

US EPA ARCHIVE DOCUMENT



# **Reregistration Eligibility Decision (RED) Metalaxyl**



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

### CERTIFIED MAIL

Dear Registrant:

I am pleased to announce that the Environmental Protection Agency has completed its reregistration eligibility review and decisions on the pesticide chemical case metalaxyl. The enclosed Reregistration Eligibility Decision (RED) contains the Agency's evaluation of the data base of this chemical, its conclusions of the potential human health and environmental risks of the current product uses, and its decisions and conditions under which these uses and products will be eligible for reregistration. The RED includes the data and labeling requirements for products for reregistration. It may also include requirements for additional data on the active ingredient to confirm the risk assessments.

To assist you with a proper response, read the enclosed document entitled "Summary of Instructions for Responding to the RED". This summary also refers to other enclosed documents which include further instructions. You must follow all instructions and submit complete and timely responses. **The first set of required responses are due 90 days from the date of this letter. The second set of required responses are due 8 months from the date of this letter.** Complete and timely responses will avoid the Agency taking the enforcement action of suspension against your products.

If you have questions on the product specific data requirements or wish to meet with the Agency, please contact the Special Review and Reregistration Division representative Franklin Gee at (703) 308-8008. Address any questions on required generic data to the Special Review and Reregistration Division representative, Judy Loranger at (703)-308-8056.

Sincerely yours,

Louis P. True, Jr., Acting Director  
Special Review and  
Reregistration Division

Enclosures

**SUMMARY OF INSTRUCTIONS FOR RESPONDING TO  
THE REREGISTRATION ELIGIBILITY DECISION (RED)**

1. **DATA CALL-IN (DCI) OR "90-DAY RESPONSE"**--If **generic data** are required for reregistration, a DCI letter will be enclosed describing such data. If **product specific data** are required, another DCI letter will be enclosed listing such requirements. If **both generic and product specific data** are required, a combined Generic and Product Specific letter will be enclosed describing such data. Complete the two response forms provided with each DCI letter (or four forms for the combined) by following the instructions provided. **You must submit the response forms for each product and for each DCI within 90 days of the date of this letter (RED issuance date); otherwise, your product may be suspended.**
2. **TIME EXTENSIONS AND DATA WAIVER REQUESTS**--No time extension requests will be granted for the 90-day response. Time extension requests may be submitted only with respect to actual data submissions. Requests for data waivers must be submitted as part of the 90-day response. Requests for time extensions should be submitted in the 90-day response, but certainly no later than the 8-month response date. All data waiver and time extension requests must be accompanied by a full justification. All waivers and time extensions must be granted by EPA in order to go into effect.
3. **APPLICATION FOR REREGISTRATION OR "8-MONTH RESPONSE"**--**You must submit the following items for each product within eight months of the date of this letter (RED issuance date).**
  - a. **Application for Reregistration** (EPA Form 8570-1). Use only an original application form. Mark it "Application for Reregistration." Send your Application for Reregistration (along with the other forms listed in b-e below) to the address listed in item 5.
  - b. **Five copies of draft labeling** which complies with the RED and current regulations and requirements. Only make labeling changes which are required by the RED and current regulations (40 CFR 156.10) and policies. Submit any other amendments (such as formulation changes, or labeling changes not related to reregistration) separately. You may delete uses which the RED says are ineligible for reregistration. For further labeling guidance, refer to the labeling section of the EPA publication "General Information on Applying for Registration in the U.S., Second Edition, August 1992" (available from the National Technical Information Service, publication #PB92-221811; telephone number 703-487-4650).
  - c. **Generic or Product Specific Data**. Submit all data in a format which complies with PR Notice 86-5, and/or submit citations of data already submitted and give the EPA identifier (MRID) numbers. Before citing these studies, you must **make sure that they meet the Agency's acceptance criteria** (attached to the DCI).
  - d. **Two copies of the Confidential Statement of Formula (CSF)** for each basic and each alternate formulation. The labeling and CSF which you submit for each product must

comply with P.R. Notice 91-2 by declaring the active ingredient as the **nominal concentration**. You have two options for submitting a CSF: (1) accept the standard certified limits (see 40 CFR §158.175) or (2) provide certified limits that are supported by the analysis of five batches. If you choose the second option, you must submit or cite the data for the five batches along with a certification statement as described in 40 CFR §158.175(e). A copy of the CSF is enclosed; follow the instructions on its back.

e. **Certification With Respect to Data Compensation Requirements.** Complete and sign EPA form 8570-31 for each product.

4. **COMMENTS IN RESPONSE TO FEDERAL REGISTER NOTICE**--Comments pertaining to the content of the RED may be submitted to the address shown in the Federal Register Notice which announces the availability of this RED.

5. **WHERE TO SEND PRODUCT SPECIFIC DCI RESPONSES (90-DAY) AND APPLICATIONS FOR REREGISTRATION (8-MONTH RESPONSES)**

**By U.S. Mail:**

Document Processing Desk (**RED-SRRD-PRB**)  
Office of Pesticide Programs (7504C)  
EPA, 401 M St. S.W.  
Washington, D.C. 20460-0001

**By express:**

Document Processing Desk (**RED-SRRD-PRB**)  
Office of Pesticide Programs (7504C)  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Hwy.  
Arlington, VA 22202

6. **EPA'S REVIEWS**--EPA will screen all submissions for completeness; those which are not complete will be returned with a request for corrections. EPA will try to respond to data waiver and time extension requests within 60 days. EPA will also try to respond to all 8-month submissions with a final reregistration determination within 14 months after the RED has been issued.

**REREGISTRATION ELIGIBILITY DECISION**

**METALAXYL**

**LIST A**

**CASE 0081**

ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDE PROGRAMS  
SPECIAL REVIEW AND REREGISTRATION DIVISION

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## METALAXYL REREGISTRATION ELIGIBILITY DECISION TEAM

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## GLOSSARY OF TERMS AND ABBREVIATIONS

AE	Acid equivalent
a.i.	Active Ingredient
ARC	Anticipated Residue Contribution
CAS	Chemical Abstracts Service
CSF	Confidential Statement of Formula
DRES	Dietary Risk Evaluation System
DWEL	Drinking Water Equivalent Level (DWEL) The DWEL represents a medium specific (i.e. drinking water) lifetime exposure at which adverse, non carcinogenic health effects are not anticipated to occur.
EEC	Estimated Environmental Concentration. The estimated pesticide concentration in an environment, such as a terrestrial ecosystem.
EP	End-Use Product
EPA	U.S. Environmental Protection Agency
FDA	Food and Drug Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FFDCA	Federal Food, Drug, and Cosmetic Act
GLC	Gas Liquid Chromatography
GRAS	Generally Recognized As Safe as designated by FDA
HA	Health Advisory (HA) The HA values are used as informal guidance to municipalities and other organizations when emergency spills or contamination situations occur.
HDT	Highest Dose Tested

## GLOSSARY OF TERMS AND ABBREVIATIONS

LC <sub>50</sub>	Median Lethal Concentration. A statistically derived concentration of a substance that can be expected to cause death in 50% of test animals. It is usually expressed as the weight of substance per weight or volume of water, air or feed, e.g., mg/l, mg/kg or ppm.
LD <sub>50</sub>	Median Lethal Dose. A statistically derived single dose that can be expected to cause death in 50% of the test animals when administered by the route indicated (oral, dermal, inhalation). It is expressed as a weight of substance per unit weight of animal, e.g., mg/kg.
LD <sub>10</sub>	Lethal Dose-low. Lowest Dose at which lethality occurs
LEL	Lowest Effect Level
LOC	Level of Concern
LOEL	Lowest Observed Effect Level
MCLG	Maximum Contaminant Level Goal (MCLG) The MCLG is used by the Agency to regulate contaminants in drinking water under the Safe Drinking Water Act.
MP	Manufacturing-Use Product
MPI	Maximum Permissible Intake
MOE	Margin Of Exposure
MRID	Master Record Identification (number). EPA's system of recording and tracking studies submitted.
N/A	Not Applicable
NPDES	National Pollutant Discharge Elimination System
NOEL	No Observed Effect Level
OPP	Office of Pesticide Programs
PADI	Provisional Acceptable Daily Intake
PAM	Pesticide Analytical Method

## GLOSSARY OF TERMS AND ABBREVIATIONS

PPE	Personal Protective Equipment
ppm	Parts Per Million
PRN	Pesticide Registration Notice
$Q^*_1$	The Carcinogenic Potential of a Compound, Quantified by the EPA's Cancer Risk Model
RED	Reregistration Eligibility Decision
REI	Restricted Entry Interval
RfD	Reference Dose
RS	Registration Standard
TD	Toxic Dose. The dose at which a substance produces a toxic effect.
TC	Toxic Concentration. The concentration at which a substance produces a toxic effect.
TEP	Typical End-Use Product
TGAI	Technical Grade Active Ingredient
TMRC	Theoretical Maximum Residue Contribution
TLC	Thin Layer Chromatography
WPS	Worker Protection Standard

## EXECUTIVE SUMMARY

This Reregistration Eligibility Decision document (RED) addresses the reregistration eligibility of the pesticide metalaxyl.

Metalaxyl is a systemic fungicide used to control plant diseases caused by the Oomycetes or water-mold fungi. There are currently 81 (35 Section 3 and 46 Section 24 (c)) products registered for use on a number of terrestrial food, feed, and nonfood crops, greenhouse nonfood crops, and outdoor residential plants. Metalaxyl formulations include granulars, wettable powders, dusts, emulsifiable concentrates, flowable concentrates, crystalline and liquid ready-to-use products. Application may be foliar or soil incorporation, surface spraying (broadcast or band), drenching, sprinkler or drip irrigation, soil mix or seed treatment. Metalaxyl registered products either contain metalaxyl as the sole active ingredient or may be combined with a variety of other active ingredients (captan, pentachloronitro-benzene, carboxin, bacillus subtilis, mancozeb, chlorothalonil, thiabendazole, triadimefon, chloroneb, and copper compounds).

Metalaxyl was initially registered as a pesticide in 1979 by the Ciba-Geigy Corporation. Registration Standards for metalaxyl were issued in June 1981 (NTIS #PB82-172297) and September 1988 (NTIS #PB89-128979). The Registration Standards summarized available data supporting the registration of products containing metalaxyl. The Registration Standards also required the submission of product chemistry, residue chemistry, toxicology, ecological effects and environmental fate studies. A Data Call-In (DCI) was issued in June 1991 for metalaxyl requiring additional aquatic plant growth and field rotational crop data. This RED reflects a reassessment of all data which were submitted in response to the Registration Standards.

The Agency has now completed its review of the metalaxyl target data base including data submitted in response to both Registration Standards and the DCI and has determined that the uses of metalaxyl as currently registered will not cause unreasonable risk to humans or the environment. All currently registered uses of metalaxyl are eligible for reregistration. The Agency is, however, requiring additional product chemistry data, animal metabolism (Guideline 171-4b), analytical method validation for additional metabolites (Guideline 171-4c/d), storage stability (Guideline 171-4e), magnitude of the residue in plants to support a newly registered formulation and residue data for cotton gin byproducts (Guideline 171-4k) and magnitude of the residue in processed tomato products (Guideline 171-4l) to support the reregistration eligibility of all uses of metalaxyl. These data are considered confirmatory because health risks from dietary exposure to metalaxyl appear to be minimal. In addition, the Agency has determined that avian reproduction studies are now required to assess the chronic risks of metalaxyl to birds.

The Agency is concerned about the potential for groundwater contamination from registered uses of metalaxyl. Available laboratory and field studies indicate that metalaxyl is persistent and mobile and will leach in many soils. Metalaxyl has been detected in

groundwater at levels typically ranging up to 3 ppb. Concentrations have been reported as high as 236 ppb, but the Agency believes that these higher levels were not likely to have resulted from normal use. In order to reduce the possibility of groundwater contamination in areas where soils are permeable and the water table is shallow, the Agency is requiring a groundwater label advisory for metalaxyl end-use products. The registrant has agreed to conduct a user education program if levels of metalaxyl are detected in groundwater at or above 400 ppb.

Metalaxyl was classified as a Group E carcinogen (signifies evidence of non-carcinogenicity for humans) based on available data. A Reference Dose (RfD) was established as 0.08 mg/kg/day based on a NOEL of 7.8 mg/kg/day and an uncertainty factor of 100. The NOEL was obtained from a 6-month dog study. The RfD was approved by the Agency on 7/8/86 and reaffirmed by the OPP RfD Committee on 4/3/94. The Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population from all tolerances is 0.012 mg/kg/day, which represents 16% of the RfD. For the most highly exposed subgroup, children ages 1 through 6, the TMRC is 0.025 mg/kg/day, which represents 31% of the RfD. The Agency concludes that based on available data, the chronic dietary risk is minimal from all metalaxyl uses.

The Agency has reassessed metalaxyl tolerances and has determined that numerous tolerance revisions will be required. These tolerance revisions will be handled administratively by the Agency. The adequacy of the established tolerances for meat, fat and meat byproducts of cattle, goats, horses, sheep, poultry, milk and eggs will be determined once questions pertaining to the required analytical method data are resolved and the ruminant feeding studies can be reevaluated.

Because there are no toxicological endpoints of concern for workers, the Agency has determined that mixer/loader/applicator and postapplication/reentry data are not required to support the reregistration of metalaxyl. Based on eye irritation data (Toxicity Category II), a 24 hour restricted entry interval (REI) will be imposed.

Before reregistering the products containing metalaxyl, the Agency is requiring that product specific data, revised Confidential Statements of Formula (CSF) and revised labeling be submitted within eight months of the issuance of this document. These data include product chemistry for each registration and acute toxicity testing. After reviewing these data and any revised labels and finding them acceptable in accordance with Section 3(c)(5) of FIFRA, the Agency will reregister a product. Those products which contain other active ingredients will be eligible for reregistration only when the other active ingredients are determined to be eligible for reregistration.



## I. INTRODUCTION

In 1988, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was amended to accelerate the reregistration of products with active ingredients registered prior to November 1, 1984. The amended Act provides a schedule for the reregistration process to be completed in nine years. There are five phases to the reregistration process. The first four phases of the process focus on identification of data requirements to support the reregistration of an active ingredient and the generation and submission of data to fulfill the requirements. The fifth phase is a review by the U.S. Environmental Protection Agency (referred to as "the Agency") of all data submitted to support reregistration.

FIFRA Section 4(g)(2)(A) states that in Phase 5 "the Administrator shall determine whether pesticides containing such active ingredient are eligible for registration" before calling in data on products and either reregistering products or taking "other appropriate regulatory action." Thus, reregistration involves a thorough review of the scientific data base underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential hazards arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects; and to determine whether the pesticide meets the "no unreasonable adverse effects" criterion of FIFRA.

This document presents the Agency's decision regarding the reregistration eligibility of the registered uses of metalaxyl. The document consists of six sections. Section I is the introduction. Section II describes metalaxyl, its uses, data requirements and regulatory history. Section III discusses the human health and environmental assessment based on the data available to the Agency. Section IV presents the reregistration decision for metalaxyl. Section V discusses the reregistration requirements for metalaxyl. Finally, Section VI is the Appendices which support this Reregistration Eligibility Decision. Additional details concerning the Agency's review of applicable data are available on request.

## II. CASE OVERVIEW

### A. Chemical Overview

The following active ingredient is covered by this Reregistration Eligibility Document:

- **Common Name:** metalaxyl
- **Chemical Name:** N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-alanine methyl ester
- **Chemical Family:** Substituted dimethyl aniline
- **CAS Registry Number:** 57837-19-1
- **OPP Chemical Code:** 113501
- **Empirical Formula:**  $C_{15}H_{21}NO_4$
- **Trade and Other Names:** Ridomil, Subdue, Apron
- **Basic Manufacturer:** Ciba-Geigy Corporation

### B. Use Profile

The following is information on the current registered uses with an overview of use sites. A detailed table of specific crops, methods of application and rates can be found in Appendix A.

For metalaxyl:

**Type of Pesticide:** systemic fungicide

**Use Sites:** Terrestrial food crop - asparagus, avocado, beets, blueberry, cole crops (broccoli, cabbage, cauliflower), cranberry, cucurbits (cucumber, melons, pumpkin, squash, watermelon), dill,

eggplant, garbanzos, ginseng, lettuce, okra, onion, papaya, pepper, radish, raspberry, spinach, stone fruits, strawberry, walnut

Terrestrial food and feed crop - almond, apple, barley, beans, buckwheat, citrus, corn, cotton, grapes, hops, millet, peanuts, peas, pineapple, potato, rice, root and tuber vegetables, rye, seed and pod vegetables, small grains, sorghum, soybean, sugar beet, sunflower, tomato, triticale, wheat

Terrestrial feed crop - alfalfa, beans, clover, corn, cowpeas, grasses (forage, fodder, hay), lespedeza, lupine, millet, trefoil, vetch

Terrestrial nonfood crop - fruit trees, golf course turf, nut crops/trees, ornamental and/or shade trees, ornamental herbaceous plants, ornamental lawns and turf, ornamental woody shrubs and vines, tobacco

Terrestrial nonfood and outdoor residential - ornamental and/or shade trees, ornamental herbaceous plants, ornamental lawn and turf, ornamental woody shrubs and vines

Terrestrial and greenhouse nonfood crop - Epcot display crops

Greenhouse nonfood crop - ornamental and/or shade trees, ornamental herbaceous plants, ornamental woody shrub and vines

**Target Pests:** white rust caused by Albugo spp; blue mold (downy mildew) caused by Peronospora spp; downy mildew caused by Pseudoperonospora spp; basal stem rot, black shank, collar rot, crown rot, foot rot, fruit rot, heart rot, leather rot, red stele, root rot, stem rot and trunk canker caused by Phytophthora spp; damping-off, fruit rot, leak, root rot, seed rot, and seedling disease complex caused by Pythium spp

**Formulation Types Registered:**

Dust - 3.12 to 12.5%  $\pm$  one other active ingredient

Granular - 1 to 5%  $\pm$  one other active ingredient

Wettable powder - 7 to 50%  $\pm$  one other active ingredient

Emulsifiable concentrate - 11.5 to 45%  $\pm$  one other active ingredient

Flowable concentrate - 28.35 to 33.3%

Liquid ready to use - 0.1 to 3.5% ± one other active ingredient

### Use Practice Limitations:

The following use practice limitation statements only pertain to seed treatments:

"Do not use treated seed for feed, food, or oil purposes."

"Do not feed clippings, crop waste, or vines to livestock. Do not graze treated areas."

Preharvest interval (PHI) restrictions for metalaxyl are outlined in the Product and Residue Chemistry Chapter (6/16/94). This document is part of the Administrative Record for metalaxyl and is included in the EPA's Office of Pesticide Programs Public Docket.

### C. Estimated Usage of Pesticide

This section summarizes the best estimates available for the pesticide uses of metalaxyl. These estimates are derived from a variety of published and proprietary sources available to the Agency. The data, reported on an aggregate and site (crop) basis, reflect annual fluctuations in use patterns as well as the variability in using data from various information sources. The table below summarizes the pesticide's use by site.

Percent of Various U.S. Crops Treated Annually with Metalaxyl, 1989 - 1992

Site	Acres Grown (000)	Multiple Acres Treated (000)	Percent Crop Treated (%)	Pounds AI Applied (000)
		low - high	low - high	low - high
Alfalfa	25,048	1 - 10	< 1 - < 1	1 - 1
Apples	480	1 - 5	< 1 - 1	1 - 5
Beans, dry	1,918	5 - 10	< 1 - 1	1 - 5
Beans, snap	266	10 - 35	< 5 - 13	5 - 20
Broccoli	111	20 - 30	18 - 27	1 - 1
Cabbage	88	10 - 20	11 - 23	1 - 2
Cantaloupe	131	25 - 30	19 - 23	5 - 10
Carrots	103	5 - 10	5 - 10	5 - 10

Site	Acres Grown (000)	Multiple Acres Treated (000)	Percent Crop Treated (%)	Pounds AI Applied (000)
Cauliflower	60	5 - 10	8 - 17	1 - 2
Cotton	13,230	225 - 400	2 - < 5	190 - 225
Cucumbers	132	10 - 15	8 - 11	10 - 15
Grapefruit	144	10 - 25	7 - 17	10 - 20
Honeydew	26	2 - 5	8 - 19	5 - 10
Lemons	63	10 - 15	16 - 24	5 - 10
Lettuce	244	50 - 150	20 - 61	15 - 45
Oats/rye	5,473	1 - 5	< 1 - < 1	1 - 5
Onions	144	50 - 75	35 - 52	20 - 25
Oranges	622	40 - 120	6 - 19	35 - 125
Peanuts	1,863	5 - 50	< 1 - < 5	5 - 55
Peas, green	361	1 - 2	0 - < 1	1 - 1
Peppers	73	2 - 10	< 5 - 14	1 - 5
Potatoes	1,378	150 - 250	11 - 18	25 - 50
Raspberries	11	2 - 3	18 - 27	1 - 2
Soybeans	58,763	150 - 450	< 1 - 1	20 - 70
Spinach	35	10 - 15	29 - 43	2 - 5
Strawberries	48	5 - 10	10 - 21	5 - 10
Sugarbeets	1,421	5 - 10	< 1 - 1	1 - 1
Sunflower	2,289	15 - 20	< 1 - 1	5 - 10
Tangelos	10	1 - 2	10 - 20	1 - 1
Tobacco	758	175 - 300	23 - 40	125 - 275
Tomatoes	475	25 - 250	5 - 53	10 - 50
Turf and Ornamentals	620	60 - 70	10 - 11	105 - 120
Watermelons	251	40 - 60	16 - 24	15 - 20
Other	N/A	25 - 75	N/A	15 - 40
TOTAL		1,151 - 2,547		649 - 1,251

There are no known usage data available for Christmas trees, apricot, nectarine, millet, fruit trees, black salsify, loquat, papaya, pineapple, chicory, dill, ginger, hops, turmeric, pumpkin, squash, pimento, collard, kale, kohlrabi, endive, fennel, mustard, parsley, rhubarb, okra, radish, sweet potato, and turnip.

There is no known usage on almond, corn, grape, peach, rice, walnut, lime, tangerine, avocado, cherry, plum, prune, blueberry, asparagus, celery, kumquat, Brussels sprout, garlic, eggplant, wheat, and sorghum.

#### **D. Data Requirements**

Product chemistry, toxicology and ecological effects studies were required in the December 1981 Registration Standard for metalaxyl. Data requested in the September 1988 Guidance document for metalaxyl included studies on product chemistry, ecological effects, environmental fate, toxicology and residue chemistry. These data were required to support the uses listed in the Registration Standard. The 1991 DCI required the submission of ecological effects and environmental fate studies. Appendix B includes all data requirements for technical metalaxyl, identified by the Agency for currently registered uses needed to support reregistration.

#### **E. Regulatory History**

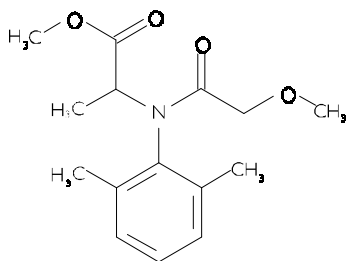
Metalaxyl is a systemic fungicide used to control plant diseases caused by the Oomycetes or water-mold fungi. There are currently 81 (35 Section 3 and 46 Section 24 (c)) products registered for use on a number of terrestrial food, feed, and nonfood crops, greenhouse nonfood crops, and outdoor residential plants. Metalaxyl formulations include granulars, wettable powders, dusts, emulsifiable concentrates, flowable concentrates, crystalline and liquid-ready to use products. Application may be foliar or soil incorporation, surface spraying (broadcast or band), drenching, sprinkler or drip irrigation, soil mix or seed treatment. Metalaxyl registered products either contain metalaxyl as the sole active ingredient or may be combined with a variety of other active ingredients (captan, pentachloronitrobenzene, carboxin, bacillus subtilis, mancozeb, chlorothalonil, thiabendazole, triadimefon, chloroneb, and copper compounds).

Metalaxyl was initially registered as a pesticide in 1979 by the Ciba-Geigy Corporation. Registration Standards for metalaxyl were issued in June 1981 (NTIS #PB82-172297) and September 1988 (NTIS #PB89-128979). The Registration Standards summarized available data supporting the registration of products containing metalaxyl. The Registration Standards also required the submission of product chemistry, residue chemistry, toxicology, ecological effects and environmental fate studies. A Data Call-In (DCI) was issued in June 1991 for metalaxyl requiring additional aquatic plant growth and field rotational crop data.

### III. SCIENCE ASSESSMENT

#### A. Physical Chemistry Assessment

Metalaxyl [N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-alanine methyl ester] is a systemic fungicide registered for use on a variety of crops/sites (primarily citrus, cotton, cucurbits, onions, ornamentals, potatoes, soybeans [seed treatment], tobacco, tomatoes, and turf).



Empirical Formula:	C <sub>15</sub> H <sub>21</sub> NO <sub>4</sub>
Molecular Weight:	279.3
CAS Registry No.:	57837-19-1
Shaughnessy No.:	113501

Technical metalaxyl is a white to beige crystalline solid with a melting point of 71-72 C and a vapor pressure of  $2.2 \times 10^{-6}$  mm Hg at 20 C. The solubility of metalaxyl in water at 20 C is 7.1 g/L. Metalaxyl is also readily soluble in most organic solvents (i.e., 65% soluble in methanol and 55% soluble in benzene).

#### B. Human Health Assessment

##### 1. Toxicology Assessment

The toxicological database on metalaxyl is essentially complete for reregistration purposes.

### a. Acute Toxicity

The table below summarizes the acute toxicity results for technical grade metalaxyl.

Test	Result	Category
Acute Oral LD <sub>50</sub> (rat) <sup>1</sup>	669 mg/kg	III
Acute Oral LD <sub>50</sub> (mouse) <sup>2</sup>	788 mg/kg	III
Acute Oral LD <sub>50</sub> (hamster) <sup>3</sup>	7120 mg/kg	IV
Acute Dermal LD <sub>50</sub> (rabbit) <sup>4</sup>	> 6000 mg/kg	III
Acute Inhalation LC <sub>50</sub>	Requirement waived <sup>5</sup>	N/A
Eye Irritation (rabbit) <sup>6*</sup>	Moderate Irritant	II
Dermal Irritation (rabbit) <sup>7*</sup>	Mild Irritant	IV
Skin Sensitization (guinea pig) <sup>8*</sup>	Negative	N/A

<sup>1</sup> MRID 00063990

<sup>2</sup> MRID 00063991

<sup>3</sup> MRID 00154308

<sup>4</sup> MRID 00063993

<sup>5</sup> Because metalaxyl cannot be prepared and tested in a respirable form, the requirement for an acute inhalation study was waived by the Agency on May 10, 1991.

<sup>6</sup> MRID 00084108

<sup>7</sup> MRID 00084107

<sup>8</sup> MRID 00084109

\*Note: Data pertaining to acute eye irritation, dermal irritation, and dermal sensitization are not required to support the reregistration of the TGA. These data are presented for informational purposes.

N/A = not applicable

### b. Subchronic Toxicity

A 90-day study was conducted with male and female Sprague-Dawley rats fed diets containing 0, 50, 250, or 1250 ppm of metalaxyl. The diet concentrations were equivalent to chemical intakes of 3.4, 17, and 83 mg/kg/day, respectively. At the high dose, food consumption by males was slightly reduced and minimal liver cell hypertrophy was increased in females. Based on these findings, the LOEL was 83 mg/kg/day and the NOEL was 17 mg/kg/day. (MRID 00084110)

A 21-day dermal study was conducted with male and female New Zealand white rabbits. Metalaxyl was applied to intact or abraded skin at dose levels of 10, 100, or 1000 mg/kg/day for 6 hours/day, 5 days/week. Endpoints evaluated included body weight, food consumption, hematology, clinical chemistry, organ weights, and histopathology. No treatment-related



dermal or systemic effects were observed at any dose level. Therefore, the NOEL for dermal and systemic toxicity was the highest dose tested, 1000 mg/kg/day. (MRID 00072394)

**c. Chronic Toxicity**

A 6-month study was conducted with beagle dogs fed diets containing 0, 50, 250, or 1000 ppm of metalaxyl. The diet concentrations were equivalent to chemical intakes of 0, 1.6, 7.8, and 30.6 mg/kg/day for males, and 0, 1.7, 7.4 and 32.4 mg/kg/day for females, respectively. Exposure to the high dose was associated with an elevation in serum alkaline phosphatase and an increase in liver weight (absolute and relative to brain weight). No clinical signs or findings in hematology, urinalysis, or histopathology were related to treatment. The LOEL was 25 mg/kg/day and the NOEL was 6.3 mg/kg/day. (MRID 00071598)

In a chronic toxicity/carcinogenicity study, male and female Sprague-Dawley rats were fed diets containing 0, 50, 250, or 1250 ppm of metalaxyl for 2 years. These levels were equivalent to 2.5, 13, and 63 mg/kg/day, respectively. The high dose produced an increase in liver weight (relative to body weight) and an increased incidence of periportal vacuolation of hepatocytes. Based on the liver changes, the systemic LOEL was 63 mg/kg/day and the NOEL was 13 mg/kg/day. (MRID 00098481, 00132009, 00150185)

**d. Carcinogenicity**

A 2-year chronic toxicity/carcinogenicity study was conducted with male and female Sprague-Dawley rats. Metalaxyl was administered in the diet at concentrations of 0, 50, 250, or 1250 ppm, which were equivalent to intakes of 2.5, 13, and 63 mg/kg/day, respectively. (MRID 00098481, 00132009, 00150185)

A 2-year carcinogenicity study was conducted with male and female Swiss mice. Metalaxyl was administered in the diet at concentrations of 0, 50, 250, or 1250 ppm, which were equivalent to intakes of 7.5, 38, and 190 mg/kg/day, respectively. (MRID 00103354, 00150094)

In 1985 the EPA reviewed four major issues concerning the rat and mouse carcinogenicity studies: (1) parafollicular cell adenomas in the thyroid of female rats, (2) adrenal medullary tumors (pheochromocytomas) in male rats, (3) liver tumors in male mice, and (4) use of a maximum tolerated dose. (50 FR 49690)

Concerns about the incidence of thyroid tumors in female rats were mitigated by the following evidence: (1) no progression of adenomas (benign) to carcinomas (malignant), (2) no increase in hyperplastic changes, (3) no dose-response relationship, and (4) two re-evaluations of microscopic slides showing no treatment-related effect. Similar microscopic reassessments of the adrenal gland of male rats and the liver of male mice indicated no compound-related effect on tumor incidence in these organs.

Although the highest dose tested (1250 ppm) was not a maximum tolerated dose (MTD) in either study, the EPA concluded that the rat and mouse studies were sufficient to demonstrate that metalaxyl did not have carcinogenic potential in laboratory animals and further testing was unwarranted. The conclusion was supported by the following evidence: (1) the doses in both studies were high enough to produce treatment-related changes in liver weight and/or histology (i.e., increased liver weight and hepatocellular vacuolation in rats; fatty infiltration in the liver of mice), (2) no structural relationship to known carcinogens, (3) no genotoxic activity, and (4) no effect on neoplasm incidence in mice or rats of either sex at any dose level tested.

In December 31, 1985, the Agency classified metalaxyl as a Group E carcinogen (evidence of non-carcinogenicity for humans) based on the available data.

**e. Developmental Toxicity**

A developmental toxicity study was conducted with pregnant Charles River COBS CD rats administered doses of 0, 50, 250, or 400 mg/kg/day by gavage on days 6 through 15 of gestation. Dams were sacrificed on day 20 of gestation. Doses of 250 mg/kg/day and higher were maternally toxic producing ataxia and convulsions. The 400 mg/kg/day dosage resulted in mortality of one-third of the dams. Doses of 250 mg/kg/day and higher produced fetotoxicity manifest as an increased incidence of unossified sternebrae. The LOEL was 250 mg/kg/day and the NOEL was 50 mg/kg/day for both maternal and developmental toxicity. (MRID 00144423, 00148867)

A developmental toxicity study was conducted with Dutch belted rabbits given doses of 0, 30, 150, or 300 mg/kg/day of metalaxyl on days 7 through 19 of gestation. Does were sacrificed on day 28 of gestation. The high dose does showed a slight loss in body weight. In a range-finding study, 500 mg/kg/day decreased maternal body weight and 1000 mg/kg/day produced mortality. No treatment-related developmental toxicity was observed at any dose level. The LOEL for maternal toxicity was 300

mg/kg/day and the NOEL was 150 mg/kg/day. The highest dose tested, 300 mg/kg/day, was the NOEL for developmental toxicity. (MRID 00144371, 00144372, 00148866, 00154938)

**f. Reproductive Toxicity**

A 3-generation reproduction study was conducted with SPF Crl:COBS CD (SD) rats. Metalaxyl was administered in the diet at concentrations of 0, 50, 250, or 1250 ppm. These levels were equivalent to 2.5, 13, and 63 mg/kg/day, respectively. There were no treatment-related effects on parental body weight, food consumption, mating, fertility, gestation length, or macroscopic observations. Pre- and post-implantation loss, litter size and weight, and incidence of fetal malformations/variations were also unaffected by treatment. The NOEL for reproductive toxicity was the highest dose tested, 63 mg/kg/day (1250 ppm). (MRID 00071600)

**g. Mutagenicity**

Metalaxyl was negative in bacterial and mammalian gene mutation, in vivo cytogenetics, and several other genotoxicity assays.

Three studies evaluated metalaxyl in the Salmonella typhimurium reverse mutation assay (Ames assay) using tester strains TA 98, TA 100, TA 1535, and TA 1537. Metalaxyl did not increase the frequency of reverse mutations with or without metabolic activation (S9) at concentrations ranging from 25-2025 µg/plate, 20-5000 µg/plate, and 10-5000 µg/plate in the three experiments. (MRID 00084113, 00154301, 00154302)

A gene mutation assay in mammalian cells was conducted using the L5178Y (TK +/-) mouse lymphoma cell line. Concentrations of metalaxyl ranged from 0.125 to 1 mg/ml without S9 and 0.0625 to 0.5 mg/ml with S9. Metalaxyl did not increase forward mutations at the thymidine kinase (TK) locus. (MRID 00103362, 00154309)

Metalaxyl did not increase the frequency of reverse mutations in yeast cells (Saccharomyces cerevisiae) at concentrations of 400 to 10,000 µg/ml with or without metabolic activation. Concentrations of 8000 µg/ml and greater were cytotoxic. Assays for recombination and gene conversion were unreliable. (MRID 00103359)

In an in vivo cytogenetics study, male and female Chinese hamsters were administered two consecutive daily oral doses of 0, 595, 1190, or 2380 mg/kg of metalaxyl. The highest dose was one-third the oral LD<sub>50</sub> in

hamsters (7120 mg/kg). Bone marrow cells were scored 24 hours later for nuclear changes which included single Jolly bodies, fragments of nuclei in erythrocytes, micronuclei in erythroblasts, micronuclei in leukopoietic cells, and polyploid cells. Metalaxyl had no effect on the incidence of nuclear anomalies. (MRID 00103361, 00154307)

A dominant lethal test was conducted with male NMRI mice given a single oral dose of 0, 65, or 195 mg/kg of metalaxyl. The highest dose was one-fourth the reported LD<sub>50</sub> in mice (788 mg/kg). Each male was cohabited with two untreated females each week for 8 consecutive weeks. Metalaxyl had no effect on mating, pregnancy, number of implants, or embryo viability. A positive control was not used in the study. (MRID 00084114, 00154310)

Metalaxyl was tested twice in the unscheduled DNA synthesis (UDS) assay using primary cultured rat hepatocytes. Concentrations tested ranged from 16-2000 µg/ml in both experiments. Another UDS assay was conducted using human fibroblasts. Metalaxyl concentrations ranged from 4 to 500 µg/ml. Concentrations up to cytotoxic levels were tested in each assay. Metalaxyl did not increase unscheduled DNA synthesis above control levels in any of the three assays. (MRID 00103363, 00154306, 00160037, 00154663)

#### **h. Metabolism**

Four studies with rats evaluated the absorption, distribution, excretion, and/or metabolism of orally administered metalaxyl. A dermal absorption study with rats was also conducted.

In a single dose study, male and female rats were administered 0.5 or 25 mg/kg of metalaxyl by gavage. Over 60% of the low or high dose was excreted within 24 hours in urine or feces. Negligible amounts were eliminated in expired air. Low tissue residues six days after treatment indicated no appreciable bioaccumulation. Female rats eliminated the majority of the dose (55-65%) in urine, and males eliminated most (60-70%) in feces. Although metabolites were not identified, the chromatographic pattern was similar for both sexes and doses. (MRID 00071613)

A metabolism study was conducted with female rats administered a single oral dose of 28 mg/kg. Within 48 hours 96% of the dose had been excreted in urine or feces. Consistent with the previous study, females excreted over 60% of the dose in urine and about 30% in feces. Approximately 20% of the metabolites in urine were identified. Hydrolysis

of the ether and ester bonds was shown to be a significant metabolic pathway. Glucuronidase treatment of urine fractions indicated metabolites were either unconjugated or glucuronide conjugates. Fecal metabolites were not identified. (MRID 00071614)

A similar study (females rats given 28 mg/kg as single oral dose) corroborated that ester and ether bond hydrolysis is a primary metabolic pathway. Secondary pathways included oxidation of methyl groups of the phenyl moiety and oxidation of the phenyl moiety itself. Some metabolites in urine were present as glucuronic acid conjugates. A large portion of the metabolites were unidentified. (MRID 00099084)

A recent comprehensive study evaluated metalaxyl pharmacokinetics with male and female Sprague-Dawley rats following a single intravenous dose (1 mg/kg), single oral low dose (1 mg/kg), single oral high dose (200 mg/kg), or repeated oral low doses (1 mg/kg/day for 14 days). The absorption, distribution, and elimination patterns were consistent with previous findings. No major dose or sex differences were observed except that urine was the predominant elimination route for females whereas feces was the major route for males. Metalaxyl was readily absorbed (similar i.v. and oral elimination profiles), extensively metabolized (< 1% parent compound in excreta), and rapidly eliminated (70-80% in 24 hours). Ten metabolites were identified. The majority of urinary metabolites were conjugated (glucuronide or sulfate) whereas fecal metabolites were mostly unconjugated. The major metabolite in urine and feces was N-(2,6-dimethylphenyl)-N-(hydroxyacetyl) alanine. Three major and one minor metabolic pathways were proposed. One pathway involved hydrolysis of the ether, followed by oxidation of the resulting alcohol, ester hydrolysis, or N-dealkylation of the ester chain. A second pathway involved oxidation of an aromatic methyl to the benzylic acid or ester hydrolysis. The third major pathway was ester hydrolysis, sometimes followed by benzylic acid formation. The minor pathway involved hydroxylation at the meta position of the phenyl ring. Two major metabolites in urine were not identified. Additional data on major unidentified metabolites must be provided to upgrade this study to acceptable. Information to upgrade this study is currently in review (MRID 41664501, original study; MRID 43317301, information to upgrade original study).

A dermal absorption study was conducted with male and female rats treated with 1 or 10 mg/kg. Thirty percent of the dose was absorbed from the skin within 8 hours. The absorption half-times were 12 and 20 hours for males at the low dose and high dose, respectively, and 13 hours for females at both dose levels. Within 72 hours 70-80% of the applied dose

had been excreted. The elimination half-times were 36 and 49 hours for males and 42 and 44 hours for females at the low and high doses, respectively. Females eliminated the majority of the dose in urine whereas males eliminated most in feces. (MRID 00161402)

**i. Other Toxic Endpoints**

Smoke Inhalation Study.

Because metalaxyl is used on tobacco, a 90-day smoke inhalation study was conducted. Male and female Fischer 344 rats were exposed to smoke from cigarettes containing 0, 130, 3900, or 13,000 ppm of metalaxyl for 4 hours/day, 5 days/week. The maximum air concentration of metalaxyl was 5 µg/L. The concentrations in test cigarettes were 100 to 10,000 times average residue levels and 30 to 100 times greater than the expected maximum residue levels. Although the study was limited in its ability to simulate human exposure, the results were adequate to demonstrate toxicological effects from exposures are unlikely beyond that from exposures associated with heavy smoking. The profile of residues in inhalable smoke indicated 30% was metalaxyl, 4% was 2,6-dimethylaniline, and 65% was unidentified material. (MRID 00103364, 00109471)

**j. Reference Dose**

The RfD was established as 0.08 mg/kg/day based on a NOEL of 7.8 mg/kg/day and an uncertainty factor of 100. The NOEL was obtained from a 6-month dog study. The RfD was approved by the Agency on 7/8/86 and reaffirmed by the OPP RfD Committee on 4/3/94.

In 1982 the FAO/WHO Joint Meeting on Pesticide Residues allocated an Acceptable Daily Intake (ADI) of 0.03 mg/kg/day for metalaxyl.

**2. Exposure Assessment**

**a. Dietary Exposure**

Plant Metabolism

The qualitative nature of the residue in plants is adequately understood. Studies with potatoes, lettuce, grapes, and tobacco indicate that metalaxyl is taken up, translocated, and extensively metabolized by plants. Metabolism involves oxidation of a ring-methyl group and hydrolysis of the methyl ester and methyl ether bonds; metabolites can be conjugated to glucose. Studies with [<sup>14</sup>C]metalaxyl-treated seed indicate that no



appreciable residue was transferred from treated seed to edible mature plant parts. The residues to be regulated in plant commodities are those in the current tolerance expression, which include metalaxyl, metabolites that can be converted to 2,6-dimethyl aniline (2,6-DMA), and one metabolite containing the 2-hydroxymethyl-6-methyl aniline (HMMA) moiety, N-(2-hydroxymethyl-6-methylphenyl)-N-(methoxyacetyl) alanine methyl ester. The molecular structures of the metabolites of concern are presented in Table A.

### Animal Metabolism

The qualitative nature of the residue in animals is adequately understood. Metabolism in ruminants is via hydrolysis to the ester alcohol and acid alcohol, which may then be de-alkylated. In ruminants, metalaxyl may also be oxidized to benzylic alcohol or phenolic compounds. Some breakdown products may be conjugated with glucuronic acid. A major residue in milk is a mixture of the N-octanoic- and N-decanoic acid ester of metabolite CGA-67869 [(N-(2,6-dimethylphenyl)-N-(hydroxyacetyl)-aniline methyl ester]. 2,6-DMA-based residues accounted for up to ~ 50% of the residues in ruminant tissues. HMMA containing compounds comprised 34% of the residue in kidney and 12-14% in muscle and fat. The parent compound is rapidly excreted.

In poultry, metalaxyl is hydrolyzed to either the benzyl alcohol or the ester alcohol. The benzylic alcohol is converted to a sulfate and the ester alcohol is conjugated with fatty acid or converted to the acid alcohol, which is subsequently hydrolyzed to the benzylic alcohol. The predominant residues in poultry are the disubstituted free acid forms of the hydroxy metabolite CGA-94689 isomers (~ 47% in thigh muscle and 24% in egg), the sulfuric acid conjugate of the hydroxy metabolite (30% in thigh muscle), fatty acid conjugates of the disubstituted free acids of CGA-94689 (27% in fat), and CGA-107955, N-(2,6-dimethylphenyl)-N-hydroxyacetyl)alanine (40% in fat).

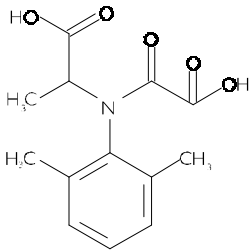
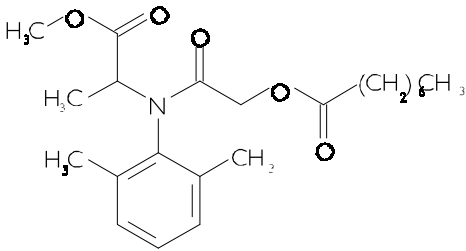
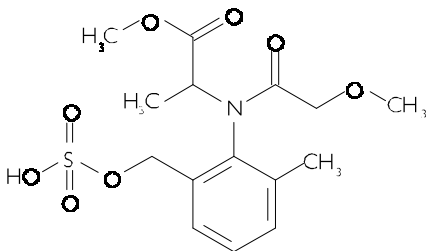
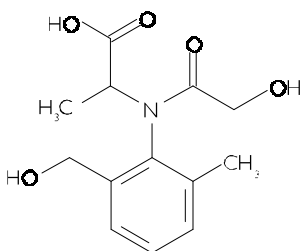
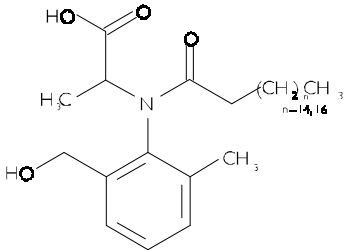
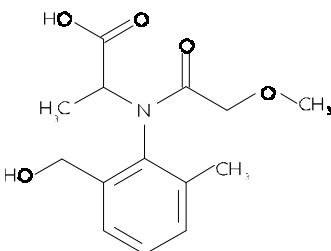
The Agency has determined that the residues to be regulated are metalaxyl, metabolites that can be converted to 2,6-dimethylaniline (2,6-DMA), and those containing the 2-hydroxymethyl-6-methylaniline (HMMA) moiety. Some metabolites containing the HMMA moiety may be convertible to 2,6-DMA and thus measured by the current enforcement methodology. Data showing percent conversion of HMMA metabolites to DMA are outstanding (enforcement method recovery data for HMMA metabolites). The wording of the tolerance expression for livestock commodities will be determined after these data are submitted. Current residue levels estimated for livestock commodities represent an upper bound

for HMMA containing metabolites. The molecular structures of the metabolites of concern are presented in Table A.



Table A. The chemical structure of metalaxyl and its metabolites of concern.

Structure Metabolite: Chemical name	Structure Metabolite: Chemical name
<p><b>metalaxyl:</b> N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester</p>	<p>N-(2,6-dimethylphenyl)-N-(hydroxyacetyl)alanine methyl ester</p>
<p>N-(oxalyl)-2,6-dimethylaniline</p>	<p>N-(oxalyl)-N-(2,6-dimethylphenyl)alanine methyl ester</p>
<p>N-(2,6-dimethylphenyl)-2-hydroxyacetamide</p>	<p>N-(2,6-dimethylphenyl)-N-(methoxyacetyl)alanine</p>
<p>N-[2-hydroxymethyl]-6-methylphenyl]-N-(methoxy acetyl)alanine methyl ester</p>	<p>N-(2,6-dimethylphenyl)-N-(hydroxyacetyl)alanine</p>

Structure Metabolite: Chemical name	Structure Metabolite: Chemical name
 <p>N-(oxalyl)-N-(2,6-dimethylphenyl)alanine</p>	 <p>N-decanoic acid ester of N-(2,6-dimethylphenyl)-N-(hydroxyacetyl)alanine methyl ester</p>
 <p>Sulfuric acid ester of N-[2-(hydroxymethyl)-6-methyl-phenyl]-N-(methoxyacetyl)alanine methyl ester</p>	 <p>N-[2-(hydroxymethyl)-6-methylphenyl]-N-(hydroxyacetyl)alanine</p>
 <p>N-Fatty acid amide conjugates of N-[2-(hydroxymethyl)-6-methylphenyl]alanine</p>	 <p>N-[2-(hydroxymethyl)-6-methylphenyl]-N-(methoxyacetyl)alanine</p>

## Residue Analytical Methods - Plants and Animals

Adequate enforcement methods are available for the determination of residues of metalaxyl and regulated metabolites in plants. Methods I and II in PAM, Vol. II, correspond to Methods AG-348 and AG-349. Method AG-395, an improved modification of AG-348, has undergone successful Agency validation with plant matrices.

Metabolites which may not be covered by the current tolerance expression have been identified in livestock commodities. Additional validation data are needed to demonstrate that Method AG-576 adequately recovers metabolites containing the 2,6-DMA moiety and HMMA containing metabolites as 2,6-dimethyl aniline. Method AG-576 is a combination of Method II in PAM, Vol. II, and AG-395, both of which have undergone successful Agency validation, and adequately recovers metalaxyl, per se. Method AG-576 may be adequate for enforcement of tolerances in animal commodities, if it is proven to adequately recover all residues of concern. If significantly less than 100% of the total toxic residue is recovered using Method AG-572, then residue levels used in future risk assessments may need to be adjusted to account for this.

Metalaxyl, per se, is completely recovered (> 80%) using FDA Multiresidue Protocol D (PAM, Vol. I, Section 232.4), and is not recovered by Protocol E (PAM, Vol. I, Sections 211.1/231.1 and 212.1/232.1) [Source: *PESTDATA*, PAM, Vol. I, Appendix, 8/93]. Multiresidue data for representative metalaxyl metabolites have been forwarded to FDA.

### Storage Stability

Adequate storage stability data are available to support residue studies on raw agricultural commodities stored less than 24 months at temperatures of -20 C or less, with the exception of oilseed and grain crops. An interim storage stability study on cranberries, potatoes, peppers, and spinach indicates that weathered residues determined as 2,6-DMA are stable in samples stored at -20 C for 18 to 24 months. A final report reflecting 38 months storage of these matrices is needed for field trial studies in which the samples were stored for more than 24 months. This information will be confirmatory. Storage stability data for metalaxyl and representative metabolites in a representative oilseed (e.g., soybean or nut) and grain (e.g., wheat) are required.

No storage stability data are available to support processing studies. Storage stability data for metalaxyl and representative metabolites are required from all processed commodities of an oilseed, a grain, and a fruit or fruiting vegetable.

Storage stability data for metalaxyl and representative metabolites in livestock commodities representing one year of frozen storage are required. Considering the demonstrated storage stability on several crops, the outstanding storage stability data are considered confirmatory.

#### Magnitude of the Residue in Plants

All data requirements for magnitude of the residue in plants have been evaluated and deemed adequate, except for the 50% WP formulation and cotton gin byproducts. For other formulations, field trials were performed representing the various conditions under which the pesticide can be applied. Geographical representation is adequate and a sufficient number of trials reflecting representative formulations were conducted. Residue data are needed for cotton gin byproducts.

To support multiple foliar and other late season applications of the 50% WP formulation to strawberries, fruiting vegetables, and asparagus, the registrant must either (1) submit available bridging data for representative commodities which show that residues are similar for late season, foliar applications of WP and EC formulations of metalaxyl at rates similar to those registered for these crops, or (2) perform 3 side by side field trials each for asparagus, strawberries, and tomatoes (9 total trials) in geographically representative growing areas using the 50% WP formulation and a representative EC formulation. If residues resulting from application of the 50% WP are substantially higher than those using the EC formulation, then additional field trial data may be required. These data are considered confirmatory. At the registrants request, the Agency has reevaluated the need for these studies and concludes that these studies are still required.

Tolerances have not been established for forage, fodder, and straw for the cereal grains group (excluding wheat, barley, and oats). A petition has been submitted to the Agency.

#### Magnitude of the Residue in Processed Food/Feed

Processing studies have been conducted on the following commodities: apples, citrus, cereal grains, cottonseeds, grapes, hops, legume vegetables, peanuts, pineapples, potatoes, prunes, sunflowers, soybeans, sugar beets,

and tomatoes. All data requirements for magnitude of the residue data in processed food/feed commodities have been deemed adequate to determine the extent to which residues of metalaxyl concentrate upon processing of the raw agricultural commodity.

Residues concentrate in the following food commodities: citrus oil; potato granules/flakes, and chips; prunes; raisins; sugar beet molasses, and tomato puree.

Residues concentrate in the following processed feed items: apple pomace (wet); citrus, molasses and pulp; grape pomace (wet and dried), grape raisin waste; legume vegetable cannery waste; peanut meal; pineapple, process residue, potato peels (dried); soybean hulls and meal; sugar beet molasses, sunflower meal; and tomato pomace (dried).

Food/feed additive tolerances for potato granule/flakes, potato chips, and tomato pomace must be proposed.

Because tomato paste is considered a processed food/feed commodities, residue data are required. The data are considered confirmatory.

#### Magnitude of the Residue in Meat, Milk, Poultry, and Eggs

Tolerances for the combined residues of metalaxyl and its metabolites convertible to 2,6-dimethyl aniline and N-(2-hydroxymethyl-6-methylphenyl)-N-(methoxyacetyl) alanine methyl ester have been established for meat, fat, kidney, liver, and meat byproducts of cattle, goats, horses, sheep and poultry and for milk and eggs. The evaluation of the submitted ruminant feeding studies is deferred until the adequacy of the analytical method used is determined.

The results from the submitted poultry feeding study indicate that residues of metalaxyl will not exceed the established tolerances in poultry tissues and eggs. However, judgement of the adequacy of the available data is reserved until the analytical method used is determined to be adequate and adequate storage stability data are provided.

There are no established or proposed direct animal uses for metalaxyl. The existing ruminant and poultry feeding studies are adequate for risk assessment.

### Confined Rotational Crops

Four confined rotational crop studies (MRID Nos. 42196501 through 42196503 and 43317302) are currently in review.

### Field Rotational Crops

A field rotational crop study (MRID 41870308) is currently in review.

## **b. Occupational and Residential**

### Mixer/Loader/Applicator (Handler) Exposure

Based on current use patterns, several exposure scenarios are plausible as defined by the types of application equipment and procedures that might be employed by metalaxyl handlers; for example, open mixing of liquids for foliar application to onions using center pivot irrigation, or loading of granular formulation for soil broadcast treatment to non-bearing nut trees using groundboom equipment.

Exposure data requirements are triggered based on the potential for exposure and the toxicological significance of the active ingredient. Metalaxyl meets the exposure criteria, but not the toxicity criteria. Therefore, exposure data for occupational and residential activity patterns (M/L/A) associated with the use of metalaxyl are not required for reregistration eligibility. Similarly, an exposure assessment is not required.

### Post-Application Exposure

The potential for post-application exposure to workers entering treated sites exists and may be significant (e.g., human exposure to ornamental lawns or turf after pesticide treatment). However, metalaxyl does not meet the toxicity criteria for requiring post-application exposure data. Therefore, neither exposure data nor an exposure analysis are required for reregistration eligibility.

### 3. Risk Assessment

#### a. Dietary

##### Toxicological Endpoints

Based on a review of the toxicology database, the Agency concluded that there are no endpoints of concern for acute dietary exposure. For chronic dietary exposure, the Agency has established a Reference Dose (RfD) of 0.08 mg/kg/day, based on a No Observed Effect Level (NOEL) of 7.8 mg/kg/day and an uncertainty factor of 100. The NOEL was derived from a 6-month dog feeding study which demonstrated increased alkaline phosphatase activity and an increase in relative liver weights at 31 mg/kg/day.

##### Residue Information

A chronic dietary analysis was completed using available percent crop treated information and tolerance residue levels from crops listed in 40 CFR §180.408 and 185.4000. The tolerance levels used in this analysis, with the exception of cabbage, cauliflower and leafy vegetables, reflect the changes that are outlined in Section IV, B, 1, the tolerance reassessment section. It should be noted that although the Agency recommends a reduction in the tolerance for cabbage and cauliflower from 2 to 1 ppm, the higher value of 2 ppm was used for this dietary analysis. For leafy vegetables (excluding *Brassica* and spinach), an increase in the tolerance from 0.1 ppm to 5 ppm is recommended. The tolerance increase has not been published in the Federal Register yet, but has been included here as a pending tolerance of 4.9 ppm; the published tolerance of 0.1 ppm added to this pending tolerance results in the 5 ppm tolerance recommended for reregistration.

##### Chronic Exposure Analysis and Dietary Risk

The Dietary Risk Evaluation System (DRES) chronic analysis used tolerance level residues to calculate the Theoretical Maximum Residue Contribution (TMRC) for the overall U.S. population and 22 population subgroups. These exposure estimates were then compared to the RfD to arrive at the potential chronic dietary risk. The TMRC for the overall U.S. population from all tolerances is 0.012 mg/kg/day, which represents 16% of the RfD. For the most highly exposed subgroup, children ages 1 through 6, the TMRC is 0.025 mg/kg/day, which represents 31% of the RfD.

The Percent of crop treated information was used to calculate the Anticipated Residue Contribution (ARC) for those same population groups. The ARC is considered the more accurate estimate of dietary exposure. The ARC for the U.S. population from the published uses of metalaxyl being recommended through reregistration is  $6.1 \times 10^{-3}$  mg/kg/day, which represents 8% of the RfD.

The ARC from published uses for the most highly exposed DRES subgroup, children (ages 1 through 6), is  $1.2 \times 10^{-2}$  mg/kg/day, which represents 15% of the RfD.

The U.S. population and all the DRES subgroups have TMRCs and ARCs for chronic dietary risk below the RfD when published and proposed tolerances are considered. It appears that chronic dietary risk is minimal for this chemical for published and proposed tolerances. Although the ARC estimate is a more accurate estimate of dietary risk, it still is likely to be an overestimate because tolerance level residues or high end residues for meat, milk and eggs were assumed on all commodities.

#### **b. Occupational and Residential**

Significant potential for exposure exists for both handlers of metalaxyl and for those exposed after application of metalaxyl during reentry operations (e.g., at planting treatment of lettuce). Potential post-application exposure concerns relate to workers and to users in residential settings. However, exposure studies (and exposure analysis) are not required to assess the risk to humans exposed to metalaxyl during or after pesticide application because there are no toxicologic endpoints of concern, except for potential eye irritation (Toxicity Category II). Potential eye effects will be addressed by appropriate labeling and personal protective equipment requirements.

### **C. Environmental Assessment**

#### **1. Environmental Fate**

The environmental fate database for metalaxyl is adequate for reregistration purposes. Although the data requirements for aerobic aquatic metabolism, field dissipation for terrestrial uses, and aquatic field dissipation have not been completely fulfilled for metalaxyl, the Agency has determined that sufficient information exists from acceptable and supplemental studies to make a sound qualitative assessment of the fate of metalaxyl in the environment. No additional studies are required at this time.



**a. Environmental Chemistry, Fate and Transport**

Detailed information regarding the fate of metalaxyl in the environment is provided below. Environmental fate studies used to support the reregistration of metalaxyl are given in Appendix B.

**1. Hydrolysis**

Metalaxyl was found to be moderately stable to hydrolysis under normal environmental conditions. At 20 C, the calculated half-life was 200 days at pH 5 and 7 and 115 days at pH 9. (MRID 00104493)

**2. Photodegradation in water**

<sup>14</sup>C-Metalaxyl was photolytically stable in water when exposed to natural sunlight, with a half-life of 400 days. Less than 10 percent of the material photolyzed during the 28 day test period. The major degradation product, N-2,6-dimethylphenyl-N-methoxyacetyl-alanine (CGA-62826) was found to comprise 5.7 percent of the applied product in the day 14 irradiated sample and 6.1 percent in the 28 day sample. Total radiocarbon remaining as metalaxyl was 88.5 percent for the irradiated samples and 89.9 percent for the dark controls. (MRID 41156001)

**3. Photodegradation in soil**

Metalaxyl was stable to photodegradation in a silty loam soil exposed to a xenon arc lamp. The results indicate no difference between the degradation of the irradiated sample and the control sample. The study also demonstrated that the residues degraded at a rate comparable to those found in the aerobic metabolism study. (MRID 00100456)

**4. Aerobic soil metabolism**

The aerobic soil metabolism half-life of metalaxyl was determined to be about 40 days. The major degradate, CGA-62826, was further broken down to non-extractable material and CO<sub>2</sub>. CGA-62826 accounted for up to 53.6 percent of the applied material at 66 days and thereafter degraded to 23 percent at 360 days. At 12 months, metalaxyl parent accounted for less than 2 percent of the applied material and nonextractable residues accounted for 38.3 percent. (MRID 00104494)

## 5. Anaerobic soil metabolism

In aerobic soil, parent metalaxyl was degraded to 60 percent of the applied material at 31 days after which anaerobic conditions were established. After 66 days, the parent declined to 49.4 percent and after 89 days it had declined to 32.5 percent. The major degradation product was CGA-62826 which accumulated to 54.4 percent of applied product after 89 days. CO<sub>2</sub> did not appear to be a major degradate and non-extractable compounds did not exceed 10 percent of the material applied. (MRID 00104494)

## 6. Anaerobic aquatic metabolism

Metalaxyl degraded in the anaerobic aquatic environment with a half-life of 26.9 days in soil with water, while the half-lives were 21.7 and 29.9 days, respectively, in the sediment and water phases. Metalaxyl accounted for 96.4 percent (1.7 ppm) at the start of the study and decreased to 1.3 percent (0.02 ppm) after 100 days post-treatment and was not detected after that time. CGA-62826 increased up to 85.5 percent at 265 days after treatment and then decreased to 48.0 percent by study termination at day 385. The metabolite, N-3-hydroxy-2,6-dimethylphenyl-N-methoxyactyl-L-alanine (CGA-119857) accounted for up to 16.3 percent at the end of the study, while CO<sub>2</sub> accounted for only 1.4 percent (0.02) ppm) of the applied radioactivity. (MRID 42259801)

## 7. Aerobic aquatic metabolism

Metalaxyl degraded in the aerobic aquatic environment with a half-life of 55.11 days in soil with water. The reported half-lives were approximately 70 and 41 days, respectively, in the sediment and water phases. Parent metalaxyl (65.36%) and CGA-62826 (20.56%) were the only major metalaxyl residues found in soil and water extracts after 30 days of incubation. Unextractable residues accounted for 3.47 percent, while CO<sub>2</sub> was less than 0.5 percent of the applied radioactivity.

This study was found to be unacceptable because data related to the concentration of metalaxyl in the sediment or water individually were not provided. (MRID 422590802)

## 8. Leaching and adsorption/desorption

In unaged leaching studies, parent <sup>14</sup>C-metalaxyl leached rapidly in sandy soil with up to 92 percent of the radioactivity recovered in the leachate. In sandy clay loam and silt loam soils, the majority of the radioactivity was recovered in the 6 to 24 cm soil layers with less than 0.6 percent in the leachates.

In aged leaching studies, 79.2 percent of the applied radioactivity was found in the leachate and 16.1 percent remained in the soil in the sandy soil column. Of the activity found in the leachate, 56 percent was parent, 31 percent was CGA-62826, and 12 percent was unidentified. In the silt loam soil, 48.7 percent was in the leachate and 34.9% remained in the column. Approximately 70 percent of the radioactivity found in the leachate was parent, 18 percent was CGA-62826 and 11 percent was unidentified.

Adsorption/desorption studies using radiolabeled metalaxyl demonstrate partition coefficient,  $K_d$  values of 0.43, 0.48, 0.87 and 1.40 for sandy, sandy loam, silt loam and sandy clay loam soil. (MRIDs 00100464, 00100465, 00100466)

## **9. Volatility**

Volatilization studies demonstrated that less than 5 percent of the applied metalaxyl would be lost due to volatilization, and that volatilization is not a major route of metalaxyl dissipation. (MRID 00100455)

## **10. Terrestrial Field Dissipation**

At the present time, none of the submitted field dissipation studies completely satisfy the data requirements for field dissipation for terrestrial uses. However, the Agency believes that little will be gained from the submission of additional field dissipation studies. Field studies demonstrate that metalaxyl and its primary degradate CGA-62826, are capable of leaching to the 36 to 48 inch soil depth. Groundwater and drinking water monitoring studies demonstrate that metalaxyl and CGA-62826 have the potential to reach groundwater. Furthermore, there are sufficient data to demonstrate that the primary routes of dissipation are leaching, aerobic soil metabolism and plant uptake. The reported half-lives of metalaxyl at the various field locations, where the studies were considered supplemental, varied from 14 to 56 days.

The field dissipation half-lives determined from four previously reviewed field dissipation studies were approximately 27, 36, 148 and 296 days (although the data in the latter two studies were too variable to accurately assess the dissipation).

Three other field dissipation studies produced the following results:

1. In one study, metalaxyl dissipated with a half-life of 56 days from the upper 6 inches of bareground plots of loamy sand soil in California after a broadcast application of metalaxyl (Ridomil 2E, 2 lbs/gallon EC) at 8 lbs AI/acre. The degradate, CGA-62826, was detected in the 0 to 6 inch soil

depth at all sampling intervals. Metalaxyl and CGA-62826 leached to the 36 to 48 inch soil depth; leaching correlated with significant amounts of irrigation water applied to the plots. This study is scientifically sound, but does not meet guideline requirements because adequate freezer storage stability data were not provided. (MRID 41765001)

2. In the second study, metalaxyl dissipated with a half-life of 50 days from the upper 6 inches of plots of sandy loam soil in a California citrus grove following the last of three applications (3-month intervals) of metalaxyl (Ridomil 2E, 2 lb/gallon EC) at 4.4 lbs AI/acre (13.2 lbs AI/acre total). The degradate, CGA-62826, was detected in the 0 to 6 inch soil depth at most sampling intervals. Metalaxyl leached to the 24 to 36 inch soil depth and CGA-62826 leached to the 36 to 48 inch soil depth. This study is scientifically sound, but does not meet guideline requirements because adequate freezer storage stability data were not provided. (MRID 41765002)

3. In the last study, metalaxyl dissipated with half-lives of 38 to 39 days from the upper 6 inches of bareground and cropped tobacco plots of loamy sand soil in North Carolina after a single broadcast application of metalaxyl (Ridomil 2E, 2 lb/gallon EC) at 4.3 lbs AI/acre. The degradate, CGA-62826, was detected in the 0 to 6 inch soil depth at most sampling intervals. Metalaxyl and CGA-62826 leached to the 36 to 48 inch soil depth; however, leaching patterns were confounded with apparent contamination during sampling. This study is scientifically sound, but does not meet guideline requirements because the patterns of leaching of metalaxyl and CGA-62826 were confounded by an apparent problem with contamination during sampling; and adequate freezer storage stability data were not provided. (MRID 41809301)

## **11. Aquatic field dissipation**

Metalaxyl dissipated from rice paddy water with calculated half-lives of 5 and 20 days and from soil with half-lives of 11 and 24 days. The studies were not acceptable because soil samples containing metalaxyl and its major degradate, CGA-62826, were stored frozen for up to 436 days before analysis and storage stability experiments were performed for only up to 180 days. The study is scientifically sound but does not meet guideline requirements because adequate storage stability data were not provided. (MRIDs 42259803, 422590804)

## **12. Accumulation in fish**

In a 29-day flow-through study in which bluegill sunfish were exposed to a metalaxyl concentration of 1 ppm, bioaccumulation factors of less than or equal

to 7 were reported in whole fish. Bioaccumulation in edible and non-edible tissues ranged from 0.60 to 0.98 and 3.25 to 14.65, respectively. Residues declined rapidly during depuration. In another accumulation study with catfish, bioaccumulation factors were below 1x in the edible, non-edible and whole fish portions at all exposure sampling times. Greater than 80 percent of the residues were recovered after 14 days of depuration. (MRIDs 00100468, 00100470)

#### **b. Environmental Fate Assessment**

Based on a review of all studies submitted, metalaxyl was found to be moderately stable under normal environmental conditions. At 20 C the calculated hydrolytic half-life was 200 days at pH 5 and 7, and 115 days at pH 9. Metalaxyl was photolytically stable in water when exposed to natural sunlight, with a half-life of 400 days, and less than 10 percent of the material photolyzed during the 28-day test period. Studies indicate that metalaxyl is stable to photodegradation on soil, with test results demonstrating no difference between the irradiated sample and the control sample. The aerobic soil metabolism half-life is determined to be about 40 days. In aquatic systems, metalaxyl degrades moderately rapidly under both aerobic and anaerobic conditions. Finally, studies indicate that less than 0.5 percent of the applied metalaxyl would be lost to volatilization.

Metalaxyl and its degradates readily leach in sandy to sandy clay loam, soils low in organic matter. It is considered to be a strong leacher because 57 and 92 percent of the applied material was detected as parent in leachates from two unaged 30-cm soil columns. In an aged leaching study conducted with sandy soil, approximately 44 percent of the material applied was found to be parent metalaxyl and 34 percent was CGA-62826. In an aged leaching study with silty loam soil, the percent of parent and CGA-62826 identified were 57 and 92, respectively.

Under field and laboratory conditions, the soil half-life of metalaxyl ranged from 14 to 56 days. In two aquatic field dissipation studies, metalaxyl dissipated from rice paddy water with half-lives of 5 and 20 days, and from soil with half-lives of 11 and 24 days. The major degradation product formed in the field studies was CGA-62826.

The Agency concludes that the primary routes of dissipation of metalaxyl in surface soil appear to be aerobic soil metabolism, leaching and plant uptake. In aquatic systems, such as rice culture, the Agency can only tentatively identify a route of dissipation because the compound is stable to hydrolysis, photolysis in water and soil and does not volatilize appreciably. However, metalaxyl degrades moderately rapidly under aerobic aquatic and anaerobic aquatic conditions, which are probably the main routes of

dissipation in aquatic systems together with leaching, surface mobility and plant uptake. Sensitized aqueous photodegradation, where absorbed light energy could accelerate aqueous photodegradation, may also be important in dissipation of metalaxyl and residues from aquatic systems.

Both laboratory and field studies indicate that metalaxyl is persistent and mobile and will leach in many soils. Although metalaxyl has been found to be less stable in the field than in laboratory studies, available field and aquatic studies demonstrate that metalaxyl is mobile under normal use conditions. In light of these concerns, the December 1981 Registration Standard required the completion of groundwater monitoring studies for metalaxyl. In 1988, the Agency required that retrospective studies be conducted for metalaxyl because of its wide use as a pesticide and also due to the potential for metalaxyl and its major degradate, CGA-62826 to reach groundwater. Because the Agency has determined that sufficient data are available to regulate metalaxyl and that additional groundwater studies were not necessary, the requirement for retrospective groundwater monitoring studies was placed on reserve in 1993.

Monitoring data demonstrate that metalaxyl and its primary degradate, CGA-62826 have the potential to reach groundwater. Metalaxyl has been detected in ground water in five states at levels typically ranging up to 3 ppb. Concentrations have been reported as high as 236 ppb, but concentrations this high are not likely to be the result of normal field use.

Although metalaxyl does not pose a threat to nontarget species, it does exceed the Level of Concern (LOC) for groundwater quality based on the Agency's groundwater criteria for mobility and persistence.

Fish accumulation studies indicate that parent metalaxyl bioaccumulation factors (BCF) in whole fish of less than or equal to 7X were found when bluegill sunfish were exposed to 1 ppm <sup>14</sup>C-metalaxyl in a continuous flow-through system for 29 days. Fish accumulation did not exceed seven fold when fish were exposed to metalaxyl at 1 ppm in water, and residues were found to accumulate in the nonedible portions over the edible portions in a ratio of about 4:1 to 15:1. Residues declined rapidly during depuration. In addition, a separate fish accumulation study using catfish showed accumulation of one fold and rapid depuration.

## **2. Ecological Effects**

The ecotoxicological data base is essentially complete for reregistration purposes. Available studies are adequate to characterize the toxicity of metalaxyl to most nontarget terrestrial organisms and to aquatic species when



used on terrestrial food, feed and nonfood sites. However, the Agency has determined that avian reproduction studies are now required to assess the chronic risk of metalaxyl to birds.

**a. Ecological Effects Data**

**(1) Terrestrial Data**

**Avian Acute Toxicity**

Avian Acute Oral Toxicity Findings			
Species	% Test Material (TGAI)	LD <sub>50</sub>	Conclusions
Mallard duck	96.9	1466 mg/kg	slightly toxic

These results show that metalaxyl is slightly toxic to birds on an acute basis. (MRID 00077334)

**Avian Subacute Dietary Toxicity**

Avian Subacute Dietary Toxicity Findings			
Species	% Test Material	LC <sub>50</sub>	Conclusions
Bobwhite Quail	96.9	> 10,000 ppm	practically nontoxic
Mallard Duck	96.9	> 10,000 ppm	practically nontoxic
Japanese Quail	tech.	> 10,000 ppm	practically nontoxic

On a subacute dietary basis, metalaxyl has been characterized as being practically non-toxic to avian species. (MRIDs 00077335, 00063989, 00063988).

**Avian Reproduction**

Avian reproduction studies are required when birds may be exposed repeatedly or continuously through persistence, bioaccumulation, or multiple applications, or if mammalian reproduction tests indicate reproductive hazard.

There are no avian reproduction studies in the current metalaxyl database. These studies had not been previously required because of the low acute toxicity of metalaxyl. Although the Agency has no evidence to indicate that metalaxyl may cause reproductive effects in birds, these studies are now required because (1) new scientific knowledge indicates that subtle effects, that may not be evident from acute testing, may occur from chronic exposure to some chemicals and (2) present product labeling of metalaxyl allows several applications of the end-use product per growing season. These studies are now required to assess the chronic risk of metalaxyl to birds.

### **Toxicity to Nontarget Mammals**

As stated in Section III, B, 1, the acute oral LD<sub>50</sub> value in rats was found to be 669 mg/kg indicating that metalaxyl is slightly toxic to wild mammals. (MRID 00063990)

### **(2) Aquatic Data**

#### **Acute Freshwater Fish Toxicity**

<b>Freshwater Fish Acute Oral Toxicity Findings</b>			
<b>Species</b>	<b>% Test Material (TGAI)</b>	<b>LC<sub>50</sub></b>	<b>Conclusions</b>
Rainbow trout (2 studies)	95.1 94.4	132 mg/L 130 mg/L	practically non-toxic
Bluegill sunfish (2 studies)	94.4 95.1	150 mg/L 139 mg/L	practically non-toxic

The results of the 96-hour acute toxicity studies indicate that metalaxyl can be characterized as being practically non-toxic to both cold and warm water fish. (MRIDs 00071303, 00100447, 00100446, 00071302)



### Acute testing with the formulated product

Freshwater Fish Acute Testing with the Formulated Product			
Species	% A.I.	Result EC50	Conclusion
Bluegill	27.9	27 mg/L	slightly toxic
Rainbow trout	27.9	18.4 mg/L	slightly toxic

The results of the 96-hour EC50 studies indicate that metalaxyl can be characterized as slightly toxic to freshwater fish. (MRIDs 00071301, 00072396).

### Chronic Test-Early Life Stage

Chronic Test-Early Life Cycle		
Species	% A.I.	NOEC
Fathead minnow	90.1	9.1 mg/L

The highest concentration tested was 9.1 mg/L. Due to 90-100%, survival the NOEC was established at 9.1 mg/L. (MRID 00071308).

### Freshwater Invertebrate Toxicity

#### Acute Freshwater Invertebrate Toxicity

Freshwater Invertebrate Toxicity Findings			
Species	% Test Material (TGAI)	LC <sub>50</sub>	Conclusions
<i>Daphnia magna</i>	95.1	121 mg/L	slightly toxic
	96.9	29 mg/L	slightly toxic
	94.4	28 mg/L	slightly toxic

There is sufficient information to characterize metalaxyl as slightly toxic to aquatic invertebrates. (MRID 00100448, 00071306, 00063986)

### Acute testing with the formulated product

Acute Toxicity Findings on the End-Use Formulation			
Species	% A.I. formulated	LC50	Conclusion
<i>Daphnia magna</i>	27	12 mg/L	slightly toxic

There is sufficient information to characterize the formulated product of metalaxyl as slightly toxic to freshwater aquatic invertebrates. (MRID 00071304)

### Chronic Test-life cycle

Chronic Test-Life Cycle		
Species	% A.I.	Results
<i>Daphnia magna</i>	90.1	NOEC 1.27 mg/L LOEC 2.70 mg/L MATC 1.85 mg/L

Based on the data submitted, the No Observable Effect Concentration (NOEC) was established at 1.27 mg/L; the Lowest Observable Effect Concentration (LOEC) at 2.70 mg/L; and the Maximum Allowable Tolerated Concentration (MATC) at 1.85 mg/L. (MRID 0071307)

### Estuarine/Marine Toxicity

Estuarine/Marine Acute Toxicity Findings			
Species	% Test Material	LC <sub>50</sub>	Conclusions
<i>Mysidopsis bahia</i> (shrimp)	96.1	25.7 ppm	slightly toxic
<i>Crassostrea virginica</i> (oyster)	96.1	4.6 ppm	moderately toxic
<i>Mysidopsis bahia</i>	25.0	5.98 ppm	moderately toxic
<i>Crassostrea virginica</i>	25.0	4.4 ppm	moderately toxic

There is sufficient information to characterize technical metalaxyl as slightly toxic to mysid shrimp and the 25 % formulated product as moderately toxic to mysid shrimp. Both formulated and technical metalaxyl were found to be moderately toxic to the Eastern oyster. (MRIDs 41288101, 41288102, 41288103, 41288104, 41855801, 42378101, 42337501)

### (3) Non-Target Insect Data

Nontarget Insect Acute Contact Toxicity Findings			
Species	% Test Material	LD <sub>50</sub>	Conclusion
<i>Apis mellifera</i> (honeybee)	27.0	> 100ug/bee	practically non-toxic

There is sufficient information to characterize metalaxyl as practically non-toxic to bees. (MRID 40276701).

### (4) Non-Target Plants Data

Aquatic Plant Toxicity Findings		
Species	% A.I.	EC <sub>50</sub>
<i>Selenastrum capricornutum</i> (algae)	90	140 ppm
<i>Lemna gibba</i> (duckweed)	90	92 ppm

Metalaxyl with an EC<sub>50</sub> of 140 ppm (cells/ml) is not expected to exert a detrimental effect on the alga *Selenastrum* at application rates up to 3.0 lbs AI/acre. Metalaxyl with an EC<sub>50</sub> of 92 ppm (frond counts) is not expected to exert a detrimental effect on duckweed at application rates up to 3.0 lbs AI/acre. (MRID 00148448)

#### b. Ecological Effects Risk Assessment

Metalaxyl is registered for numerous use sites. Exposure to non-target organisms may result from direct applications, spray drift and/or runoff from treated areas.

## 1. Risk to Terrestrial Animals

### a. Nontarget insects

Nontarget insects will be exposed to metalaxyl based on the end-use product's terrestrial food and nonfood use patterns. For nontarget insects, the honeybee or *Apis mellifera* is the representative test species; with an acute contact LD<sub>50</sub> value of greater than 100 µg/bee, metalaxyl is practically nontoxic to honeybees.

### b. Avian and mammalian species

Avian and mammalian species will be exposed to metalaxyl through the consumption of insect and plant food material containing metalaxyl residues. The criterion for the presumption of high risk from exposure for acute avian and mammalian species is a value greater than or equal to 0.5 for the quotient of the estimated environmental concentration (EEC) divided by the lowest LD<sub>50</sub> value for birds and mammals; this is known as the risk quotient (RQ).

Acute RQ =  $EEC/LC50 \geq 0.5$  for birds and mammals

#### Avian Acute Oral and Subacute Dietary Effects

Metalaxyl has been characterized as being practically non-toxic to avian species on a dietary basis and slightly toxic on an acute, single dose basis. Metalaxyl may be used in granular form or as a liquid formulation. As a liquid formulation, the risk quotient of metalaxyl is the expected environmental concentration (EEC) divided by the dietary LC<sub>50</sub>. For a granular formulation, the risk quotient is the LD<sub>50</sub> per square foot.

#### Granular Formulation (LD<sub>50</sub>/sq ft)

To calculate maximum mg ai/ft<sup>2</sup> for a granular formulation with a maximum application rate of 6.0 lbs AI/acre, where 454,598 is the number of milligrams per pound, and 43,560 are the number of square feet per acre:

$$6.0 \text{ lb ai/A} \times 454,590 \text{ mg/lb} \times 1 \text{ A}/43,560 \text{ ft}^2 = 62.62 \text{ mg/ft}^2$$

The LD<sub>50</sub> for the mallard duck is 1466 mg/kg. The average weight of a mallard duck is 1.082 kg. To calculate the LD<sub>50</sub> per square foot:

$$\frac{62.62\text{kg mg/ft}^2}{1466\text{mg/kg}(1.082)} = 0.039 \text{ LD}_{50}/\text{ft}^2$$

The risks to birds from exposure to granular metalaxyl was analyzed by the above method, LD<sub>50</sub> per square foot, to characterize acute risk. When the LD<sub>50</sub> per square foot value equals or exceeds 0.5, then the pesticide is said to pose a high acute risk to birds. As the calculated value is only 0.039, the risk from granular metalaxyl to exposed birds is minimal.

### Nongranular Formulations (EEC/LC<sub>50</sub>)

Metalaxyl is registered as nongranular formulations for numerous use sites. Exposure to nontarget organisms may result from direct application spray drift and/or runoff from treated areas. The maximum expected terrestrial residues based on a single application at different application rates and on different categories of avian food items are presented in the following table.

Application Rate (lbs AI/A)	Short Grass (ppm)	Long Grass (ppm)	Leaves and Leafy Crops (ppm)	Forage and Insects (ppm)	Seeds (ppm)	Fruits (ppm)
0.14 <sup>1</sup>	34	15	18	8	2	1
0.33 <sup>2</sup>	79	36	42	19	4	2
0.90 <sup>3</sup>	216	99	113	52	11	6
1.0 <sup>4</sup>	240	110	125	58	12	7
1.35 <sup>5</sup>	324	149	169	78	16	10
1.5 <sup>6</sup>	360	165	188	87	18	11
2.0 <sup>7</sup>	480	220	250	116	24	14
3.0 <sup>8</sup>	720	330	375	174	36	21
4.0 <sup>9</sup>	960	440	500	232	48	28
6.0 <sup>10</sup>	1440	660	750	348	72	42
7.2 <sup>11</sup>	1728	792	900	418	86	50
8.0 <sup>12</sup>	1920	880	1000	464	96	56

1. broccoli, cabbage, cauliflower, cotton, cucumbers, melons, squash, onions, alfalfa, buckwheat, dill, cucumber 2. beans, lentils, potatoes, avocados, raspberries, cotton, onions, cucurbits, barley, cole crops 3. hops, peas, soybeans, melons, ornamental turf, cotton, forage and hay, brassica, spinach, rice, blueberries, tobacco 4. lettuce, peanuts, squash, ornamental plants, hops, strawberries 5. soybeans, tomatoes, ornamental plants, cotton, vegetable bedding plants, onions, legume vegetables, lawn and turf 6. apples, cucurbits, grapes, avocado, asparagus 7. spinach, pineapple, citrus, tomatoes, lettuce, legume vegetables, peanuts 8. tobacco, citrus, grapes, herbaceous plants 9. apples, citrus, grapes, herbaceous plants 10. stone fruit, conifer trees, shrubs and vines 11. pome fruit, citrus trees 12. apples, citrus, stone fruit

Acute dietary risk to birds from nongranular metalaxyl were analyzed by comparing EEC's to the  $LC_{50}$  values. When the risk quotient ( $EEC/LC_{50}$ ) is at least equal to 0.2, the chemical is a candidate for Restricted Use classification. When the quotient is at least 0.5, the chemical is said to be a high acute risk to birds. The EEC value for short grass based on the maximum application rate is 1920 ppm. The  $LC_{50}$  from the avian dietary studies were shown to be in excess of 10,000 ppm. If the  $LC_{50}$  were estimated as 5 times the no mortality level (criteria for no risk is based on an EEC less than the  $LC_{50}/0.2$ ), then the estimated  $LC_{50}$  would be 50,000 ppm. The quotient of the  $EEC/LC_{50}$  (1920 ppm/50,000 ppm) is significantly less 0.2 and 0.5. Therefore, it can be concluded that there are minimal risks to birds from dietary exposure to metalaxyl.

### **Avian Chronic Risk**

Chronic risk cannot be determined as there are no avian reproduction studies for metalaxyl. Due to its widespread use (registered on over 100 agricultural crops), multiple applications, and persistence in the field, these studies are needed.

### **Mammalian Risk**

This small mammal risk assessment is based on a sole toxicity test using laboratory rats. The test resulted in a rat  $LD_{50}$  value of 669 mg/kg which indicates that metalaxyl is slightly toxic to small mammals. Due to this low toxicity metalaxyl is not expected to present a risk to small mammals.

## 2. Risk to Aquatic Animals

Estimated aquatic environmental concentrations were calculated and are presented in the following table.

Application Rate (lbs AI/acre)	EEC Ground <sup>1</sup> Application (ppb)	EEC Aerial <sup>2</sup> Application (ppb)	EEC Direct <sup>3</sup> Application (ppb)
0.14	0.85	0.94	8.54
0.33	2.01	2.23	20.13
0.90	5.49	6.04	54.90
1.0	6.10	6.71	61.00
1.4	8.24	9.06	82.35
1.5	9.15	10.07	91.50
2.0	12.2	13.2	122.0
3.0	18.3	20.1	183.0
4.0	24.4	26.8	244.0
6.0	36.6	40.3	366.0
7.2	43.9	48.3	439.2
8.0	48.8	53.7	488.0

1. The total aquatic EEC from a 10-acre field treated by unincorporated ground application and draining into a 6-foot deep one acre water body. 2. The total loading from both runoff (1%) and drift (5%) of a 10-acre field treated by aerial application and draining into a 6 foot deep one acre water body. Aerial application includes mist blowers. 3. A single inadvertent direct application to a 6 foot deep one acre water body.

### Acute Aquatic Risk

The Risk Quotients (RQ) are calculated by comparing the EEC values for ground and aerial applications to the lowest LC<sub>50</sub> values for freshwater and estuarine fish and invertebrates for technical and formulated metalaxyl. When the RQ's equal or exceed the levels of concern (LOC) the associated risk can be presumed:

<u>LOC</u>	<u>Risk Presumption</u>
0.5	high acute risk
0.1	Restricted Use
0.05	risk to endangered species

The following RQ's were calculated for ground and aerial applications for freshwater and estuarine fish and invertebrates.

Organism	Ground Application	Aerial Application
<b>Freshwater fish</b> technical formulate	0.0004 0.003	0.0004 0.003
<b>Daphnia</b> technical formulate	0.002 0.004	0.002 0.005
<b>Mysid</b> technical formulate	0.002 0.008	0.002 0.009
<b>Oyster</b> formulate	0.011	0.012

As the RQ's are below the levels of concern, there are minimal risks to non-endangered and endangered freshwater and estuarine species.

### Chronic Aquatic Risk

When the risk quotient of the EEC/NOEC is less than 1.0, it is presumed that the chemical will not pose a high chronic risk. Metalaxyl can be applied on many of the registered crops up to four times per season. As it is persistent, the maximum residues from ground and aerial application are 0.193 ppm ground application and 0.213 ppm aerial application. As these residue levels are below the NOEC of 9.1 mg/L from the fathead minnow chronic study, chronic risks to freshwater fish are minimal.

### Risk to Aquatic Plants

The risk to aquatic plants is determined by comparing the EEC's from ground and aerial applications to the EC<sub>50</sub> values for duckweed and algae. As the highest EEC's, 48.8 ppb and 53.7 ppb, respectively, are less than the EC<sub>50</sub> values of 92 and 140 ppm, metalaxyl is not expected to adversely affect aquatic plants.

### Risk to Endangered Species

The registered uses of metalaxyl do not present an acute hazard to endangered terrestrial and aquatic animals or plant species. If the Agency discovers a chronic problem after reviewing the required avian reproductive studies, then this issue will be revisited.



## IV. RISK MANAGEMENT AND REREGISTRATION DECISION

### A. Determination of Eligibility

Section 4(g)(2)(A) of FIFRA calls for the Agency to determine, after submission of relevant data concerning an active ingredient, whether products containing the active ingredients are eligible for reregistration. The Agency has previously identified and required the submission of the generic (i.e., active ingredient specific) data required to support reregistration of products containing metalaxyl as the active ingredient. The Agency has completed its review of these generic data, and has determined that with the exception of avian reproduction studies, data are sufficient to support reregistration of all products containing metalaxyl. Although the Agency was unable to conduct a chronic avian risk assessment due to lack of avian reproduction studies, the Agency has decided that metalaxyl can be reregistered. However, the Agency will require avian reproduction studies and take appropriate action after reviewing the results.

Appendix B identifies the generic data requirements that the Agency reviewed as part of its determination of reregistration eligibility of metalaxyl, and lists the submitted studies that the Agency found acceptable. The data identified in Appendix B were sufficient to allow the Agency to assess the registered uses of metalaxyl and to determine that metalaxyl can be used without resulting in unreasonable adverse effects to humans and the environment. The Agency therefore finds that all products containing metalaxyl as the active ingredients are eligible for reregistration. The reregistration of particular products is addressed in Section V of this document.

The Agency made its reregistration eligibility determination based upon the target data base required for reregistration, the current guidelines for conducting acceptable studies to generate such data and the data identified in Appendix B. Although the Agency has found that all uses of metalaxyl are eligible for reregistration, it should be understood that the Agency may take appropriate regulatory action, and/or require the submission of additional data to support the registration of products containing metalaxyl, if new information comes to the Agency's attention or if the data requirements for registration (or the guidelines for generating such data) change.

#### 1. Eligibility Decision

Based on the reviews of the generic data for the active ingredient metalaxyl, the Agency has sufficient information on the health effects of metalaxyl and on its potential for causing adverse effects in fish and wildlife and the environment. Based on this information, the Agency concludes that products containing metalaxyl for all uses are eligible for reregistration.

The Agency has determined that metalaxyl products, labeled and used as specified in this Reregistration Eligibility Decision, will not pose unreasonable risks or adverse

effects to humans or the environment. Those products which contain other active ingredients will be eligible for reregistration only when the other active ingredients are determined to be eligible for reregistration.

## **2. Eligible and Ineligible Uses**

The Agency has determined that all uses of metalaxyl are eligible for reregistration.

## **B. Regulatory Position**

The following is a summary of the regulatory positions and rationales for metalaxyl. Where labeling revisions are imposed, specific language is set forth in Section V of this document.

### **1. Tolerance Reassessment**

The Agency is requiring that the chemical name of the metalaxyl metabolite, N-(2-hydroxymethyl-6-methyl)-N-(methoxyacetyl) alanine methyl ester, currently included in the tolerance expression in 40 CFR 180.408 (a) and (c), 185.40000 (a), and 186.40000 (a) be replaced by N-(2-hydroxymethyl-6-methylphenyl)-N-(methoxyacetyl) alanine methyl ester.

#### Tolerances Listed Under 40 CFR § 180.408 (a):

The tolerances listed in 40 CFR § 180.408(a) are for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and N-(2-hydroxy methyl-6-methylphenyl)-N-(methoxyacetyl)-alanine methylester, each expressed as metalaxyl.

Sufficient data are available to ascertain the adequacy of the established tolerances listed in 40 CFR § 180.408(a) for the following commodities: alfalfa, almonds, apples, asparagus, avocados, blueberries, broccoli, cabbage, cauliflower, cereal grains (excluding wheat, barley, and oats) group, citrus fruits group, cranberries, cucurbit vegetables group, fruiting vegetables (except cucurbits) group, ginseng, grapes, leafy vegetables (excluding brassica) group, leaves of root and tuber vegetables group, legume vegetables (succulent or dried group, excluding soybeans), foliage of legume vegetables group, onions (bulb and green), peanuts, pineapples, potatoes, raspberries, root and tuber vegetables (excluding ginseng) group, soybeans, spinach, stone fruits group, strawberries, sunflowers, and walnuts.

The established tolerances for green hops (0.2 ppm), peanut vines (20 ppm), and pineapple forage and fodder (0.1 ppm) should be revoked as these are no longer regulated raw agricultural commodities (RAC).

The established tolerances for beets (0.1 ppm), potatoes (0.5 ppm), and sugar beets (0.1 ppm and 0.5 ppm) should be revoked as these commodities are covered by the established root and tuber vegetable group tolerance (0.5 ppm). The established root and tuber group should exclude ginseng which has an established 3.0 ppm tolerance. In addition, the established tolerances for beet tops (0.1 ppm) and sugar beet tops (10.0 ppm) should be revoked as they are covered under the established crop group tolerance for leaves of root and tuber vegetables (15.0 ppm).

The established tolerance of 0.1 ppm for the Brassica (cole) leafy vegetable group (excluding broccoli, cabbage, and cauliflower) should be revoked as this tolerance was established to cover residues resulting from seed treatments which are no longer registered uses. Separate tolerances will be required for each member of the Brassica leafy vegetable group, because of the greater than five fold difference in residue levels. The available residue data indicate that the established tolerances for cabbage and cauliflower (2 ppm) should be lowered to 1 ppm.

A petition (PP#0F3893) proposing a crop group tolerance for leafy vegetables (except Brassica, excluding spinach) has been submitted. Sufficient data have been submitted to ascertain the adequacy of the pending tolerances. The established tolerance for the leafy vegetables group (excluding Brassica) should be increased from 0.1 ppm to 5 ppm and the group should be renamed to also exclude spinach. Once the increased tolerance is established, the established tolerance for head lettuce (5 ppm) should be revoked.

A petition (PP#1F3993) for crop group tolerances for the cereal grains group (excluding wheat, barley, and oat) and the forage, fodder, and straw of cereal grain group (excluding wheat, barley, and oat) has been submitted. Sufficient data have been submitted to ascertain the adequacy of the pending tolerances. A 0.1 ppm tolerance must be established for the cereal grains group (excluding wheat, barley, and oats), and a tolerance of 1.0 ppm must be established for the forage, fodder, and straw of cereal grains group (excluding wheat, barley, and oats).

Additional data are required to support the 0.1 ppm tolerances for cottonseed. Additional data and a tolerance proposal are required for cotton gin byproducts.

The adequacy of the established tolerances for meat, fat, and meat byproducts of cattle, goats, horses, sheep and poultry and for milk and eggs will be determined once questions pertaining to the analytical method are resolved and the submitted ruminant feeding studies are re-evaluated.

Tolerances Listed Under 40 CFR § 180.408(b):

The tolerances listed in 40 CFR § 180.408(b) are for the indirect or inadvertent residues of metalaxyl present as a result of the application of metalaxyl to the growing of the primary crops listed in 40 CFR § 180.408(a) and tobacco.

Sufficient data are available to ascertain the adequacy of the established indirect or inadvertent tolerances listed in 40 CFR § 180.408(b). Additional field rotational crop studies have been submitted and are currently under review.

Tolerances Listed Under 40 CFR § 180.408(c):

The tolerance listed in 40 CFR § 180.408(c) are with regional registration for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and *N*-(2-hydroxy methyl-6-methylphenyl)-*N*-(methoxyacetyl)-alanine methylester, each expressed as metalaxyl in/on papaya in HI.

Sufficient data are available to ascertain the adequacy of the established tolerances listed in 40 CFR § 180.408(c) for papaya.

Tolerances Listed Under 40 CFR § 185.4000(a):

The food additive tolerances listed in 40 CFR § 185.4000(a) are for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and *N*-(2-hydroxy methyl-6-methylphenyl)-*N*-(methoxyacetyl)-alanine methylester, each expressed as metalaxyl.

Sufficient data are available to ascertain the adequacy of the established food additive tolerances listed in 40 CFR § 185.4000(a) for the following food commodities: citrus oil, dried prunes, raisins, potatoes processed (including potato chips), and tomato puree.

The established tolerance for dried apricots (4 ppm) should be revoked as it is not a regulated commodity.

A 2.0 ppm food additive tolerance for potato granules/flakes and potato chips should be proposed. Once these tolerances are established, the food additive tolerance of 4.0 ppm for potatoes, processed (including potato chips) should be revoked. Additional data and a tolerance proposal (if needed) are required for tomato paste.

Tolerances Listed Under 40 CFR § 185.4000(b):

The food additive tolerances listed in 40 CFR § 185.4000(b) are for the indirect or inadvertent residues of metalaxyl present as a result of the application of metalaxyl to the growing of the primary crops listed in 40 CFR § 180.408(a) and tobacco.

Sufficient data are available to ascertain the adequacy of the established inadvertent or indirect tolerances listed in 40 CFR § 185.4000(b). Additional field rotational crop studies have been submitted and are currently under review.

Tolerances Listed Under 40 CFR § 185.4000(d):

The food additive tolerance listed in 40 CFR § 185.4000(d) is for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and *N*-(2-hydroxymethyl-6-methylphenyl)-*N*-(methoxyacetyl) alanine methylester, each expressed as metalaxyl.

Sufficient data are available to ascertain the adequacy of the established food additive tolerance listed in 40 CFR § 185.4000(d) for dried hops. However, as the regulated RAC for hops is now considered to be dried hops [*Source: PR Notice 93-12 (12/23/93)*], the 20 ppm tolerance for hops, dried should be moved to 40 CFR §180.408(a).

Tolerances Listed Under 40 CFR § 186.4000(a):

The feed additive tolerances listed in 40 CFR § 186.4000(a) are for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and *N*-(2-hydroxy methyl-6-methylphenyl)-*N*-(methoxyacetyl)-alanine methylester, each expressed as metalaxyl.

Sufficient data are available to ascertain the adequacy of the established feed additive tolerances listed in 40 CFR § 186.4000(a) for the following feed commodities: apple pomace (wet), citrus molasses and dried pulp, grape pomace (wet and dried), peanut meal, processed potato waste, raisin waste, soybean hulls and meal, sugar beet molasses, and tomato pomace (dried).

The tolerance for potato waste, dried, processed should be increased from 4.0 ppm to 10 ppm and renamed potatoes, waste from processing. The tolerance for sugar beet molasses should be increased from 1.0 ppm to 5.0 ppm concomitant with the revocation of the 5.0 ppm for indirect or inadvertent residues in sugar beet molasses listed under 40 CFR 186.4000 (b).

The established 2.0 ppm tolerances for apple pomace (dry), hops (dry), peanut soapstock, and soybean soapstock and the 5.0 ppm tolerance for legume vegetable cannery waste should be revoked as these commodities are no longer being regulated because they are not considered major livestock feed items.

Feed additive tolerances must be proposed and established for pineapple process residue (0.5 ppm) and sunflower meal (0.2 ppm).

Tolerances Listed Under 40 CFR § 186.4000(b):

The feed additive tolerances listed in 40 CFR § 186.4000(b) are for the indirect or inadvertent residues of metalaxyl present as a result of the application of metalaxyl to the growing of the primary crops listed in 40 CFR § 180.408(a) and tobacco.

Sufficient data are available to ascertain the adequacy of the established indirect or inadvertent tolerances listed in 40 CFR § 186.4000(b) for the following feed commodities: barley, oats, and wheat, milling fractions.

The indirect or inadvertent tolerance for sugar beet molasses of 5 ppm should be revoked as the need for this tolerance is superseded by the 5 ppm tolerance for this commodity in 40 CFR §186.4000(a).

Tolerances Listed Under 40 CFR § 186.4000(d):

The tolerances listed in 40 CFR § 186.4000(d) are for the combined residues of metalaxyl and its metabolites containing the 2,6-dimethylaniline moiety, and *N*-(2-hydroxymethyl-6-methylphenyl)-*N*-(methoxyacetyl) alanine methylester, each expressed as metalaxyl.

The 20 ppm tolerance for spent hops should be revoked as residues in spent hops will be covered by the 20 ppm tolerance on the RAC (hops, dried).

The reassessment of the established tolerances is set forth in the Tolerance Reassessment Table as follows.

#### Tolerance Reassessment Summary for Metalaxyl

Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
<b>Tolerances listed under 40 CFR §180.408(a)</b>			
Alfalfa, forage	6.0	6.0	
Alfalfa, hay	20.0	20.0	
Almonds	0.5	0.5	
Almonds, hulls	10.0	10.0	
Apples	0.2	0.2	
Asparagus	7.0	7.0	
Avocados	4.0	4.0	
Beets	0.1	Revoke	Established 0.1 ppm tolerance was based on seed use which has been superseded by preplant and foliar uses. In addition, use is covered by 0.5 ppm crop group tolerance for <i>root and tuber vegetables (exc. ginseng)</i> .
Beet, top	0.1	Revoke	Tolerance covered by 15.0 ppm crop group tolerance for <i>leaves of root and tuber vegetables</i> .
Blueberries	2.0	2.0	
Brassica (cole) leafy vegetables group [excluding broccoli, cabbage, and cauliflower]	0.1	Revoke	Separate tolerances are required for each member of the Brassica vegetable crop group for which metalaxyl use is registered.
Broccoli	2.0	2.0	
Cabbage	2.0	1.0	
Cauliflower	2.0	1.0	
Cattle, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Cattle, kidney	0.4		
Cattle, liver	0.4		
Cattle, meat	0.05		
Cattle, meat byproduct (excluding kidney and liver)	0.05		
Citrus fruit	1.0	1.0	<i>Citrus fruits group</i>



Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
Cottonseed	0.1	To be determined	<i>Cotton, undelinted seed</i> Additional residue data are required.
Cranberry	4.0	4.0	<i>Cranberries</i>
Cucurbit vegetables group	1.0	1.0	
Eggs	0.05	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Fruiting vegetables (excluding cucurbits) group	1.0	1.0	
Ginseng	3.0	3.0	
Goats, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Goats, kidney	0.4		
Goats, liver	0.4		
Goats, meat	0.05		
Goats, meat byproduct (excluding kidney and liver)	0.05	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Grain, crops	0.1	0.1	<i>Cereal grains (exc. wheat, barley, and oats).</i>
Grapes	2.0	2.0	
Grasses, forage	0.1	0.1	
Hogs, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Hogs, kidney	0.4		
Hogs, liver	0.4		
Hogs, meat	0.05		
Hogs, meat byproduct (excluding kidney and liver)	0.05		
Hops, green	2.0	Revoke	Hops, green is no longer a regulated RAC.
Horses, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Horses, kidney	0.4		
Horses, liver	0.4		
Horses, meat	0.05		



Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
Horses, meat byproduct (excluding kidney and liver)	0.05		
Leafy vegetables (excluding brassica) group	0.1	5.0	<i>Leafy vegetables (exc. Brassica, exc. spinach)</i>
Lettuce, head	5.0	Revoke	Tolerance will be covered by 5.0 ppm crop group tolerance for leafy vegetables (exc. Brassica, exc. spinach).
Leaves of root and tuber vegetables (human food or animal feed) group	15.0	15.0	
Legume vegetable foliage	8.0	8.0	<i>Legume vegetables group, Foliage of</i>
Legume vegetable group (dry or succulent)	0.2	0.2	<i>Legume vegetables (succulent or dried) group, exc. soybeans</i>
Milk	0.02	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Onions, dry bulb	3.0	3.0	
Onions, green	10.0	10.0	
Peanut, hay	20.0	20.0	
Peanut, vines	20.0	Revoke	Peanut vines are no longer a regulated RAC.
Peanut, nuts	0.2	0.2	<i>Peanuts, nutmeat</i>
Peanut, shells	2.0	2.0	<i>Peanuts, hulls (shells)</i>
Pineapples	0.1	0.1	
Pineapple fodder	0.1	Revoke	Pineapple fodder and forage are no longer regulated RACs.
Pineapple forage	0.1	Revoke	
Potatoes	0.5	Revoke	Tolerance covered by 0.5 ppm crop group tolerance for <i>root and tuber vegetables (exc. ginseng)</i> .
Poultry, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Poultry, kidney	0.4	To be determined	Additional data may be required. (Refer to poultry fat above).
Poultry, liver	0.4	To be determined	Additional data may be required. (Refer to poultry fat above).

Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
Poultry, meat	0.05	To be determined	Additional data may be required. (Refer to poultry fat above).
Poultry, meat byproduct (excluding kidney and liver)	0.05	To be determined	Additional data may be required. (Refer to poultry fat above).
Raspberries	0.5	0.5	
Root and tuber vegetables group	0.5	0.5	<i>Root and tuber vegetables (exc. ginseng).</i>
Soybean, grain	1.0	1.0	<i>Soybeans</i>
Spinach	10.0	10.0	
Sugar beets	0.1	Revoke	Tolerance covered by 0.5 ppm crop group tolerance for <i>root and tuber vegetables (exc. ginseng)</i> .
Sugar beet (tops)	10.0	Revoke	
Sugar beet (roots)	0.5	Revoke	
Sheep, fat	0.4	To be determined	Depending on the results of required analytical method and storage stability data, additional data may be required.
Sheep, kidney	0.4	To be determined	Additional data may be required. (Refer to sheep fat above).
Sheep, liver	0.4	To be determined	Additional data may be required. (Refer to sheep fat above).
Sheep, meat	0.05	To be determined	Additional data may be required. (Refer to sheep fat above).
Sheep, meat byproduct (excluding kidney and liver)	0.05	To be determined	Additional data may be required. (Refer to sheep fat above).
Stone fruit group	1.0	1.0	<i>Stone fruits group</i>
Strawberries	10.0	10.0	
Sunflowers	0.1	0.1	<i>Sunflower, seed</i>
Sunflower, forage	0.1	0.1	
Walnuts	0.5	0.5	
<b>Tolerances listed under 40 CFR §180.408(b)</b>			
Barley, grain	0.2	0.2	
Barley, fodder	2.0	Revoke	No longer regulated
Barley, forage	2.0	2.0	
Barley, straw	2.0	2.0	
Oat, fodder	2.0	Revoke	No longer regulated

Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
Oat, forage	2.0	2.0	<i>Oats, forage</i>
Oat, grain	0.2	0.2	<i>Oats, grain</i>
Oat, straw	2.0	2.0	<i>Oats, straw</i>
Wheat, fodder	2.0	Revoke	No longer regulated
Wheat, forage	2.0	2.0	
Wheat, grain	0.2	0.2	
Wheat, straw	2.0	2.0	
<b>Tolerances listed under 40 CFR §180.408(c)</b>			
Papaya	0.1	0.1	
<b>Food Additive Tolerances listed under 40 CFR §185.4000(a)</b>			
Apricots (dried)	4.0	Revoke	Dried apricots are not a regulated commodity.
Citrus, oil	7.0	7.0	
Potatoes, processed (including potato chips)	4.0	Revoke	See <i>potato granules/flakes</i> and <i>potato chips</i> below.
Prunes (dried)	4.0	4.0	
Raisins	6.0	6.0	<i>Grapes, raisins</i>
Tomatoes, processed	3.0	3.0	<i>Tomato, puree</i>
<b>Food Additive Tolerances listed under 40 CFR §185.4000(b)</b>			
Barley, milling fractions	1.0	1.0	
Oat milling fractions	1.0	1.0	<i>Oats, milling fractions</i>
Wheat, milling fractions	1.0	1.0	
<b>Food Additive Tolerances listed under 40 CFR §185.4000(d)</b>			
Hops, dried	20.0	Move to 40 CFR §180.408(a)	Hops, dried are now regulated as a RAC
<b>Feed Additive Tolerances listed under 40 CFR §186.4000(a)</b>			
Apple, pomace (dry)	2.0	Revoke	Apple, pomace (dry) is no longer produced as a significant livestock feed.
Apple, pomace (wet)	0.4	0.4	<i>Apple, pomace</i>
Citrus, molasses	7.0	7.0	
Citrus, pulp	7.0	7.0	<i>Citrus, pulp, dried</i>
Grape pomace (dry)	10.0	10.0	<i>Grapes, pomace, dried</i>
Grape pomace (wet)	10.0	Revoke	Covered by 10 ppm tolerance on <i>Grapes, pomace, dried</i>
Hops, dry	2.0	Revoke	Hops, dry is no longer a regulated commodity.
Legume vegetable, cannery waste	5.0	Revoke	Legume vegetable cannery waste is no longer regulated.

Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
Peanut, meal	1.0	1.0	<i>Peanuts, meal</i>
Peanut, soapstock	2.0	Revoke	Peanut soapstock is no longer a regulated commodity.
Potato waste, dried, processed	4.0	10.0	<i>Potatoes, waste from processing</i>
Raisin waste	10.0	10.0	<i>Grapes, raisin waste</i>
Soybean, hulls	2.0	2.0	<i>Soybeans, hulls</i>
Soybean, meal	2.0	2.0	<i>Soybeans, meal</i>
Soybean, soapstock	2.0	Revoke	Soybean soapstock is no longer a regulated commodity.
Sugar beet molasses	1.0	5.0	<i>Sugar beets, molasses</i>
Tomato pomace (dry and wet)	20.0	20.0	<i>Tomato, pomace, dried</i>
<b>Feed Additive Tolerances listed under 40 CFR §186.4000(b)</b>			
Barley, milling fractions	1.0	1.0	
Oat milling fractions	1.0	1.0	<i>Oats, milling fractions</i>
Sugar beet molasses	5.0	Revoke	Inadvertent tolerance covered by primary use tolerance listed under 40 CFR §186.4000(a).
Wheat, milling fractions	1.0	1.0	
<b>Feed Additive Tolerances listed under 40 CFR §186.4000(d)</b>			
Hops, spent	20	Revoke	Tolerance will be covered by the 20.0 ppm tolerance on the RAC, <i>Hops, dried</i> .
<b>Tolerances required under 40 CFR §180.408(a)</b>			
Forage, fodder, and straw of cereal grains group (excluding wheat, barley, and oats)	None	1.0	Must be established.
Cotton, gin byproducts	None	To be determined	Appropriate tolerance must be proposed and established.
<b>Food Additive Tolerances required under 40 CFR §185.4000(a)</b>			
Potatoes, granules/flakes	None	2.0	Must be proposed and established.
Potatoes, chips	None	2.0	Must be proposed and established.
Tomato paste	None	To be determined	Appropriate tolerance (if needed) must be proposed and established.

Commodity	Current Tolerance (ppm)	Tolerance Reassessment (ppm)	Comment/Correct Commodity Definition
<b>Feed Additive Tolerances required under 40 CFR §186.4000(a)</b>			
Pineapples, process residue	None	0.5	Must be established.
Sunflower seeds, meal	None	0.2	Must be established.

The Agency has determined that numerous tolerance revisions are required. These revisions will be handled administratively by the Agency.

#### Codex Harmonization

Numerous maximum residue limits (MRLs) for metalaxyl residues in plant commodities have been established by the Codex Committee on Pesticide Residues, a committee within the Codex Alimentarius Commission, an international organization formed to promote the coordination of international food standards. Codex currently regulates metalaxyl *per se* in plant commodities; however, the Agency has concluded that the U.S. tolerance definition for plant commodities should include metalaxyl and its metabolites that can be converted to 2,6-dimethylaniline and N-(2-hydroxymethyl-6-methylphenyl)-N-(methoxyacetyl) alanine methyl ester. The Codex MRLs and the applicable U.S. tolerances are presented below.

Commodity	MRL (mg/kg) <sup>a</sup>	U.S. Tolerance (ppm) <sup>b</sup>	Recommendation/ Comments <sup>c</sup>
Apple	0.05 <sup>d</sup>	0.2	--
Asparagus	0.05 <sup>d</sup>	7.0	--
Avocado	0.2	4.0	--
Broccoli	0.5	2.0	--
Brussels sprouts	0.2	0.1 (Brassica leafy vegetables)	--
Cabbages, head	0.5	2.0	--
Cacao beans	0.2	None	--
Carrot	0.05 <sup>d</sup>	0.5 (Root and tuber vegetables)	--
Cauliflower	0.5	2.0	--
Cereal grains	0.05 <sup>d</sup>	0.1 (Grain, crops)	--
Citrus fruits	5	1	--
Cotton seed	0.05 <sup>d</sup>	0.1	--
Cucumber	0.5	1.0 (Cucurbit vegetables)	--
Gherkin	0.5	1.0 (Cucurbit vegetables)	--
Grapes	1	None	--

Commodity	MRL (mg/kg) <sup>a</sup>	U.S. Tolerance (ppm) <sup>b</sup>	Recommendation/ Comments <sup>c</sup>
Hops, dry	10	20.0 (Hops, dried)	--
Lettuce, head	2 <sup>e</sup>	5.0	--
Melons, except watermelon	0.2	1.0 (Cucurbit vegetables)	--
Onion, bulb	0.2 <sup>e</sup>	0.5	--
Peanut	0.1	0.01	--
Peas, shelled	0.05 <sup>d</sup>	0.1 (Legume vegetables)	--
Peppers	1	1.0 (Fruiting vegetables)	--
Pome fruits	1	None	--
Potato	0.05 <sup>d</sup>	0.5	--
Raspberries, Red, Black	0.2	0.5	--
Soya bean (dry)	0.05 <sup>d</sup>	1.0	--
Spinach	2 <sup>e</sup>	10.0	--
Squash, Summer	0.2	1.0 (Cucurbit vegetables)	--
Strawberry	0.2	10.0	--
Sugar beet	0.05 <sup>d</sup>	0.5 (Sugar beet, roots)	--
Sunflower seed	0.05 <sup>d</sup>	0.1	--
Tomato	0.5	1.0 (Fruiting vegetables)	--
Watermelon	0.2	1.0 (Cucurbit vegetables)	--
Winter squash	0.2	1.0 (Cucurbit vegetables)	--

- a/ All metalaxyl MRLs are final (CXL), except MRLs for lettuce, onions, and spinach which are at step 8 and the MRL for strawberries which is at step 7B.
- b/ Based on the combined residues of metalaxyl and its metabolites that can be converted to 2,6-DMA and N-(2-hydroxymethyl-6-methylphenyl)-N-(methoxyacetyl) alanine methyl ester.
- c/ As the tolerance definitions for Codex MRLs and U.S. tolerances are different, harmonization of Codex MRLs and U.S. tolerances is not currently possible.
- d/ At or about the limit of detection.
- e/ MRL is temporary.

The following conclusion can be made regarding efforts to harmonize the U.S. tolerances with the Codex MRLs:

- Harmonization of Codex MRLs and U.S. tolerances for metalaxyl is not possible at the present time as the Codex and U.S. tolerance definitions are incompatible.

## 2. Reference Dose (RfD)

The RfD was established as 0.08 mg/kg/day based on a NOEL of 7.8 mg/kg/day and an uncertainty factor of 100. The NOEL was obtained from a 6-month dog study. The RfD was approved on 4/3/94. In 1982 the FAO/WHO Joint Meeting on Pesticide Residues established an Acceptable Daily Intake (ADI) of 0.03 mg/kg/day for metalaxyl.

### **3. Risk Mitigation**

The Agency has determined that the current uses of metalaxyl do not pose an unreasonable threat to the environment based upon available environmental fate and ecotoxicity data. However, because metalaxyl has been detected in groundwater, the Agency will take the following actions to reduce the possibility of groundwater contamination in vulnerable areas.

1. All end-use products will be required to contain a groundwater advisory statement. (Refer to Section V, B, 2).
2. The registrant, Ciba-Geigy Corporation, has agreed to conduct a user education program if they become aware of groundwater levels of metalaxyl at or above 400 ppb in samples from monitoring sites. The function of this program will be to alert users to the risks to groundwater from metalaxyl use and to discuss ways to mitigate these risks.

### **4. Endangered Species**

Based on available ecotoxicity data, the Agency has determined that endangered species precautionary labeling will not be required at this time.

### **5. Labeling Requirements**

#### A. Worker Protection Standard

Any product whose labeling reasonably permits use in the production of an agricultural plant on any farm, forest, nursery, or greenhouse must comply with the labeling requirements of PR Notice 93-7, "Labeling Revisions Required by the Worker Protection Standard (WPS), and PR Notice 93-11, "Supplemental Guidance for PR Notice 93-7, which reflect the requirements of EPA's labeling regulations for worker protection statements (40 CFR part 156, subpart K). These labeling revisions are necessary to implement the Worker Protection Standard for Agricultural Pesticides (40 CFR part 170) and must be completed in accordance with, and within the deadlines specified in, PR Notices 93-7 and 93-11. Unless otherwise specifically directed in this RED, all statements required by PR Notices 93-7 and 93-11 are to be on the product label exactly as instructed in those notices.

After April 21, 1994, except as otherwise provided in PR Notices 93-7 and 93-11, all products within the scope of those notices must bear WPS PR Notice complying labeling when they are distributed or sold by the primary registrant or any supplementally registered distributor.

After October 23, 1995, except as otherwise provided in PR Notices 93-7 and 93-11, all products within the scope of those notices must bear WPS PR Notice complying labeling when they are distributed or sold by any person.

#### Post-application Reentry

Under the Worker Protection Standard (WPS), interim restricted entry intervals (REI) for all uses within the scope of the WPS are established based on the acute toxicity of the active ingredient. The toxicity categories of the active ingredient for acute dermal toxicity, eye irritation potential, and skin irritation potential are used to determine the interim WPS REI. If one or more of the three acute toxicity effects are in Toxicity Category I, the interim WPS REI is established at 48 hours. If none of the acute toxicity effects are in Category I, but one or more of the three is classified as Category II, the interim WPS REI is established at 24 hours. If none of the three acute toxicity effects are in Category I or II, the interim WPS REI is established at 12 hours. A 48 hour REI is increased to 72 hours when an organophosphate pesticide is applied outdoors in arid areas. In addition, the WPS specifically retains two types of REI's established by the Agency prior to the promulgation of the WPS: product-specific REI's established on the basis of adequate data and interim REI's that are longer than those that would be established under the WPS.

For end-use product containing metalaxyl as an active ingredient, the Agency is requiring the establishment of a 24-hour restricted entry interval for uses of the product that fall within the scope of the WPS for agricultural pesticides. This requirement is based on categorizing the eye irritation potential of the active ingredient as Toxicity Category II, moderate eye irritant. The Agency found no extenuating circumstance for retaining the 12-hour interim restricted entry interval placed on metalaxyl products by PR Notice 93-7. The 12-hour interim WPS restricted entry interval was established because early data indicated that metalaxyl was in Toxicity Category III for eye irritation potential.

#### Personal Protective Equipment (PPE) Requirements

##### Mixer/loader/applicator PPE

For each end-use product, PPE requirements for pesticide handlers will be set during reregistration in one of two ways:

1. If the Agency has no special concerns regarding other adverse effects of an



active ingredient, the PPE for pesticide handlers will be established based on the acute toxicity of the end-use product. For occupational-use products, PPE will be established using the process described in PR Notice 93-7 or more recent EPA guidelines.

2. If the Agency has special concerns about an active ingredient due to very high acute toxicity or certain adverse effects, such as allergic effects or other effects (cancer, developmental toxicity, reproductive effects, etc):

- the Agency may establish in the RED minimum or "baseline" handler PPE requirements for that active ingredient that pertain to all or most occupational end-use products containing that active ingredient.

- these minimum PPE requirements must be compared with the PPE that would be designated on the basis of the acute toxicity of each end-use product, and

- the more stringent choice for each type of PPE (i.e., bodywear, hand protection, footwear, eyewear, etc.) must be placed on the label of the end-use product.

There are no special toxicological concerns about metalaxyl that warrant the establishment of active-ingredient-based PPE requirements.

#### Early Entry PPE

Personal protective equipment requirements for persons who must enter areas that remain under a restricted entry interval are based on the toxicity concerns about the active ingredient. The requirements are set in one of two ways:

1. If the Agency has no additional concerns about an active ingredient, it established the early entry PPE requirements based on acute dermal toxicity, skin irritation potential, and eye irritation potential of the active ingredient.
2. If the Agency has special concerns about an active ingredient due to very high acute toxicity or to other adverse effects, such as allergic effects or cancer, developmental toxicity, reproductive effects, etc., it may establish early entry PPE requirements that are more stringent than would be established on the basis of acute toxicity concerns.

Since metalaxyl is classified as category III for acute dermal toxicity and category IV for skin irritation potential, and EPA has no special concerns about other adverse effects, the PPE required early entry is: coveralls, chemical-resistant gloves, shoes and socks. Since metalaxyl is classified as

toxicity category II for eye irritation potential, protective eyewear is also required.

### Personal Protective Equipment for Handlers

The PPE for pesticide handlers will be based on the acute toxicity of the end-use product. For occupational-use products, PPE will be established using the process described in PR Notice 93-7 or more recent EPA guidelines.

### Entry Restrictions

Some registered uses of metalaxyl are within the scope of the Worker Protection standard for Agricultural Pesticides (WPS) and some are outside the scope of the WPS.

WPS Uses: For occupational end-use products containing metalaxyl as an active ingredient, the Agency is establishing a 24-hour restricted-entry interval for each use of the product that is within the scope of the Worker Protection Standard for Agricultural Pesticides (WPS). The PPE required for early entry allowed by the WPS as stated earlier is: Coveralls, chemical-resistant gloves, shoes plus socks, and protective eyewear.

Non-WPS Uses: The Agency is establishing the following entry restrictions for all non WPS occupational uses of metalaxyl end-use products:

For liquid applications:

Do not enter or allow others to enter the treated area until sprays have dried.

For dry applications:

Do not enter or allow others to enter the treated area until dusts have settled.

Homeowner Products: Some products containing metalaxyl are intended primarily for homeowner use. The Agency is concerned about post-application exposures to homeowners following application of metalaxyl; therefore, the Agency is requiring that home-use products contain the following requirement:

For liquid applications:

Do not allow people or pets to enter the treated area until the sprays have dried.

For dry applications:

Do not allow people or pets to enter the treated area until dusts have settled.

#### Other Occupational/Residential Requirements

The Agency is requiring the following labelling statements to be located on all end-use products containing metalaxyl that are intended primarily for occupational use:

##### Application Restrictions:

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

##### Engineering Controls:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

##### User Safety Requirements:

Follow manufacture's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

##### User Safety Recommendations:

-Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

-Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

-Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### B. Groundwater

The Agency is concerned about the potential for groundwater contamination

from registered uses of metalaxyl. Available laboratory and field studies indicate that metalaxyl is persistent and mobile and may leach in many soils. Metalaxyl has been detected in groundwater at levels typically ranging up to 3 ppb. Concentrations have been reported as high as 236 ppb, but the Agency believes that these higher levels were not likely to have resulted from normal use. In order to reduce the possibility of groundwater contamination in areas where soils are permeable and the water table is shallow, the Agency is requiring a groundwater label advisory for metalaxyl end-use products. In addition, the registrant has agreed to conduct a user education program if they become aware of groundwater levels of metalaxyl at or above 400 ppb in samples from monitoring sites. (Refer to Section V for required label statement and Section IV, B, 4, above for a discussion of risk mitigation measures including the groundwater education program).

#### C. Environmental Hazard

The Agency is requiring labeling to ensure that metalaxyl use will not endangered sensitive aquatic species. (Refer to Section V, B, 2).

#### D. Spray Drift Advisory

In order to inform the user of best management practices that would minimize spray drift from the target site, the Agency is currently preparing spray drift labeling statements. This future labeling may be required for all metalaxyl products that may be applied aurally to agricultural crops.

## V. ACTIONS REQUIRED BY REGISTRANTS

This section specifies the data requirements and responses necessary for the reregistration of both manufacturing-use and end-use products.

### A. Manufacturing-Use Products

#### 1. Additional Generic Data Requirements

The generic data base supporting the reregistration of metalaxyl for the above eligible uses has been reviewed and determined to be substantially complete. However, additional confirmatory data are needed to fulfill requirements for the studies listed below:

- Product chemistry
- Animal metabolism (data showing percent conversion of HMMA to DMA in livestock)
- Analytical method validation for additional metabolites
- Storage stability
- Magnitude of residue in plants to support the newly registered 50% WP formulation and use on cotton
- Magnitude of residue in processed tomato
- Avian reproduction

### B. End-Use Products

#### 1. Additional Product-Specific Data Requirements

Section 4(g)(2)(B) of FIFRA calls for the Agency to obtain any needed product-specific data regarding the pesticide after a determination of eligibility has been made. The product specific data requirements are listed in Appendix G, the Product Specific Data Call-In Notice.

Registrants must review previous data submissions to ensure that they meet current EPA acceptance criteria (Appendix F; Attachment E) and if not, commit to conduct new studies. If a registrant believes that previously submitted data meet current testing standards, then study MRID numbers should be cited according to the instructions in the Requirement Status and Registrants Response Form provided for each product.

## 2. Labeling Requirements for End-Use Products

### A. Worker Protection Standard

Metalaxyl is in Toxicity Category III for acute dermal toxicity, and the REI imposed by the Worker Protection Standard was 12 hours. The RED evaluation of the REI established by the WPS concluded that changes were warranted based on the classification of the eye irritation study as Toxicity Category II. The REI should be increased to 24 hours to reflect this finding. In addition to the PPE previously required in the WPS for early entry, protective eyewear requirement is now imposed for early entry for uses within scope of the WPS due to the change in the Toxicity Category for ocular irritation.

Non-WPS Uses: The Agency is establishing the following entry restrictions for all non WPS occupational uses of metalaxyl end-use products:

For liquid applications:

"Do not enter or allow others to enter the treated area until sprays have dried."

For dry applications:

"Do not enter or allow others to enter the treated area until dusts have settled."

Homeowner Products: Some products containing metalaxyl are intended primarily for homeowner use. The Agency is concerned about post-application exposures to homeowners following application of metalaxyl; therefore, the Agency is requiring that home-use products contain the following requirement:

For liquid applications:

"Do not allow people or pets to enter the treated area until the sprays have dried."

For dry applications:

"Do not allow people or pets to enter the treated area until dusts have settled."

### Other Occupational/Residential Requirements

The Agency is requiring the following labelling statements to be located on all end-use products containing metalaxyl that are intended primarily for occupational use:

#### Application Restrictions:

"Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application."

#### Engineering Controls:

"When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS."

#### User Safety Requirements:

"Follow manufacture's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry."

#### User Safety Recommendations:

"Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet."

"Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."

"Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing."

### B. Environmental Hazard

End-use product must contain the following label language:

"For terrestrial uses, do not apply to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment wash water or rinsate."

### C. Groundwater Advisory

The following Groundwater Advisory is required on all end-use products:

"This chemical is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination."

### **C. Existing Stocks**

Registrants may generally distribute and sell products bearing old labels/labeling for 26 months from the date of the issuance of this Reregistration Eligibility Decision (RED). Persons other than the registrant may generally distribute or sell such products for 50 months from the date of the issuance of this RED. However, existing stocks time frames will be established case-by-case, depending on the number of products involved, the number of label changes, and other factors. Refer to "Existing Stocks of Pesticide Products; Statement of Policy"; Federal Register, Volume 56, No. 123, June 26, 1991.

The Agency has determined that registrants may distribute and sell products bearing old labels/labeling, i.e., labels absent the modifications specified in this RED document, except as noted below, for 26 months from the date of issuance of this RED. Persons other than the registrant may distribute or sell such products for 50 months from the date of the issuance of this RED. Registrants and persons other than registrants remain obligated to meet pre-existing Agency imposed label changes and existing stocks requirements applicable to products they sell or distribute.



## **VI. APPENDICES**



## **APPENDIX A. Table of Use Patterns Subject to Reregistration**



SITE Application Type, Application Timing, Application Equipment ) Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES

## ALFALFA Use Group: TERRESTRIAL FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Soil broadcast treatment., At planting., Sprayer.	EC	NA	.5 lb A	*	NS	NS	NS	NS	0.5	C92, H12(60)

## ALMOND Use Group: TERRESTRIAL FOOD+FEED CROP

Soil band treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

ALMOND (con't)			Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
Soil broadcast treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
APPLE			Use Group: TERRESTRIAL FOOD+FEED CROP								
Drench., Delayed dormant., Not on label.	EC	NA	.005 lb tree	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Drench., Nonbearing., Not on label.	EC	NA	.005 lb tree	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Drench., Postharvest., Not on label.	EC	NA	.005 lb tree	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Soil band treatment., Delayed dormant., Sprayer.	EC	NA	4 lb A	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Soil band treatment., Nonbearing., Sprayer.	EC	NA	4 lb A	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Soil broadcast treatment., Delayed dormant., Sprayer.	EC	NA	4 lb A	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Soil broadcast treatment., Nonbearing., Sprayer.	EC	NA	4 lb A	*	NS	NS	NS	NS	NS	0.5	C92, GM1
Soil broadcast treatment., Postharvest., Sprayer.	EC	NA	4 lb A	*	NS	NS	NS	NS	NS	0.5	C92, GM1
ASPARAGUS			Use Group: TERRESTRIAL FOOD CROP								
Soil broadcast treatment., Postplant., Sprayer.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preharvest., Sprayer.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
AVOCADO			Use Group: TERRESTRIAL FOOD CROP								
Chemigation., Foliar., Drip irrigation.	EC	NA	UC	*	NS	NS	NS	12 lb	90	0.5	C92, H01(28)
Chemigation., Foliar., Sprinkler irrigation.	EC	NA	UC	*	NS	NS	NS	12 lb	90	0.5	C92, H01(28)
Soil broadcast treatment., Foliar., Not on label.	EC	NA	.091 lb tree	*	NS	NS	NS	12 lb	90	0.5	C92, H01(28)
Soil broadcast treatment., Transplant., Not on label.	EC	NA	.091 lb tree	*	NS	NS	NS	12 lb	90	0.5	C92, H01(28)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## AVOCADO (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Soil drench treatment., Transplant., Not on label.	EC	NA	2.170E-04 lb tree	* NS	NS	NS	12 lb	90	0.5	C92, H01(28)
Soil treatment., At planting., Granule applicator.	G	NA	5.203E-04 lb sq.ft	* NS	3/1 yr	NS	12 lb	90	NS	C92, H01(28)
Soil treatment., Transplant., Granule applicator.	G	NA	5.203E-04 lb sq.ft	* NS	3/1 yr	NS	12 lb	90	NS	C92, H01(28)

## BARLEY

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.022 lb cwt	* NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.033 lb cwt	* NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.016 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66, GN3
Seed treatment., At planting., Seed treater.	D	NA	.022 lb cwt	* NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.033 lb cwt	* NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.016 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66, GN3
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

BARLEY (con't)			Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66	
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66	
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92	
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66	
BEANS			Use Group: TERRESTRIAL FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
			Use Group: TERRESTRIAL FOOD+FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	NS	0.5	C92, G66



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

BEANS (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)	
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.016 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66, G73
Seed treatment., At planting., Seed treater.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.016 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66, G73
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Spray., Foliar., Sprayer.	EC	NA	.125 gal A	*	2	NS	NS	NS	7	NS VA	H01(3)

## BEANS, DRIED-TYPE

## Use Group: TERRESTRIAL FOOD+FEED CROP

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

BEANS, DRIED-TYPE (con't)			Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS
FlC		NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
FlC		NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
FlC		NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
RTU		NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
WP		NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
WP		NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Soil band treatment., At planting., Granule applicator.	G	NA	.0075 lb 1K linear ft	*	NS	NS	NS	NS	NS	0.5	C92, GL7
BEANS, SUCCULENT (LIMA)			Use Group: TERRESTRIAL FOOD+FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Tex. @ Max. Dose	Max. # Apps /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

BEANS, SUCCULENT (LIMA) (con't)											
Use Group: TERRESTRIAL FOOD+FEED CROP (con't)											
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
BEANS, SUCCULENT (SNAP)											
Use Group: TERRESTRIAL FOOD+FEED CROP											
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

BEANS, SUCCULENT (SNAP) (con't)		Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Soil band treatment., At planting., Granule applicator.	G	NA	.0075 lb 1K linear ft	*	NS	NS	NS	NS	0.5	C92, GL7

## BEETS Use Group: TERRESTRIAL FOOD CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

BEETS (con't)										Use Group: TERRESTRIAL FOOD CROP (con't)
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
BEETS (UNSPECIFIED)										Use Group: TERRESTRIAL FOOD CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
BLUEBERRY										Use Group: TERRESTRIAL FOOD CROP
Soil band treatment., At planting., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60 0.5	C92
Soil band treatment., Foliar., Sprayer.	EC	NA	3.625 lb A	*	NS	2/1 yr	NS	NS	NS 0.5	C92
Soil band treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60 0.5	C92
Soil broadcast treatment., At planting., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60 0.5	C92
Soil broadcast treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60 0.5	C92
BROCCOLI										Use Group: TERRESTRIAL FOOD CROP
Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS 0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS 0.5	CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14 2	C92, H01(7)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Soil Rate (AI Tex. @ unless noted otherwise) Dose	Max. # Apps Max. Rate /crop /year cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## BROCCOLI (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

## BROCCOLI (con't)

Use Group: TERRESTRIAL FOOD CROP (con't)

Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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## BROCCOLI, CHINESE

Use Group: TERRESTRIAL FOOD CROP

Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	*	4	NS	NS	NS	14	NS	CA	H01(7)
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	EC	NA	UC	*	NS	NS	NS	NS	14	NS	AZ	
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	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	*	4	NS	NS	NS	14	NS	CA	H01(7)
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	EC	NA	UC	*	NS	NS	NS	NS	14	NS	AZ	
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	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	UC	*	NS	NS	NS	NS	14	NS	AZ
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	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
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Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

BUCKWHEAT										Use Group: TERRESTRIAL FOOD+FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
CABBAGE										Use Group: TERRESTRIAL FOOD CROP
Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	0.5	CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	*	4	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	4	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	4	NS	NS	14	2	C92, H01(7)



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

## CABBAGE (con't)

Use Group: TERRESTRIAL FOOD CROP (con't)

Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Soil Rate (AI Tex. @ unless noted otherwise) Dose	Max. # Apps Max. Rate /crop /year cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## CABBAGE, CHINESE

## Use Group: TERRESTRIAL FOOD CROP

Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	* 4	NS	NS	NS	14	NS	CA	H01(7)
	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	UC	* NS	NS	NS	NS	14	NS	AZ	
	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92

## CAULIFLOWER

## Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5		CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5		CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	* 4	NS	NS	NS	14	2		C92, H01(7)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

CAULIFLOWER (con't)											Use Group: TERRESTRIAL FOOD CROP (con't)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	*	4	NS	NS	NS	14	NS CA	H01(7)
	EC	NA	UC	*	NS	NS	NS	NS	14	NS AZ	
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	*	4	NS	NS	NS	14	NS CA	H01(7)
	EC	NA	UC	*	NS	NS	NS	NS	14	NS AZ	
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	UC	*	NS	NS	NS	NS	14	NS AZ	
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## CAULIFLOWER (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
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Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
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## CITRUS FRUITS

## Use Group: TERRESTRIAL FOOD+FEED CROP

Bark treatment., Foliar., Sprayer.	EC	NA	UC	* NS	3/1 yr	NS	12 lb	NS	0.5	AZ, CA, TX	C92
	EC	NA	UC	* NS	3/1 yr	NS	NS	NS	NS	FL	

Chemigation., Foliar., Drip irrigation.	EC	NA	.031 lb tree	* NS	3/1 yr	NS	.938 lb	NS	0.5		C92
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Chemigation., Foliar., Sprinkler irrigation.	EC	NA	.031 lb tree	* NS	3/1 yr	NS	.938 lb	NS	0.5		C92
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Soil band treatment., Nonbearing nurserystock., Granule applicator.	G	NA	4 lb A	* NS	NS	NS	NS	90	0.5		CAE
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Soil band treatment., Nonbearing nurserystock., Not on label.	EC	NA	4 lb A	* NS	NS	NS	NS	NS	0.5		C92
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Soil band treatment., Nonbearing., Drip irrigation.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
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Soil band treatment., Nonbearing., Not on label.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
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Soil band treatment., Nonbearing., Overhead sprinkler irrigation.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
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Soil band treatment., Nurserystock., Granule applicator.	G	NA	4 lb A	* 3	NS	NS	NS	90	NS	AZ, CA, FL, PR	C92, H01(0)
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Soil band treatment., Nurserystock., Sprayer.	EC	NA	4 lb A	* NS	NS	NS	NS	90	0.5	AZ, CA, FL, PR	C92
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Soil band treatment., Transplant., Sprayer.	EC	NA	4 lb A	* NS	NS	NS	NS	90	0.5	AZ, CA, FL, PR	C92
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Soil broadcast treatment., Foliar., Granule applicator.	G	NA	4 lb A	* 3	NS	NS	NS	90	NS	AZ, CA	C92, H01(0)
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Soil broadcast treatment., Foliar., Sprayer.	EC	NA	4 lb A	* NS	3/1 yr	NS	NS	90	0.5	AZ, CA	C92
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Soil broadcast treatment., Nonbearing nurserystock., Granule applicator.	G	NA	4 lb A	* NS	NS	NS	NS	90	0.5		CAE
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SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## CITRUS FRUITS (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

Soil broadcast treatment., Nonbearing nurserystock., Not on label.	EC	NA	4 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Nonbearing., Drip irrigation.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
Soil broadcast treatment., Nonbearing., Not on label.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
Soil broadcast treatment., Nonbearing., Overhead sprinkler irrigation.	WP	NA	4.084 lb A	* NS	NS	NS	NS	90	0.5		C92
Soil broadcast treatment., Nurserystock., Granule applicator.	G	NA	4 lb A	* 3	NS	NS	NS	90	NS	AZ, CA, FL, PR	C92, H01(0)
Soil broadcast treatment., Nurserystock., Sprayer.	EC	NA	4 lb A	* NS	NS	NS	NS	90	0.5	AZ, CA, FL	C92
Soil broadcast treatment., Transplant., Granule applicator.	G	NA	4 lb A	* 4	NS	NS	NS	90	NS	AZ, CA, FL, PR	C92, H01(0)
Soil broadcast treatment., Transplant., Sprayer.	EC	NA	4 lb A	* NS	NS	NS	NS	90	0.5	AZ, CA, FL	C92
Soil drench treatment., Nonbearing nurserystock., Not on label.	EC	NA	.234 lb 1K linear ft	* NS	NS	NS	NS	90	0.5		C92
Soil drench treatment., Nonbearing., Drip irrigation.	WP	NA	UC	* NS	NS	NS	NS	90	0.5		C92
Soil drench treatment., Nonbearing., Not on label.	WP	NA	.234 lb 1K linear ft	* NS	NS	NS	NS	90	0.5		C92
Soil drench treatment., Nonbearing., Overhead sprinkler irrigation.	WP	NA	UC	* NS	NS	NS	NS	90	0.5		C92
Soil drench treatment., Nurserystock., Not on label.	EC	NA	.234 lb 1K linear ft	* NS	NS	NS	NS	NS	0.5	AZ, CA, FL, PR	C92
Soil drench treatment., Transplant., Not on label.	EC	NA	.004688 lb tree	* NS	NS	NS	NS	NS	0.5	AZ, CA, FL, PR	C92
Soil treatment., Foliar., Sprayer.	EC	NA	2 lb A	* NS	3/1 yr	NS	NS	90	0.5	FL, PR	C92

## CLOVER

## Use Group: TERRESTRIAL FEED CROP

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

CLOVER (con't)			Use Group: TERRESTRIAL FEED CROP (con't)								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
COLE CROPS			Use Group: TERRESTRIAL FOOD CROP								
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)

FOOD/FEED USES (con't)

COLE CROPS (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
CORN			Use Group: TERRESTRIAL FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	F1C	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	F1C	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	F1C	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	F1C	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	F1C	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	F1C	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

CORN (con't)										
Use Group: TERRESTRIAL FEED CROP (con't)										
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
CORN (UNSPECIFIED)										
Use Group: TERRESTRIAL FOOD+FEED CROP										
Seed treatment., At planting., Planter/seed box.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	1	C92, G66
	D	NA	.00585 lb bu	*	NS	NS	NS	NS	NS	C92, G66, GN3
Seed treatment., At planting., Seed treater.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	1	C92, G66
	D	NA	.00585 lb bu	*	NS	NS	NS	NS	NS	C92, G66, GN3
Slurry., Seed., Mist-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.234 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.234 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
CORN, FIELD										
Use Group: TERRESTRIAL FOOD+FEED CROP										
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

CORN, FIELD (con't)											
Use Group: TERRESTRIAL FOOD+FEED CROP (con't)											
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
CORN, POP											
Use Group: TERRESTRIAL FOOD+FEED CROP											
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

CORN, POP (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
CORN, SWEET										Use Group: TERRESTRIAL FOOD+FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
COTTON (UNSPECIFIED)										Use Group: TERRESTRIAL FOOD+FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.032 lb cwt	*	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	1	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

COTTON (UNSPECIFIED) (con't)			Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66, G73
	RTU	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	D	NA	.032 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66, G73
	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Soil Rate (AI Tex. @ unless noted otherwise) Dose	Max. # Apps Max. Rate /crop /year cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## COTTON (UNSPECIFIED) (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

Soil band treatment., At planting., Granule applicator.	G	NA	.007688 lb 1K linear ft	* NS NS	NS NS	0.5		C92, GL8
Soil in-furrow treatment., At planting., Granule applicator.	G	NA	.009375 lb 1K linear ft	* NS NS	NS NS	NS		C92, H01(0)
Soil in-furrow treatment., At planting., Sprayer.	EC	NA	.009375 lb 1K linear ft	* NS NS	NS NS	0.5		C92

## COWPEA/BLACKEYED PEA

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS NS	NS NS	2		C92, G66
	D	NA	.031 lb cwt	* NS NS	NS NS	NS		C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS NS	NS NS	2		C92, G66
	D	NA	.031 lb cwt	* NS NS	NS NS	NS		C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS		C46, C92, G66
	FlC	NA	.070 lb cwt	* NS NS	NS NS	NS		CAE, G66
	FlC	NA	.088 lb cwt	* NS NS	NS NS	NS		G66
	WP	NA	.031 lb cwt	* NS NS	NS NS	NS		C92
	WP	NA	.031 lb cwt	* NS NS	NS NS	NS		C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS		C46, C92, G66
	FlC	NA	.070 lb cwt	* NS NS	NS NS	NS		CAE, G66
	FlC	NA	.088 lb cwt	* NS NS	NS NS	NS		G66
	WP	NA	.031 lb cwt	* NS NS	NS NS	NS		C92
	WP	NA	.031 lb cwt	* NS NS	NS NS	NS		C92, G66

## COWPEAS

## Use Group: TERRESTRIAL FEED CROP

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

COWPEAS (con't)										Use Group: TERRESTRIAL FEED CROP (con't)	
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
CRANBERRY										Use Group: TERRESTRIAL FOOD CROP	
Chemigation., Foliar., Center pivot irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Foliar., Drip irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Foliar., Hand move irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Foliar., Moving wheel irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Foliar., Solid set irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## CRANBERRY (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Chemigation., Foliar., Sprinkler irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Center pivot irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Drip irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Hand move irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Moving wheel irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Solid set irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Postharvest., Sprinkler irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Center pivot irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Drip irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Hand move irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Moving wheel irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Solid set irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Chemigation., Spring., Sprinkler irrigation.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Soil broadcast treatment., Foliar., Ground.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Soil broadcast treatment., Postharvest., Ground.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)
Soil broadcast treatment., Spring., Ground.	EC	NA	1.75 lb A	*	3	NS	5.25 lb	NS	NS	0.5	C92, H01(45)

## CUCUMBER

## Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps	Max. Dose [(AI unless noted otherwise)/A]	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION									
FOOD/FEED USES (con't)									
CUCUMBER (con't)									
Use Group: TERRESTRIAL FOOD CROP (con't)									
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.2 lb A	* 4	NS	NS	NS	14 1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.2 lb A	* 4	NS	NS	NS	14 1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.2 lb A	* 4	NS	NS	NS	14 1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
	WP	NA	.2 lb A	* 4	NS	NS	NS	14 1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7 1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	* 4	NS	NS	NS	10 2	C92, H03
Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS 018	CAE, G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS 018	CAE, G66
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS 0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Soil Rate (AI Tex. @ unless noted otherwise) Dose	Max. # Apps Max. Rate /crop /year cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

CUCUMBER (con't)		Use Group: TERRESTRIAL FOOD CROP (con't)										Use Limitations Codes
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5		
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5		C92
CUCURBIT VEGETABLES		Use Group: TERRESTRIAL FOOD CROP										Use Limitations Codes
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	2		C92, C94, CAG, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	2		C92, C94, CAG, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	2		C92, C94, CAG, H01(5)
High volume spray (dilute)., Foliar., Ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	2		C92, C94, CAG, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	2		C92, C94, CAG, H01(5)



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## CUCURBIT VEGETABLES (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5	C92

## DILL

## Use Group: TERRESTRIAL FOOD CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66

## EGGPLANT

## Use Group: TERRESTRIAL FOOD CROP

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## EGGPLANT (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5	CAE
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	3 lb	NS	NS	0.5	C92, H01(7)
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	3 lb	NS	NS	0.5	C92, H01(7)
	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92

## GARBANZOS (INCLUDING CHICK PEAS)

## Use Group: TERRESTRIAL FOOD CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., Seed., Not on label.	FlC	NA	.012 gal cwt	* NS	NS	NS	NS	NS	NS	G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

## GARBANZOS (INCLUDING CHICK PEAS) (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66

## Use Group: TERRESTRIAL FOOD+FEED CROP

Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	ND	G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	ND	G66

## GINSENG (MEDICINAL)

## Use Group: TERRESTRIAL FOOD CROP

Soil drench treatment., Spring., Not on label.	EC	NA	.75 lb A	*	NS	NS	NS	NS	NS	0.5	C92
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## GRAPES

## Use Group: TERRESTRIAL FOOD+FEED CROP

Chemigation., Bloom through foliar., Center pivot irrigation.	WP	NA	.2 lb A	*	NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Chemigation., Bloom through foliar., Moving wheel irrigation.	WP	NA	.2 lb A	*	NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Chemigation., Bloom through foliar., Solid set irrigation.	WP	NA	.2 lb A	*	NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Chemigation., Early bloom., Center pivot irrigation.	WP	NA	.2 lb A	*	NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Chemigation., Early bloom., Moving wheel irrigation.	WP	NA	.2 lb A	*	NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

GRAPES (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
Chemigation., Early bloom., Solid set irrigation.	WP	NA	.2 lb A	* NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
High volume spray (dilute)., Bloom through foliar., Ground.	WP	NA	.2 lb A	* NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
High volume spray (dilute)., Early bloom., Ground.	WP	NA	.2 lb A	* NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Low volume spray (concentrate)., Bloom through foliar., Aircraft.	WP	NA	.2 lb A	* NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
Low volume spray (concentrate)., Early bloom., Aircraft.	WP	NA	.2 lb A	* NS	NS	NS	NS	NS	2	C92, C94, CAG, H01(66)
GRASS FORAGE/FODDER/HAY										Use Group: TERRESTRIAL FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
Slurry., Seed., Slurry-type seed treater.	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

## GRASS FORAGE/FODDER/HAY (con't)

## Use Group: TERRESTRIAL FEED CROP (con't)

	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
HOPS											
Use Group: TERRESTRIAL FOOD+FEED CROP											
Soil treatment., Foliar., Not on label.	EC	NA	.5 lb A	*	NS	3/1 yr	NS	NS	NS	0.5	C92, GB6, H01(45)
Spray., Foliar., Ground.	EC	NA	.25 gal A	*	3	NS	NS	NS	NS	NS	ID
	EC	NA	.25 gal A	*	3	NS	NS	NS	NS	NS	OR
	EC	NA	.25 gal A	*	3	NS	NS	NS	NS	NS	WA
	EC	NA	.5 lb A	*	NS	3/1 yr	NS	NS	NS	0.5	C92, GB6, H01(45)

## LEGUME VEGETABLES

## Use Group: TERRESTRIAL FOOD+FEED CROP

Soil band treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil band treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92

## LENTILS

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Rate (AI Tex. unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year Dose cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

LENTILS (con't)		Use Group: TERRESTRIAL FOOD+FEED CROP (con't)								
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
LESPEDeza		Use Group: TERRESTRIAL FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## LESPEDeza (con't)

## Use Group: TERRESTRIAL FEED CROP (con't)

	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66

## LETTUCE

## Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92

## LETTUCE, HEAD

## Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	2 lb A	*	NS	NS	NS	NS	NS	NS	C92, H01(0)
Chemigation., Foliar., Center pivot irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)
Chemigation., Foliar., Drip irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)
Chemigation., Foliar., Hand move irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)
Chemigation., Foliar., Moving wheel irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)
Chemigation., Foliar., Solid set irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)
Chemigation., Foliar., Sprinkler irrigation.	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS TX	H01(7)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

## LETTUCE, HEAD (con't)

Use Group: TERRESTRIAL FOOD CROP (con't)

High volume spray (dilute)., Foliar., High volume ground.	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	AZ	
	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	CA	H01(10)
	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	WA	H01(10)
Low volume spray (concentrate)., Foliar., Aircraft.	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	AZ	
	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	CA	H01(10)
	EC	NA	.25 lb A	*	2	NS	NS	NS	NS	NS	CO	H01(10)
	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	WA	H01(10)
	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS	FL	
	EC	NA	.25 lb A	*	NS	NS	NS	NS	14	NS	TX	H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	EC	NA	.125 gal A	*	2	NS	NS	NS	NS	NS	AZ	
Soil band treatment., At planting., Granule applicator.	G	NA	2 lb A	*	NS	NS	NS	NS	NS	NS		C92, H01(0)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Granule applicator.	G	NA	2 lb A	*	NS	NS	NS	NS	NS	NS		C92, H01(0)
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Granule applicator.	G	NA	2 lb A	*	NS	NS	NS	NS	NS	NS		C92, H01(0)
Soil broadcast treatment., Preplant., Granule applicator.	G	NA	2 lb A	*	NS	NS	NS	NS	NS	NS		C92, H01(0)
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Spray., Foliar., Ground.	EC	NA	.25 lb A	*	2	NS	NS	NS	NS	NS	CO	H01(10)





SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## MELONS Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	* NS NS	NS NS NS	0.5			CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	* NS NS	NS NS NS	0.5			CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS NS	NS NS NS	0.5			C92

## MELONS, CANTALOUPE Use Group: TERRESTRIAL FOOD CROP

Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	* 4 NS	NS NS 10	2			C92, H03
	WP	NA	.2 lb A	* 4 NS	NS NS 14	1			C92, C94, H01(5)
	WP	NA	.193 lb A	* 4 NS	NS NS 7	1			C92, C94, H01(5)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

MELONS, CANTALOUPE (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
MELONS, HONEYDEW			Use Group: TERRESTRIAL FOOD CROP								
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Soil Rate (AI Tex. @ unless noted otherwise) Dose	Max. # Apps Max. Rate /crop /year cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

MELONS, HONEYDEW (con't)		Use Group: TERRESTRIAL FOOD CROP (con't)										
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(5)
MELONS, MUSK		Use Group: TERRESTRIAL FOOD CROP										
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
MELONS, WATER		Use Group: TERRESTRIAL FOOD CROP										
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2		C92, H03

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

MELONS, WATER (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
MELONS, WINTER (CASABA/CRENSHAW/HONEYDEW/PERSIAN)			Use Group: TERRESTRIAL FOOD CROP								
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

MELONS, WINTER (CASABA/CRENSHAW/HONEYDEW/PERSIAN) (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
MILLET (FOXTAIL)			Use Group: TERRESTRIAL FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

MILLET (FOXTAIL) (con't)		Use Group: TERRESTRIAL FEED CROP (con't)								
WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	
										C92, G66
OATS		Use Group: TERRESTRIAL FOOD+FEED CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.013 lb cwt	*	NS	NS	NS	NS	NS	C92, G66, GN3
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.013 lb cwt	*	NS	NS	NS	NS	NS	C92, G66, GN3
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
OKRA		Use Group: TERRESTRIAL FOOD CROP								
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

OKRA (con't)										Use Group: TERRESTRIAL FOOD CROP (con't)	
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
ONION										Use Group: TERRESTRIAL FOOD CROP	
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(7)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(7)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(7)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(7)



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Rate (AI un- less noted otherwise)	Soil Max. # Apps @ Max. Rate Max. /crop /year Dose cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

ONION (con't)		Use Group: TERRESTRIAL FOOD CROP (con't)										Use Limitations Codes
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(7)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1		C92, C94, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
ONIONS (GREEN)		Use Group: TERRESTRIAL FOOD CROP										Use Limitations Codes
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		C92, H01(21)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

ONIONS (GREEN) (con't)		Use Group: TERRESTRIAL FOOD CROP (con't)										
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.18 lb A	*	3	NS	NS	NS	14	2		
Soil band treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil incorporated treatment., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
PAPAYA		Use Group: TERRESTRIAL FOOD CROP										
Soil broadcast treatment., Transplant., Not on label.	EC	NA	3.5 lb A	*	NS	2/1 yr	NS	NS	14	0.5	HI	
Soil drench treatment., Nurserystock., Not on label.	EC	NA	3.403 lb A	*	NS	2/1 yr	NS	NS	30	0.5	HI	C92
PEANUTS		Use Group: TERRESTRIAL FEED CROP										
Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS		
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS		CAE, G66
PEANUTS (UNSPECIFIED)		Use Group: TERRESTRIAL FOOD+FEED CROP										
Broadcast., At pegging., Spreader.	G	NA	.5 lb A	*	NS	NS	.75 lb	NS	NS	0.5		
	G	NA	1 lb A	*	NS	NS	1 lb	NS	NS	0.5		C92, GL9
Chemigation., At pegging., Overhead sprinkler irrigation.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Chemigation., Foliar., Overhead sprinkler irrigation.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Seed treatment., At planting., Planter/seed box.	D	NA	.016 lb cwt	*	NS	NS	NS	NS	NS	0.5		C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

PEANUTS (UNSPECIFIED) (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.016 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66, G73, GI2
Seed treatment., At planting., Seed treater.	D	NA	.016 lb cwt	* NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.016 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66, G73, GI2
Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
Soil band treatment., At pegging., Granule applicator.	G	NA	.5 lb A	* NS	NS	.75 lb	NS	NS	0.5	C92, GL9, H01(75)
	G	NA	1 lb A	* NS	NS	1 lb	NS	NS	0.5	C92, GL9
	G	NA	.041 lb 1K linear ft	* NS	NS	NS	NS	NS	NS	C92, H01(0)
Soil band treatment., At planting., Granule applicator.	G	NA	.25 lb A	* NS	NS	NS	NS	NS	NS	C92, H01(0)
Soil band treatment., At planting., Not on label.	EC	NA	.25 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil in-furrow treatment., At planting., Granule applicator.	G	NA	.020 lb 1K linear ft	* NS	NS	NS	NS	NS	NS	C92, H01(0)
Soil in-furrow treatment., At planting., Not on label.	EC	NA	.25 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil incorporated treatment., At planting., Granule applicator.	G	NA	.25 lb A	* NS	NS	.75 lb	NS	NS	0.5	C92, GL9, H01(75)
	G	NA	.25 lb A	* NS	NS	1 lb	NS	NS	0.5	C92, GL9
PEAS (INCLUDING VINES)										Use Group: TERRESTRIAL FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

PEAS (INCLUDING VINES) (con't)		Use Group: TERRESTRIAL FEED CROP (con't)									
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
PEAS (UNSPECIFIED)		Use Group: TERRESTRIAL FOOD+FEED CROP									
Seed treatment., At planting., Planter/seed box.	D	NA	.027 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.026 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.027 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.026 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., Seed., Mist-type seed treater.	EC	NA	.156 lb cwt	*	NS	NS	NS	NS	NS	NS WA	G66

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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

PEAS (UNSPECIFIED) (con't)

Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	ID	G66
Seed treatment., Seed., Slurry-type seed treater.	EC	NA	.156 lb cwt	*	NS	NS	NS	NS	NS	WA	G66
	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.07 lb cwt	*	NS	NS	NS	NS	NS	CA	G66
	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	ID	G66
	WP	NA	.07 lb cwt	*	NS	NS	NS	NS	NS	WA	G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.068 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	CA	G66
	WP	NA	.071 lb cwt	*	NS	NS	NS	NS	NS	WA	G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.068 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
	WP	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	CA	G66
	WP	NA	.071 lb cwt	*	NS	NS	NS	NS	NS	WA	G66

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

PEAS, FIELD										Use Group: TERRESTRIAL FOOD+FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.088 lb cwt	*	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	WP	NA	.078 lb cwt	*	NS	NS	NS	NS	NS	C92, G66

PEAS, SUCCULENT										Use Group: TERRESTRIAL FOOD+FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	2	C92, G66

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## PEAS, SUCCULENT (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.088 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.078 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.078 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.070 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.088 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.078 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.078 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66

## PEPPER Use Group: TERRESTRIAL FOOD CROP

Broadcast., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5	CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.25 lb A	* 4	NS	NS	NS	10	2	C92, C94, CAG, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.25 lb A	* 4	NS	NS	NS	10	2	C92, C94, CAG, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.25 lb A	* 4	NS	NS	NS	10	2	C92, C94, CAG, H01(7)
High volume spray (dilute)., Foliar., Ground.	WP	NA	.25 lb A	* 4	NS	NS	NS	10	2	C92, C94, CAG, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.25 lb A	* 4	NS	NS	NS	10	2	C92, C94, CAG, H01(7)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

PEPPER (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	3 lb	NS	NS	0.5	C92, H01(7)
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	EC	NA	2 lb A	*	NS	NS	3 lb	NS	NS	0.5	C92, H01(7)
	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
PINEAPPLE			Use Group: TERRESTRIAL FOOD+FEED CROP								
Dip., Preplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	C92
POTATO, WHITE/IRISH			Use Group: TERRESTRIAL FOOD+FEED CROP								
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(14), H01(3)
	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
	WP	NA	.25 lb A	*	NS	NS	NS	NS	14	2	C92, C94, CAG, H01(21)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2	C92, H01(7)



## FOOD/FEED USES (con't)

POTATO, WHITE/IRISH (con't)			Use Group: TERRESTRIAL FOOD+FEED CROP (con't)									
	WP	NA	.25 lb A	*	NS	NS	NS	NS	14	2		C92, C94, CAG, H01(21)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(14), H01(3)
	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
	WP	NA	.25 lb A	*	NS	NS	NS	NS	14	2		C92, C94, CAG, H01(21)
High volume spray (dilute)., Foliar., Ground.	WP	NA	.25 lb A	*	NS	NS	NS	NS	14	2		C92, C94, CAG, H01(21)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(14), H01(3)
	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(14), H01(3)
	WP	NA	.158 lb A	*	4	NS	NS	NS	14	1		C92, C94, H01(3)
	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	NS	ME	H01(7)
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	NS	ND	H01(7)
	WP	NA	.25 lb A	*	NS	NS	NS	NS	14	2		C92, C94, CAG, H01(21)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.18 lb A	*	4	NS	NS	NS	14	2		C92, H01(7)
Spray., Foliar., Ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	NS	ME	H01(7)
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	NS	ND	H01(7)
PUMPKIN	Use Group: TERRESTRIAL FOOD CROP											

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

PUMPKIN (con't)		Use Group: TERRESTRIAL FOOD CROP (con't)									
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
RADISH		Use Group: TERRESTRIAL FOOD CROP									
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.2 lb A	*	NS	2/1 yr	NS	NS	14	NS WA	C14, GF9, GI9, GO3
Spray., Foliar., Ground.	WP	NA	.2 lb A	*	NS	2/1 yr	NS	NS	14	NS WA	C14, GF9, GI9, GO3
RASPBERRY (BLACK, RED)		Use Group: TERRESTRIAL FOOD CROP									
Soil band treatment., Postharvest., Granule applicator.	G	NA	.25 lb 1K linear ft	*	NS	NS	NS	NS	NS	NS	C92, H01(45)
Soil band treatment., Postharvest., Not on label.	EC	NA	.25 lb 1K linear ft	*	NS	NS	NS	NS	NS	0.5	C92, H01(45)
Soil band treatment., Spring., Granule applicator.	G	NA	.25 lb 1K linear ft	*	NS	NS	NS	NS	NS	NS	C92, H01(45)
Soil band treatment., Spring., Not on label.	EC	NA	.25 lb 1K linear ft	*	NS	NS	NS	NS	NS	0.5	C92, H01(45)
RICE		Use Group: TERRESTRIAL FOOD+FEED CROP									
Chemigation., Preplant., Center pivot irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS LA	
Chemigation., Preplant., Drip irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS LA	

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Rate (AI un- less noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year Dose cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

RICE (con't)		Use Group: TERRESTRIAL FOOD+FEED CROP (con't)									
Chemigation., Preplant., Hand move irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS	LA
Chemigation., Preplant., Moving wheel irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS	LA
Chemigation., Preplant., Solid set irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS	LA
Chemigation., Preplant., Sprinkler irrigation.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS	LA
Seed treatment., At planting., Planter/seed box.	D	NA	.024 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.024 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
Slurry., Seed., Slurry-type seed treater.	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

RICE (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)	
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92, G66
Soil broadcast treatment., Preplant., Aircraft.	EC	NA	.5 lb A	* NS	NS	NS	NS	NS	NS	LA	
Soil broadcast treatment., Preplant., Ground.	EC	NA	.5 lb A	* NS	NS	NS	NS	NS	NS	LA	
ROOT AND TUBER VEGETABLES										Use Group: TERRESTRIAL FOOD+FEED CROP	
Soil band treatment., At planting., Sprayer.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil band treatment., Preplant., Soil incorporation equipment.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Sprayer.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Soil incorporation equipment.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92
RYE										Use Group: TERRESTRIAL FOOD+FEED CROP	
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2		C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2		C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS		C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

RYE (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)	
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
SMALL GRAINS										Use Group: TERRESTRIAL FEED CROP	
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

SORGHUM										
Use Group: TERRESTRIAL FEED CROP										
Slurry., Seed., Mist-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
Use Group: TERRESTRIAL FOOD+FEED CROP										
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
SORGHUM (UNSPECIFIED)										
Use Group: TERRESTRIAL FOOD+FEED CROP										
Seed treatment., At planting., Planter/seed box.	D	NA	.063 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.063 lb cwt	*	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.234 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.234 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SOYBEANS

## Use Group: TERRESTRIAL FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66

## SOYBEANS (UNSPECIFIED)

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.027 lb cwt	* NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.026 lb cwt	* NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.013 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66, G73
	RTU	NA	.019 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	RTU	NA	.002557 lb cwt	* NS	NS	NS	NS	NS	NS	G79

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Tex. @ Max. Dose	Max. # Apps /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SOYBEANS (UNSPECIFIED) (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

Seed treatment., At planting., Seed treater.	D	NA	.027 lb cwt	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.026 lb cwt	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.013 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66, G73
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.019 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Soil band treatment., At planting., Granule applicator.	G	NA	.49 lb A	*	NS	NS	NS	NS	NS	NS	C92, H01(0)
Soil band treatment., At planting., Not on label.	EC	NA	1.25 lb A	*	NS	NS	NS	NS	NS	0.5	C92



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate unless noted	Max. Dose [(AI unless noted otherwise)/A]	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SOYBEANS (UNSPECIFIED) (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

Soil broadcast treatment., At planting., Not on label.	EC	NA	1.25 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil in-furrow treatment., At planting., Granule applicator.	G	NA	.245 lb A	* NS	NS	NS	NS	NS	NS	C92, H01(0)
Soil in-furrow treatment., At planting., Sprayer.	EC	NA	.017 lb 1K linear ft	* NS	NS	NS	NS	NS	0.5	C92

## SOYBEANS, EDIBLE

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66

## SPINACH

## Use Group: TERRESTRIAL FOOD CROP

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

SPINACH (con't)										Use Group: TERRESTRIAL FOOD CROP (con't)	
Broadcast., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5		CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	* NS	NS	NS	NS	NS	0.5		CAE
Soil band treatment., At planting., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS		C92, H01(21)
Soil band treatment., Preplant., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS		C92, H01(21)
Soil band treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92, H01(21)
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS		C92, H01(21)
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS		C92, H01(21)
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5		C92
Soil in-furrow treatment., At planting., Granule applicator.	G	NA	.063 lb 1K linear ft	* NS	NS	NS	NS	NS	NS		C92, H01(21)
Soil incorporated treatment., Fall., Ground.	G	NA	.5 lb A	* 2	NS	NS	NS	NS	NS	OK	H01(21)
Soil incorporated treatment., Preplant., Not on label.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5		C92, H01(21)

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

SPINACH (con't)											Use Group: TERRESTRIAL FOOD CROP (con't)
Soil shanking treatment., At planting., Not on label.	EC	NA	.25 lb A	*	NS	NS	NS	NS	NS	0.5	C92, H01(21)
Soil treatment., Late winter., Ground.	G	NA	.5 lb A	*	2	NS	NS	NS	NS	OK	H01(21)
Soil treatment., Postemergence., Granule applicator.	G	NA	.25 lb A	*	2	NS	NS	NS	NS	NS	C92, H01(21)
SQUASH (ALL OR UNSPECIFIED)											Use Group: TERRESTRIAL FOOD CROP
Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	*	NS	NS	NS	NS	NS	0.5	C92
SQUASH (SUMMER)											Use Group: TERRESTRIAL FOOD CROP
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SQUASH (SUMMER) (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03

## SQUASH (WINTER)

## Use Group: TERRESTRIAL FOOD CROP

Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SQUASH (WINTER) (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H03
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## STONE FRUITS

## Use Group: TERRESTRIAL FOOD CROP

Soil band treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1

## STRAWBERRY

## Use Group: TERRESTRIAL FOOD CROP

Chemigation., During harvest., Drip irrigation.	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Chemigation., Foliar., Drip irrigation.	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Chemigation., Postharvest., Drip irrigation.	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Chemigation., Posttransplant., Drip irrigation.	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Chemigation., Prebloom., Drip irrigation.	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
High volume spray (dilute)., Nurserystock., High volume ground.	EC	NA	.5 gal A	*	NS	NS	1 gal	NS	30	NS	CA
Soil band treatment., During harvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Soil band treatment., Foliar., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	
Soil band treatment., Postharvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
	EC	NA	.5 gal A	*	NS	NS	NS 1.5 gal	NS	NS	CA	

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## STRAWBERRY (con't)

## Use Group: TERRESTRIAL FOOD CROP (con't)

Soil band treatment., Posttransplant., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil band treatment., Prebloom., Ground.	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil band treatment., Preharvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil band treatment., Spring., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil broadcast treatment., During harvest., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil broadcast treatment., During harvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil broadcast treatment., Foliar., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil broadcast treatment., Foliar., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil broadcast treatment., Postharvest., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil broadcast treatment., Postharvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil broadcast treatment., Posttransplant., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
Soil broadcast treatment., Posttransplant., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92
	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil broadcast treatment., Prebloom., Ground.	EC	NA	.5 gal A	*	NS	NS	NS	1.5 gal	NS	NS	CA	
Soil broadcast treatment., Preharvest., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5		C92

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

STRAWBERRY (con't)			Use Group: TERRESTRIAL FOOD CROP (con't)								
Soil broadcast treatment., Preharvest., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
Soil broadcast treatment., Spring., Drip irrigation.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
Soil broadcast treatment., Spring., Ground.	EC	NA	1 lb A	*	3	NS	NS	3 lb	NS	0.5	C92
SUGAR BEET			Use Group: TERRESTRIAL FOOD+FEED CROP								
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, GA8, H01(14)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, GA8, H01(14)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, GA8, H01(14)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, GA8, H01(14)
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	RTU	NA	.029 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.029 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66

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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## SUGAR BEET (con't)

## Use Group: TERRESTRIAL FOOD+FEED CROP (con't)

Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	RTU	NA	.029 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Soil band treatment., At planting., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS	C92
Soil band treatment., At planting., Sprayer.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil band treatment., Preplant., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS	C92
Soil band treatment., Preplant., Soil incorporation equipment.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS	C92
Soil broadcast treatment., At planting., Sprayer.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., Preplant., Granule applicator.	G	NA	2 lb A	* NS	NS	NS	NS	NS	NS	C92
Soil broadcast treatment., Preplant., Soil incorporation equipment.	EC	NA	2 lb A	* NS	NS	NS	NS	NS	0.5	C92

## SUNFLOWER

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.063 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.063 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66



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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

SUNFLOWER (con't)											
Use Group: TERRESTRIAL FOOD+FEED CROP (con't)											
Slurry., Seed., Mist-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.207 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.219 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
TOMATO											
Use Group: TERRESTRIAL FOOD+FEED CROP											
Broadcast., At planting., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Preplant., Granule applicator.	G	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Chemigation., Foliar., Center pivot irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.2 lb A	*	4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
	WP	NA	.25 lb A	*	NS	NS	NS	NS	5	2	C92, C94, CAG, H01(7)
Chemigation., Foliar., Hand move irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)
Chemigation., Foliar., Moving wheel irrigation.	WP	NA	.27 lb A	*	4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.193 lb A	*	4	NS	NS	NS	7	1	C92, C94, H01(5)

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## USES ELIGIBLE FOR REREGISTRATION

FOOD/FEED USES (con't)

TOMATO (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
	WP	NA	.25 lb A	* NS	NS	NS	NS	5	2	C92, C94, CAG, H01(7)
Chemigation., Foliar., Solid set irrigation.	WP	NA	.27 lb A	* 4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.2 lb A	* 4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7	1	C92, C94, H01(5)
	WP	NA	.25 lb A	* NS	NS	NS	NS	5	2	C92, C94, CAG, H01(7)
High volume spray (dilute)., Foliar., Ground.	WP	NA	.25 lb A	* NS	NS	NS	NS	5	2	C92, C94, CAG, H01(7)
High volume spray (dilute)., Foliar., High volume ground.	WP	NA	.27 lb A	* 4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.2 lb A	* 4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7	1	C92, C94, H01(5)
Low volume spray (concentrate)., Foliar., Aircraft.	WP	NA	.27 lb A	* 4	NS	NS	NS	10	2	C92, H01(7)
	WP	NA	.2 lb A	* 4	NS	NS	NS	14	1	C92, C94, H01(5)
	WP	NA	.193 lb A	* 4	NS	NS	NS	7	1	C92, C94, H01(5)
	WP	NA	.25 lb A	* NS	NS	NS	NS	5	2	C92, C94, CAG, H01(7)
Low volume spray (concentrate)., Foliar., Low volume ground.	WP	NA	.27 lb A	* 4	NS	NS	NS	10	2	C92, H01(7)
Soil band treatment., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	2 lb	NS	NS	NS	C92, H01(7)
Soil band treatment., At planting., Not on label.	EC	NA	2 lb A	* NS	NS	3 lb	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Drip irrigation.	WP	NA	.681 lb A	* NS	NS	NS	NS	NS	0.5	C92
Soil broadcast treatment., At planting., Granule applicator.	G	NA	1 lb A	* NS	NS	2 lb	NS	NS	NS	C92, H01(7)

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

TOMATO (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
Soil broadcast treatment., At planting., Not on label.	WP	NA	.681 lb A	* NS NS	NS NS	0.5				C92
Soil broadcast treatment., At planting., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS NS	NS NS	0.5				C92
Soil broadcast treatment., Plant bed., Sprayer.	EC	NA	1 lb A	* NS NS	3 lb NS	0.5				C92
Soil broadcast treatment., Preplant., Drip irrigation.	WP	NA	.681 lb A	* NS NS	NS NS	0.5				C92
Soil broadcast treatment., Preplant., Not on label.	WP	NA	.681 lb A	* NS NS	NS NS	0.5				C92
Soil broadcast treatment., Preplant., Overhead sprinkler irrigation.	WP	NA	.681 lb A	* NS NS	NS NS	0.5				C92
Soil incorporated treatment., Plant bed., Injection.	EC	NA	1 lb A	* NS NS	3 lb NS	0.5				C92
Soil treatment., At planting., Not on label.	EC	NA	2 lb A	* NS NS	3 lb NS	0.5				C92
Soil treatment., Foliar., Not on label.	EC	NA	1 lb A	* NS NS	3 lb NS	0.5				C92
TREFOIL										Use Group: TERRESTRIAL FEED CROP
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS NS	NS NS					C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS NS	NS NS					C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS					C46, C93, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS					C46, C92, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS					CAE, G66
	FlC	NA	.035 lb cwt	* NS NS	NS NS					G66
	WP	NA	.031 lb cwt	* NS NS	NS NS					C92
	WP	NA	.031 lb cwt	* NS NS	NS NS					C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS					C46, C93, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS					C46, C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

## TREFOIL (con't)

## Use Group: TERRESTRIAL FEED CROP (con't)

FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66

## TRITICALE

## Use Group: TERRESTRIAL FOOD+FEED CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66

## USE 22002

## Use Group: TERRESTRIAL FOOD+FEED CROP

Slurry., Seed., Mist-type seed treater.	FlC	NA	.234 lb cwt	* NS	NS	NS	NS	NS	NS	G66
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SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION									
FOOD/FEED USES (con't)									
USE 22002 (con't)									
Use Group: TERRESTRIAL FOOD+FEED CROP (con't)									
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.234 lb cwt	* NS NS	NS NS	NS NS			G66
USE 26018									
Use Group: TERRESTRIAL FOOD+FEED CROP									
Slurry., Seed., Mist-type seed treater.	FlC	NA	.035 lb cwt	* NS NS	NS NS	NS NS			G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.035 lb cwt	* NS NS	NS NS	NS NS			G66
USE 26019									
Use Group: TERRESTRIAL FOOD+FEED CROP									
Slurry., Seed., Mist-type seed treater.	FlC	NA	.070 lb cwt	* NS NS	NS NS	NS NS			G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.070 lb cwt	* NS NS	NS NS	NS NS			G66
USE 26020									
Use Group: TERRESTRIAL FOOD CROP									
Slurry., Seed., Mist-type seed treater.	FlC	NA	.035 lb cwt	* NS NS	NS NS	NS NS			G66
Slurry., Seed., Slurry-type seed treater.	FlC	NA	.035 lb cwt	* NS NS	NS NS	NS NS			G66
USE 26021									
Use Group: TERRESTRIAL FOOD+FEED CROP									
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS	NS NS			G66
	FlC	NA	.234 lb cwt	* NS NS	NS NS	NS NS			G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS	NS NS			G66
	FlC	NA	.234 lb cwt	* NS NS	NS NS	NS NS			G66
VETCH									
Use Group: TERRESTRIAL FEED CROP									
Seed treatment., At planting., Planter/seed box.	D	NA	.031 lb cwt	* NS NS	NS NS	NS NS			C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.031 lb cwt	* NS NS	NS NS	NS NS			C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	* NS NS	NS NS	NS NS			C46, C93, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS NS			C46, C92, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS NS			CAE, G66
	FlC	NA	.035 lb cwt	* NS NS	NS NS	NS NS			G66
	WP	NA	.031 lb cwt	* NS NS	NS NS	NS NS			C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Tex. @ Max. Dose	Max. # Apps /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

VETCH (con't)											
Use Group: TERRESTRIAL FEED CROP (con't)											
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS		G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS		C92, G66
WALNUT (ENGLISH/BLACK)											
Use Group: TERRESTRIAL FOOD CROP											
Soil band treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil band treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Postplant., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
Soil broadcast treatment., Spring., Sprayer.	EC	NA	4 lb A	*	NS	3/1 yr	NS	NS	60	0.5	C92, G03, GM1
WHEAT											
Use Group: TERRESTRIAL FOOD+FEED CROP											
Seed treatment., At planting., Planter/seed box.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
	D	NA	.00585 lb bu	*	NS	NS	NS	NS	NS	NS	C92, G66, GN3
Seed treatment., At planting., Seed treater.	D	NA	.007969 lb bu	*	NS	NS	NS	NS	NS	0.5	C92, G66
	D	NA	.007813 lb bu	*	NS	NS	NS	NS	NS	1	C92, G66
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

## FOOD/FEED USES (con't)

WHEAT (con't)										Use Group: TERRESTRIAL FOOD+FEED CROP (con't)
	D	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
	D	NA	.00585 lb bu	*	NS	NS	NS	NS	NS	C92, G66, GN3
Slurry., Seed., Mist-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.035 lb cwt	*	NS	NS	NS	NS	NS	G66
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92
	WP	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	C92, G66

## NON-FOOD/NON-FEED

COMMERCIAL/INDUSTRIAL LAWNS				Use Group: TERRESTRIAL NON-FOOD CROP							
Spray., Foliar., Not on label.	WP	NA	2.800E-05 lb sq.ft	*	NS	NS	NS	NS	7	1	C46, C92, C94, GB9, GC1
DECIDUOUS FRUIT TREES (UNSPECIFIED)				Use Group: TERRESTRIAL NON-FOOD CROP							
Soil band treatment., Nonbearing., Granule applicator.	G	NA	4 lb A	*	3	NS	NS	NS	60	NS	C92
Soil band treatment., Nonbearing., Not on label.	EC	NA	4 lb A	*	NS	NS	NS	12 lb	90	0.5	C92
Soil broadcast treatment., Nonbearing nurserystock., Granule applicator.	G	NA	8 lb A	*	NS	NS	NS	NS	90	0.5	CAE

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## DECIDUOUS FRUIT TREES (UNSPECIFIED) (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil broadcast treatment., Nonbearing nurserystock., Not on label.	EC	NA	9.375E-05 lb sq.ft	* NS NS	NS .275 lb	90	0.5		C92
Soil broadcast treatment., Nonbearing., Drip irrigation.	WP	NA	1.875E-04 lb sq.ft	* NS NS	NS NS	90	0.5		C92
Soil broadcast treatment., Nonbearing., Granule applicator.	G	NA	4 lb A	* 3 NS	NS NS	60	NS		C92
Soil broadcast treatment., Nonbearing., Not on label.	EC	NA	4 lb A	* NS NS	NS 12 lb	90	0.5		C92
	WP	NA	1.875E-04 lb sq.ft	* NS NS	NS NS	90	0.5		C92
Soil broadcast treatment., Nonbearing., Overhead sprinkler irrigation.	WP	NA	1.875E-04 lb sq.ft	* NS NS	NS NS	90	0.5		C92

## GOLF COURSE TURF

Use Group: TERRESTRIAL NON-FOOD CROP

Seed treatment., At planting., Planter/seed box.	D	NA	.063 lb cwt	* NS NS	NS NS	NS	2		C92, G66
	D	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.063 lb cwt	* NS NS	NS NS	NS	2		C92, G66
	D	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C46, C93, G66
	FlC	NA	.062 lb cwt	* NS NS	NS NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS	NS		CAE, G66
	FlC	NA	.070 lb cwt	* NS NS	NS NS	NS	NS		G66
	WP	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C92
	WP	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.063 lb cwt	* NS NS	NS NS	NS	NS		C46, C93, G66
	FlC	NA	.062 lb cwt	* NS NS	NS NS	NS	NS		C46, C92, G66
	FlC	NA	.031 lb cwt	* NS NS	NS NS	NS	NS		CAE, G66



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## GOLF COURSE TURF (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

	FlC	NA	.070 lb cwt	* NS	NS	NS	NS	NS	NS	G66
	WP	NA	.063 lb cwt	* NS	NS	NS	NS	NS	NS	C92
	WP	NA	.063 lb cwt	* NS	NS	NS	NS	NS	NS	C92, G66
Spray., Foliar., Not on label.	WP	NA	2.800E-05 lb sq.ft	* NS	NS	NS	NS	7	1	C46, C92, C94, GB9, GC1

## ORNAMENTAL AND/OR SHADE TREES

Use Group: GREENHOUSE NON-FOOD CROP

Broadcast., Seed bed., Drip irrigation.	WP	NA	UC	* NS	NS	NS	NS	NS	0.5	C92
Broadcast., Seed bed., Not on label.	WP	NA	1.563E-05 lb sq.ft	* NS	NS	NS	NS	NS	0.5	C92
Broadcast., Seed bed., Overhead sprinkler irrigation.	WP	NA	UC	* NS	NS	NS	NS	NS	0.5	C92
Broadcast., Transplant., Drip irrigation.	WP	NA	UC	* NS	NS	NS	NS	NS	0.5	C92
Broadcast., Transplant., Not on label.	WP	NA	3.125E-05 lb sq.ft	* NS	NS	NS	NS	NS	0.5	C92
Broadcast., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	* NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	* NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., At planting., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	* NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	* NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	* NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Containerized., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	* NS	NS	NS	NS	70	0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL AND/OR SHADE TREES (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Plant bed., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Plant bed., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Transplant., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL AND/OR SHADE TREES (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil mix., Transplant., Granule applicator.	G	NA	5.781E-04 lb cu.ft	*	NS	NS	NS	NS	60	0.5	CAE
Soil treatment., At planting., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Containerized., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Interiorscapes., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Transplant., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE

Use Group: TERRESTRIAL NON-FOOD CROP

Band treatment., Early spring., Not on label.	G	NA	5 lb A	*	NS	NS	NS	NS	NS	NS	NC
Band treatment., Fall., Not on label.	G	NA	5 lb A	*	NS	NS	NS	NS	NS	NS	NC
Broadcast., Early spring., Not on label.	G	NA	5 lb A	*	NS	NS	NS	NS	NS	NS	NC
Broadcast., Fall., Not on label.	G	NA	5 lb A	*	NS	NS	NS	NS	NS	NS	NC
Broadcast., Seed bed., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Broadcast., Seed bed., Granule applicator.	G	NA	.625 lb A	*	NS	NS	NS	NS	NS	0.5	CAE
Broadcast., Seed bed., Not on label.	WP	NA	1.563E-05 lb sq.ft	*	NS	NS	NS	NS	NS	0.5	C92
Broadcast., Seed bed., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Broadcast., Transplant., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL AND/OR SHADE TREES (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Broadcast., Transplant., Granule applicator.	G	NA	1.25 lb A	* NS NS	NS NS NS	0.5				CAE
Broadcast., Transplant., Not on label.	WP	NA	3.125E-05 lb sq.ft	* NS NS	NS NS NS	0.5				C92
Broadcast., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS NS	0.5				C92
Soil band treatment., Early spring., Sprayer.	EC	NA	5 lb A	* NS NS	NS NS NS	NS NC				
Soil band treatment., Fall., Sprayer.	EC	NA	5 lb A	* NS NS	NS NS NS	NS NC				
Soil band treatment., Foliar., Sprayer.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS NS	0.5				C92
Soil broadcast treatment., Containerized., Spreader.	G	NA	3.025E-05 lb sq.ft	* NS NS	NS NS 60	0.5				CAE, GB9
Soil broadcast treatment., Early spring., Sprayer.	EC	NA	5 lb A	* NS NS	NS NS NS	NS NC				
Soil broadcast treatment., Fall., Sprayer.	EC	NA	5 lb A	* NS NS	NS NS NS	NS NC				
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS NS	0.5				C92
Soil broadcast treatment., Seed bed., Not on label.	EC	NA	.625 lb A	* NS NS	NS NS NS	0.5				C92
Soil broadcast treatment., Transplant., Not on label.	EC	NA	1.25 lb A	* NS NS	NS NS NS	0.5				C92
Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	* NS NS	NS NS 70	0.5				C92
Soil drench treatment., At planting., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS 70	0.5				C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS 70	0.5				C92
Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS 70	0.5				C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	* NS NS	NS NS 70	0.5				C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL AND/OR SHADE TREES (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil drench treatment., Containerized., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Foliar., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Plant bed., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Plant bed., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70 0.5			C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL AND/OR SHADE TREES (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil drench treatment., Transplant., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil mix., Transplant., Granule applicator.	G	NA	5.781E-04 lb cu.ft	*	NS	NS	NS	NS	60	0.5	CAE
Soil mix., Transplant., Not on label.	G	NA	6.716E-04 lb cu.ft	*	NS	NS	NS	NS	60	0.5	CAE, GB9
Soil treatment., At planting., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Containerized., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Interiorscapes., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE
Soil treatment., Transplant., Granule applicator.	G	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	CAE

Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL

Soil drench treatment., Foliar., Product container.	RTU	NA	2.498E-04 lb sq.ft	*	NS	4/1 yr	NS	NS	90	NS	C46, CAC
Soil drench treatment., Foliar., Sprinkler can.	RTU	NA	2.498E-04 lb sq.ft	*	NS	4/1 yr	NS	NS	90	NS	C46, CAC

## ORNAMENTAL HERBACEOUS PLANTS

Use Group: GREENHOUSE NON-FOOD CROP

Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	42	0.5	C92
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SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL HERBACEOUS PLANTS (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil drench treatment., At planting., Not on label.	EC	NA	9.766E-06 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Containerized., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Foliar., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL HERBACEOUS PLANTS (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil drench treatment., Plant bed., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Plant bed., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Transplant., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42 0.5			C92
Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	42 0.5			C92
Soil mix., At planting., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil mix., Containerized., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil mix., Foliar., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil mix., Interiorscapes., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil mix., Plant bed., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil mix., Transplant., Granule applicator.	G	NA	3.700E-04 lb cu.ft	* NS NS	NS NS	42 0.5			CAE
Soil mix., Transplant., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	NS 0.5			C92
Soil treatment., At planting., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5			CAE
Soil treatment., Containerized., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5			CAE



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL HERBACEOUS PLANTS (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil treatment., Interiorscapes., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42	0.5		CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42	0.5		CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42	0.5		CAE
Soil treatment., Transplant., Granule applicator.	G	NA	3.750E-05 lb sq.ft	* NS NS	NS NS	42	0.5		CAE

Use Group: TERRESTRIAL NON-FOOD CROP

Soil band treatment., Foliar., Sprayer.	EC	NA	3.125E-05 lb sq.ft	* NS NS	NS NS	NS	0.5		C92
Soil broadcast treatment., Containerized., Spreader.	G	NA	3.025E-05 lb sq.ft	* NS NS	NS NS	60	0.5		CAE, GB9
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	3.125E-05 lb sq.ft	* NS NS	NS NS	NS	0.5		C92
Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	NS	0.5		C92
Soil drench treatment., At planting., Not on label.	EC	NA	9.766E-06 lb sq.ft	* NS NS	NS NS	42	0.5		C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42	0.5		C92
Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	NS	0.5		C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	NS	0.5		C92
Soil drench treatment., Containerized., Not on label.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42	0.5		C92
	WP	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	42	0.5		C92
Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	NS	0.5		C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL HERBACEOUS PLANTS (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Foliar., Not on label.	EC	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
	WP	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
	WP	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Plant bed., Not on label.	EC	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
	WP	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
Soil drench treatment., Plant bed., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92
Soil drench treatment., Transplant., Not on label.	EC	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
	WP	NA	7.813E-05 lb sq.ft	*	NS	NS	NS	NS	42	0.5	C92
Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	NS	0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Rate (AI un- less noted otherwise)	Soil Max. # Apps Max. Rate @ Max. Rate Max. /crop /year Dose cycle	Max. Dose [(AI unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL HERBACEOUS PLANTS (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil mix., At planting., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
Soil mix., Containerized., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
Soil mix., Foliar., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
Soil mix., Interiorscapes., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
Soil mix., Plant bed., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
Soil mix., Transplant., Granule applicator.	G	NA	3.700E-04 lb cu.ft	* NS NS	NS NS	42 0.5		CAE
Soil mix., Transplant., Not on label.	EC	NA	2.891E-04 lb cu.ft	* NS NS	NS NS	0.5		C92
	G	NA	6.716E-04 lb cu.ft	* NS NS	NS NS	60 0.5		CAE, GB9
Soil treatment., At planting., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE
Soil treatment., Containerized., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE
Soil treatment., Interiorscapes., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	7.500E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE
Soil treatment., Transplant., Granule applicator.	G	NA	3.750E-05 lb sq.ft	* NS NS	NS NS	42 0.5		CAE

## ORNAMENTAL LAWNS AND TURF

Use Group: TERRESTRIAL NON-FOOD CROP

Broadcast., Foliar., Granule applicator.	G	NA	3.125E-05 lb sq.ft	* NS NS	NS NS	7 0.5		CAE
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SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI un- less noted otherwise)	Max. Appl. Rate (AI un- less noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year Dose cycle	Max. Dose [(AI Tex. @ Max. Rate unless noted otherwise)/A] /crop /year cycle	Min. Restr. Interv Entry (days) Interv [day(s)]	Geographic Limitations Allowed Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL LAWNS AND TURF (con't)

## Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Spray., Foliar., Not on label.	WP	NA	2.800E-05 lb sq.ft	*	NS	NS	NS	NS	7	1	C46, C92, C94, GB9, GC1
Spray., Foliar., Sprayer.	EC	NA	3.125E-05 lb sq.ft	*	3	NS	NS	NS	10	0.5	C92

## Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL

Broadcast., Foliar., Spreader.	G	NA	3.108E-05 lb sq.ft	*	3	NS	NS	NS	7	0.5	CAE, GB9
Chemigation., Foliar., Overhead sprinkler irrigation.	WP	NA	3.125E-05 lb sq.ft	*	3	NS	NS	NS	14	0.5	C92
Chemigation., Postplant., Overhead sprinkler irrigation.	WP	NA	3.125E-05 lb sq.ft	*	3	NS	NS	NS	7	0.5	C92
Seed treatment., At planting., Planter/seed box.	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Seed treatment., At planting., Seed treater.	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	2	C92, G66
	D	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Mist-type seed treater.	EC	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C92
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C92, G66
Slurry., Seed., Slurry-type seed treater.	EC	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C93, G66
	FlC	NA	.062 lb cwt	*	NS	NS	NS	NS	NS	NS	C46, C92, G66
	FlC	NA	.031 lb cwt	*	NS	NS	NS	NS	NS	NS	CAE, G66
	FlC	NA	.070 lb cwt	*	NS	NS	NS	NS	NS	NS	G66
	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	NS	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL LAWNS AND TURF (con't) Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL (con't)

	WP	NA	.063 lb cwt	*	NS	NS	NS	NS	NS	C92, G66
Spray., Foliar., Not on label.	WP	NA	3.125E-05 lb sq.ft	*	3	NS	NS	NS	14 0.5	C92
Spray., Foliar., Sprayer.	EC	NA	1.111E-05 gal sq.ft	*	NS	NS	NS	NS	NS	GB9, GC1
Spray., Postplant., Not on label.	WP	NA	3.125E-05 lb sq.ft	*	3	NS	NS	NS	7 0.5	C92

## ORNAMENTAL WOODY SHRUBS AND VINES Use Group: GREENHOUSE NON-FOOD CROP

Chemigation., Foliar., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	60 0.5	C92
Chemigation., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	60 0.5	C92
Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., At planting., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70 0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., Containerized., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70 0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70 0.5	C92
Soil drench treatment., Foliar., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70 0.5	C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL WOODY SHRUBS AND VINES (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Plant bed., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Plant bed., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil mix., Transplant., Granule applicator.	G	NA	5.781E-04 lb cu.ft	* NS NS	NS NS	60	0.5		CAE
Soil treatment., At planting., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL WOODY SHRUBS AND VINES (con't)

Use Group: GREENHOUSE NON-FOOD CROP (con't)

Soil treatment., Containerized., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			CAE
Soil treatment., Interiorscapes., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			CAE
Soil treatment., Transplant., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			CAE
Spray., Foliar., Not on label.	WP	NA	UC	* NS NS	NS NS	10	NS	PA		C46
	WP	NA	UC	* NS NS	NS NS	60	0.5			C92
Spray., Foliar., Sprayer.	EC	NA	UC	* NS NS	NS NS	60	0.5			C92

Use Group: TERRESTRIAL NON-FOOD CROP

Chemigation., Foliar., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	60	0.5			C92
Chemigation., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	60	0.5			C92
Soil band treatment., Foliar., Sprayer.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	NS	0.5			C92
Soil broadcast treatment., Containerized., Spreader.	G	NA	3.025E-05 lb sq.ft	* NS NS	NS NS	60	0.5			CAE, GB9
Soil broadcast treatment., Foliar., Sprayer.	EC	NA	7.813E-05 lb sq.ft	* NS NS	NS NS	NS	0.5			C92
Soil drench treatment., At planting., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5			C92
Soil drench treatment., At planting., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5			C92

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## ORNAMENTAL WOODY SHRUBS AND VINES (con't)

Use Group: TERRESTRIAL NON-FOOD CROP (con't)

Soil drench treatment., At planting., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Containerized., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Containerized., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Containerized., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Foliar., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Interiorscapes., Overhead sprinkler irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Plant bed., Drip irrigation.	WP	NA	UC	*	NS	NS	NS	NS	70	0.5	C92
Soil drench treatment., Plant bed., Not on label.	EC	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92
	WP	NA	1.563E-04 lb sq.ft	*	NS	NS	NS	NS	70	0.5	C92



SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv Entry (days)	Geographic Limitations Allowed	Disallowed	Use Limitations Codes
USES ELIGIBLE FOR REREGISTRATION									
NON-FOOD/NON-FEED (con't)									
ORNAMENTAL WOODY SHRUBS AND VINES (con't)									
Use Group: TERRESTRIAL NON-FOOD CROP (con't)									
Soil drench treatment., Plant bed., Overhead WP sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Drip irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Not on label.	EC	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
	WP	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		C92
Soil drench treatment., Transplant., Overhead sprinkler irrigation.	WP	NA	UC	* NS NS	NS NS	70	0.5		C92
Soil mix., Transplant., Granule applicator.	G	NA	5.781E-04 lb cu.ft	* NS NS	NS NS	60	0.5		CAE
Soil mix., Transplant., Not on label.	G	NA	6.716E-04 lb cu.ft	* NS NS	NS NS	60	0.5		CAE, GB9
Soil treatment., At planting., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Soil treatment., Containerized., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Soil treatment., Interiorscapes., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Soil treatment., Nurserystock., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Soil treatment., Plant bed., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Soil treatment., Transplant., Granule applicator.	G	NA	1.563E-04 lb sq.ft	* NS NS	NS NS	70	0.5		CAE
Spray., Foliar., Not on label.	WP	NA	UC	* NS NS	NS NS	60	0.5		C92
Spray., Foliar., Sprayer.	EC	NA	UC	* NS NS	NS NS	60	0.5		C92
Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL									
Spray., Foliar., Not on label.	WP	NA	UC	* NS NS	NS NS	10	NS	PA	C46

SITE Application Type, Application Timing, Application Equipment – Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Restr. Entry Interv [day(s)]	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes		
USES ELIGIBLE FOR REREGISTRATION												
NON-FOOD/NON-FEED (con't)												
ORNAMENTAL WOODY SHRUBS AND VINES (con't)												
Use Group: TERRESTRIAL NON-FOOD+OUTDOOR RESIDENTIAL (con't)												
Spray., Foliar., Sprayer.	WP	NA	UC	*	NS	NS	NS	10	NS	TX	C46	
RESIDENTIAL LAWNS												
Use Group: OUTDOOR RESIDENTIAL												
Spray., Foliar., Not on label.	WP	NA	2.800E-05 lb sq.ft	*	NS	NS	NS	7	1		C46, C92, C94, GB9, GC1	
TOBACCO												
Use Group: TERRESTRIAL NON-FOOD CROP												
Soil broadcast treatment., At planting., Sprayer.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	OH	C46	
Soil broadcast treatment., Plant bed., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	PA	C92	
Soil broadcast treatment., Posttransplant., Ground.	EC	NA	3 lb A	*	NS	NS	NS	NS	NS	0.5	PA	C92
Soil broadcast treatment., Preplant., Not on label.	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	FL	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	GA	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	KY	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	MD	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	NC	
	EC	NA	.5 gal A	*	NS	NS	NS	NS	NS	NS	PA	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	TN	
	EC	NA	.25 gal A	*	NS	NS	NS	NS	NS	NS	VA	
Soil broadcast treatment., Preplant., Sprayer.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	NS	OH	C46
Soil broadcast treatment., Pretransplant., Not on label.	EC	NA	1 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Soil treatment., Layby., Ground.	EC	NA	.5 lb A	*	NS	NS	NS	NS	NS	0.5		C92
Spray., Foliar., Sprayer.	EC	NA	.125 gal A	*	NS	NS	1.5 gal	NS	NS	NS	SC	
	EC	NA	.125 gal A	*	NS	NS	NS	NS	7	NS	FL	

SITE Application Type, Application Timing, Application Equipment _ Surface Type (Antimicrobial only) & Efficacy Influencing Factor (Antimicrobial only)	Form(s)	Min. Appl. Rate (AI unless noted otherwise)	Max. Appl. Rate (AI unless noted otherwise)	Soil Max. # Apps @ Max. Rate /crop /year	Max. Dose [(AI unless noted otherwise)/A] /crop /year	Min. Restr. Interv (days)	Geographic Limitations Allowed	Geographic Limitations Disallowed	Use Limitations Codes
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## USES ELIGIBLE FOR REREGISTRATION

NON-FOOD/NON-FEED (con't)

## TOBACCO (con't) Use Group: TERRESTRIAL NON-FOOD CROP (con't)

EC	NA	.125 gal A	* NS	NS	NS	7	NS	GA
EC	NA	.125 gal A	* NS	NS	NS	7	NS	KY
EC	NA	.125 gal A	* NS	NS	NS	7	NS	MD
EC	NA	.125 gal A	* NS	NS	NS	7	NS	NC
EC	NA	.25 lb A	* NS	NS	NS	7	NS	OH
EC	NA	.125 gal A	* NS	NS	NS	7	NS	PA
EC	NA	.125 gal A	* NS	NS	NS	7	NS	TN
EC	NA	.125 gal A	* NS	NS	NS	7	NS	VA

C46

## TREE NUTS Use Group: TERRESTRIAL NON-FOOD CROP

Soil band treatment., Nonbearing., Granule applicator.	G	NA	4 lb A	*	3	NS	NS	NS	60	NS
Soil band treatment., Nonbearing., Not on label.	EC	NA	4 lb A	*	NS	NS	NS	12 lb	90	0.5
Soil broadcast treatment., Nonbearing nurserystock., Granule applicator.	G	NA	8 lb A	*	NS	NS	NS	NS	90	0.5
Soil broadcast treatment., Nonbearing nurserystock., Not on label.	EC	NA	9.375E-05 lb sq.ft	*	NS	NS	NS	.275 lb	90	0.5
Soil broadcast treatment., Nonbearing., Drip irrigation.	WP	NA	1.875E-04 lb sq.ft	*	NS	NS	NS	NS	90	0.5
Soil broadcast treatment., Nonbearing., Granule applicator.	G	NA	4 lb A	*	3	NS	NS	NS	60	NS
Soil broadcast treatment., Nonbearing., Not on label.	EC	NA	4 lb A	*	NS	NS	NS	12 lb	90	0.5
	WP	NA	1.875E-04 lb sq.ft	*	NS	NS	NS	NS	90	0.5
Soil broadcast treatment., Nonbearing., Overhead sprinkler irrigation.	WP	NA	1.875E-04 lb sq.ft	*	NS	NS	NS	NS	90	0.5

## LEGEND

## HEADER ABBREVIATIONS

Min. Appl. Rate (AI unless : Minimum dose for a single application to a single site. System calculated. Microbial claims only. noted otherwise)

Max. Appl. Rate (AI unless : Maximum dose for a single application to a single site. System calculated. noted otherwise)

Soil Tex. Max. Dose : Maximum dose for a single application to a single site as related to soil texture (Herbicide claims only).

Max. # Apps @ Max. Rate : Maximum number of Applications at Maximum Dosage Rate. Example: "4 applications per year" is expressed as "4/1 yr"; "4 applications per 3 years" is expressed as "4/3 yr"

Max. Dose [(AI unless : Maximum dose applied to a site over a single crop cycle or year. System calculated. noted otherwise)/A]

Min. Interv (days) : Minimum Interval between Applications (days)

Restr. Entry Interv (days) : Restricted Entry Interval (days)

## SOIL TEXTURE FOR MAX APP. RATE

\* : Non-specific

C : Coarse

M : Medium

F : Fine

O : Others

## FORMULATION CODES

D : DUST

EC : EMULSIFIABLE CONCENTRATE

FLC : FLOWABLE CONCENTRATE

G : GRANULAR

RTU : LIQUID-READY TO USE

WP : WETTABLE POWDER

## ABBREVIATIONS

AN : As Needed

NA : Not Applicable

NS : Not Specified (on label)

UC : Unconverted due to lack of data (on label), or with one of following units: bag, bait, bait block, bait pack, bait station, bait station(s), block, briquet, briquets, bursts, cake, can, canister, capsule, cartridges, coil, collar, container, dispenser, drop, eartag, grains, lure, pack, packet, packets, pad, part, parts, pellets, piece, pieces, pill, pumps, sec, sec burst, sheet, spike, stake, stick, strip, tab, tablet, tablets, tag, tape, towelette, tray, unit, --

## APPLICATION RATE

DCNC : Dosage Can Not be Calculated

No Calc : No Calculation can be made

W : PPM calculated by weight

V : PPM Calculated by volume

cwt : Hundred Weight

nnE-xx : nn times (10 power -xx); for instance, "1.234E-04" is equivalent to ".0001234"

## USE LIMITATIONS CODES

C14 : Grown for seed only.

C46 : Do not apply through any type of irrigation system.

C92 : For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark.

C93 : Do not apply directly to water.

C94 : Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

CAC : Keep out of lakes, streams, and ponds.

CAE : Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes).

CAG : Do not apply where runoff is likely to occur.

G03 : Do not graze livestock in treated areas.

G66 : Do not use treated seed for feed, food or oil purposes.

G73 : Do not graze or feed livestock on hay grown from treated seed.

G79 : Treated seed must not be used for or mixed with food or animal feed or processing oil.

GA8 : Do not feed treated tops to livestock.

GB6 : Do not feed crop waste to livestock.

GB9 : Do not feed clippings to livestock.

GC1 : Do not graze treated areas.

GF9 : Do not graze treated crop or allow hay, seeds or seed screenings from treated crop to be used for food or feed.

GI2 : Do not hog down treated fields.

GI9 : Do not graze or feed fodder and forage to livestock.

GL7 : Do not allow the feeding of vines or grazing of foliage by livestock.

GL8 : Do not allow the feeding or grazing of foliage by livestock.

GL9 : Do not allow the feeding or grazing of foliage or harvest residues by livestock.

GM1 : Do not graze or feed cover crops in treated orchards.

GN3 : Do not graze or feed livestock on treated areas for 42 days after planting.

GO3 : Do not cut green crop for feed or forage purposes.

H01 : \_\_ day(s) preharvest interval.

H03 : Preharvest interval not located on the label.  
H12 : \_\_ day(s) preharvest interval (forage, fodder).  
\* NUMBER IN PARENTHESES REPRESENTS THE NUMBER OF TIME UNITS (HOURS,DAYS, ETC.) DESCRIBED IN THE LIMITATION.

GEOGRAPHIC CODES  
018 : Pacific Northwest  
AZ : Arizona  
CA : California  
CO : Colorado  
FL : Florida  
GA : Georgia  
HI : Hawaii  
ID : Idaho  
KY : Kentucky  
LA : Louisiana  
MD : Maryland  
ME : Maine  
NC : North Carolina  
ND : North Dakota  
OH : Ohio  
OK : Oklahoma  
OR : Oregon  
PA : Pennsylvania  
PR : Puerto Rico  
SC : South Carolina  
TN : Tennessee  
TX : Texas  
VA : Virginia  
WA : Washington



**APPENDIX B. Table of the Generic Data Requirements  
and Studies Used to Make the Reregistration Decision**





### **GUIDE TO APPENDIX B**

Appendix B contains listings of data requirements which support the reregistration for active ingredients within the case 0081 covered by this Reregistration Eligibility Decision Document. It contains generic data requirements that apply to 0081 in all products, including data requirements for which a "typical formulation" is the test substance.

The data table is organized in the following format:

1. Data Requirement (Column 1). The data requirements are listed in the order in which they appear in 40 CFR Part 158. the reference numbers accompanying each test refer to the test protocols set in the Pesticide Assessment Guidelines, which are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (703) 487-4650.

2. Use Pattern (Column 2). This column indicates the use patterns for which the data requirements apply. The following letter designations are used for the given use patterns:

A	Terrestrial food
B	Terrestrial feed
C	Terrestrial non-food
D	Aquatic food
E	Aquatic non-food outdoor
F	Aquatic non-food industrial
G	Aquatic non-food residential
H	Greenhouse food
I	Greenhouse non-food
J	Forestry
K	Residential
L	Indoor food
M	Indoor non-food
N	Indoor medical
O	Indoor residential

3. Bibliographic citation (Column 3). If the Agency has acceptable data in its files, this column lists the identifying number of each study. This normally is the Master Record Identification (MRID) number, but may be a "GS" number if no MRID number has been assigned. Refer to the Bibliography appendix for a complete citation of the study.



# APPENDIX B

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
<b><u>PRODUCT CHEMISTRY</u></b>			
61-1	Chemical Identity	All	00104498, 41055201, 41912901, 42409201, 42762801, 42762802,
61-2A	Start. Mat. & Mnfg. Process	All	41055201, 41912901, DATA GAP
61-2B	Formation of Impurities	All	41055201, 41055202, 41912901
62-1	Preliminary Analysis	All	41055202, 42319901, 42762801, 42762802
62-2	Certification of limits	All	41055201, 41055202, 41912901, 42409202
62-3	Analytical Method	All	41055202, 41912901
63-2	Color	All	00104483
63-3	Physical State	All	00104483
63-4	Odor	All	00104483
63-5	Melting Point	All	00104483
63-6	Boiling Point	All	NOT REQUIRED
63-7	Density	All	00104483
63-8	Solubility	All	00104483
63-9	Vapor Pressure	All	00104483
63-10	Dissociation Constant	All	00104483
63-11	Octanol/Water Partition	All	40435001
63-12	pH	All	40435001
63-13	Stability	All	00104483

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
63-14	Oxidizing\Reducing Action	ALL	WAIVED
63-15	Flammability	ALL	NOT REQUIRED
63-16	Explodability	All	WAIVED
63-17	Storage stability	All	DATA GAP, MANUFACTURING USE DATA REQUIREMENT, REFER TO PRODUCT SPECIFIC DCI
63-18	Viscosity	ALL	NOT REQUIRED
63-19	Miscibility	ALL	NOT REQUIRED
63-20	Corrosion characteristics	All	DATA GAP, MANUFACTURING USE DATA REQUIREMENT, REFER TO PRODUCT SPECIFIC DCI

### ECOLOGICAL EFFECTS

71-1A	Acute Avian Oral - Quail/Duck	A,B	00077334
71-2A	Avian Dietary - Quail	A,B	00077335, 00063988
71-2B	Avian Dietary - Duck	A,B	00063989
71-4A	Avian Reproduction - Quail	A,B	DATA GAP
71-4B	Avian Reproduction - Duck	A,B	DATA GAP
72-1A	Fish Toxicity Bluegill	A,B	00071302, 00100446
72-1B	Fish Toxicity Bluegill - TEP	A,B	00071301
72-1C	Fish Toxicity Rainbow Trout	A,B	00071303, 00100447
72-1D	Fish Toxicity Rainbow Trout- TEP	A,B	00072396
72-2A	Invertebrate Toxicity	A,B	00071306, 00100448, 00063986
72-2B	Invertebrate Toxicity - TEP	A,B	00071304

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
72-3B	Estuarine/Marine Toxicity - Mollusk	A,B	41288101, 41855801
72-3C	Estuarine/Marine Toxicity - Shrimp	A,B	41288103
72-3E	Estuarine/Marine Toxicity Mollusk - TEP	A,B	41288102, 41855801, 42378101
72-3F	Estuarine/Marine Toxicity Shrimp - TEP	A,B	41288104, 41855801, 42337501
72-4A	Early Life Stage Fish	A,B	00071308
72-4B	Life Cycle Invertebrate	A,B	00071307
123-2	Aquatic Plant Growth	A,B	00148448
141-1	Honey Bee Acute Contact	A,B	40276701

### TOXICOLOGY

81-1	Acute Oral Toxicity	A,B	00063990, 00063991, 00154308
81-2	Acute Dermal Toxicity - Rabbit/Rat	A,B	00063993, 00063994
81-3	Acute Inhalation Toxicity - Rat		WAIVED
81-4	Primary Eye Irritation - Rabbit	A,B	00084108
81-5	Primary Dermal Irritation - Rabbit	A,B	00084107
81-6	Dermal Sensitization - Guinea Pig	A,B	00084109
82-1A	90-Day Feeding - Rodent	A,B	00084110, 00148087
82-1B	90-Day Feeding - Non-rodent	A,B	00084111
82-2	21-Day Dermal - Rabbit/Rat	A,B	00072394

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
82-4	90-Day Inhalation - Rat	A,B	00109471
83-1A	Chronic Feeding Toxicity - Rodent	A,B	00098481, 00132009, 00150185
83-1B	Chronic Feeding Toxicity - Non-Rodent	A,B	00071598
83-2A	Oncogenicity - Rat	A,B	00098481, 00013209, 00150185
83-2B	Oncogenicity - Mouse	A,B	00103354, 00150094
83-3A	Developmental Toxicity - Rat	A,B	00161405, 00144423, 00148867
83-3B	Developmental Toxicity - Rabbit	A,B	00144371, 00144372, 00148866, 00154938, 00161404
83-4	2-Generation Reproduction - Rat	A,B	00071600
84-2A	Gene Mutation (Ames Test)	A,B	00084113, 00154301, 00154302, 00103359, 00103362, 00154309
84-2B	Structural Chromosomal Aberration	A,B	00084114, 00103361, 00154307, 00154310
84-4	Other Genotoxic Effects	A,B	00154306, 00154663, 00103363, 00160037
85-1	General Metabolism	A,B	00071613, 00071614, 00099084, 41664501, 00161402, 43317301, DATA IN REVIEW

### OCCUPATIONAL/RESIDENTIAL EXPOSURE

No studies required.

### ENVIRONMENTAL FATE

161-1	Hydrolysis	A,B	00104493
161-2	Photodegradation - Water	A,B	41156001

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
161-3	Photodegradation - Soil	A,B	00100456
162-1	Aerobic Soil Metabolism	A,B	00104494
162-2	Anaerobic Soil Metabolism	A,B	00104494
162-3	Anaerobic Aquatic Metabolism	A,B	42259801
162-4	Aerobic Aquatic Metabolism	A,B	42259802, NOT ACCEPTABLE BUT NO ADDITIONAL DATA REQUIRED
163-1	Leaching/Adsorption and Desorption	A,B	00100464, 00100465, 00100466
163-2	Volatility - Lab	A,B	00100455
164-1	Terrestrial Field Dissipation	A,B	41765001, 41765002, 41809301, NOT ACCEPTABLE BUT NO ADDITIONAL DATA REQUIRED
164-2	Aquatic Field Dissipation	A,B	42259803, 42259804, NOT ACCEPTABLE BUT NO ADDITIONAL DATA REQUIRED
165-4	Bioaccumulation in Fish	A,B	00100468, 00100470
166-2	Ground Water - Small Retrospective	A,B	RESERVED
<b><u>RESIDUE CHEMISTRY</u></b>			
171-4A	Nature of Residue - Plants	A,B,C	00071601, 00071602, 00071603, 00071604, 00071605, 00071606, 00071607, 00071608, 00071609, 00071610, 00114379, 00128102
171-4B	Nature of Residue - Livestock	A,B,C	00071611, 00071612, 41664503, 41664504, 41664505, 41664506, 42115801, 42115802, 42115803, 42115804, 42115805, 42115806 DATA GAP

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT		USE PATTERN	CITATION(S)
171-4C/D	Residue Analytical Method - Plants and Animals	A,B	00071622, 00071623, 00071676, 00104378, 00104656, 00148440, 00157480, 40503101, 41055203, 41689701, 41689702, 42115809, 42115810, 42115807, 42115808, DATA GAP
171-4E	Storage Stability	A,B,C	00148440, 40106601, 41449001, 42021101, 42115809, 42350101, 42919401, 41912902, DATA GAP
171-4J	Magnitude of Residues -	A,B	
	-fat, kidney and liver		00100753, 42115809, 00071673, 00071674, RESERVED
	-meat & meat byproducts		00100753, 42115809, 00071673, 00071674, RESERVED
	-eggs		00071673, 42115809, RESERVED
	-milk		00071674, RESERVED
171-4K	Crop Field Trials	A,B,C	
	<u>Root and Tuber Group</u>		40838301, 4083802
	-beets		00128102
	-ginseng		41688900, 41688901
	-potatoes		00104654, 00071616, 00098428
	-sugarbeets		00128102, 40569301
	<u>Leaves of Root and Tuber Group</u>		40838301, 40838302



## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT	USE PATTERN	CITATION(S)
-beet, tops		00128102
-sugarbeet, tops		40569301
<u>Bulb Vegetable Group</u>		
-onions, dry bulb		00071615, 00098428, 00130694, 00148103
-onions, green		00071615, 00098428, 00130694
<u>Leafy Vegetables Group (except Brassica)</u>		41587801, 42021101
-lettuce, head		00071615, 00097511, 00114377, 40775801
-spinach		00071672, 00114378, 40790201, 41636201
<u>Brassica Leafy Vegetable Group</u>		
-brassica leafy vegetable group (except broccoli, cabbage, and cauliflower)		
-broccoli		00071615, 00130773
-cabbage		00071615, 00130773
-cauliflower		00071615, 00130773
<u>Legume Vegetables Group</u>		
-legume vegetables group		00129003, 40569303
-soybean, grain		00071672, 00104390, 00148440
<u>Foliage of Vegetables Group</u>		00129003, 00071672, 00104390, 00148440, 40569303

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT	USE PATTERN	CITATION(S)
<u>Fruiting Vegetables (Except Cucurbits) Group</u>		00148103, 00148440, 00157480 DATA GAP
<u>Cucurbit Vegetables Group</u>		00071615, 00098428, 00130693, 00148103
<u>Citrus Fruits Group</u>		00117969, 00133020, 00148440
<u>Pome Fruits Group</u>		
-apples		00126315, 00141519
<u>Stone Fruits Group</u>		00164650
<u>Small Fruits and Berries Group</u>		
-blueberries		00164649
-cranberries		41996401
-grapes		00138818, 00155845, 41150101
-raspberries		00127769
-strawberries		00155237, 40880401, DATA GAP
<u>Tree Nuts Group</u>		
-almonds		00164651
-walnuts		00164651
<u>Cereal Grains Group</u>		
-grain, crops		00071672, 00104387, 00128102, 41689701, 41689702, 41870301
<u>Forage, Fodder and Straw of Cereal Grains Group (except wheat, barley and oats)</u>		00128102, 41689701, 41689702, 41870301, 41870305, 41912903

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT	USE PATTERN	CITATION(S)
<u>Grass Forage, Fodder, and Hay Group</u>		
-grasses, forage		NO ADDITIONAL DATA NEEDED AT THIS TIME
<u>NON-GRASS ANIMAL FEEDS GROUP</u>		
-alfalfa		40832901
<u>Miscellaneous Commodities</u>		
-asparagus		00154446, DATA GAP
-avocados		00074488
-cottonseed		00109402, 41870305, DATA GAP
-hops, green		00079433, 40746901, 40909401
-papaya		40490501
-peanut		00128738, 41870306, 42498701
-pineapples		00109472
-sunflower		00128102, 41912902
-tobacco		00100476, 00100477, 00100478, 00104485, 00140371, 00148440, 42196503
171-4L Processed Food		
-apples		00126315
-citrus		00117969
<u>Cereal Grains Group (except wheat, barley, and oats)</u>		41870301, 41870302, 41870303, 42498701, 42259805

## Generic Data Supporting Guideline Requirements for the Reregistration of Metalaxyl

REQUIREMENT	USE PATTERN	CITATION(S)
	-grapes	00138818, 00155845, 41150101
	-hops	00079433, 40746901, 40909401
	-peanut	00128738
	-pineapples	42233501
	-potatoes	41870307
	-prunes	00164650
	-soybean	00071672
	-sugarbeet	40106601, 40569301
	-sunflower	41870304, 42498701
	-tomatoes	00148440, 00157480, DATA GAP
165-1	Confined Rotational Crop	42196501, 42196502, 42196503, 43317302, DATA IN REVIEW
165-2	Field Rotational Crop	00114376, 00071672, 00104387, 41870308, DATA IN REVIEW





**APPENDIX C. Citations Considered to be Part of the Data  
Base Supporting the Reregistration of 0081**





## GUIDE TO APPENDIX C

1. **CONTENTS OF BIBLIOGRAPHY.** This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Reregistration Eligibility Document. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, are included.
2. **UNITS OF ENTRY.** The unit of entry in this bibliography is called a "study". In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review and can be described with a conventional bibliographic citation. The Agency has also attempted to unite basic documents and commentaries upon them, treating them as a single study.
3. **IDENTIFICATION OF ENTRIES.** The entries in this bibliography are sorted numerically by Master Record Identifier, or "MRID number". This number is unique to the citation, and should be used whenever a specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies (see paragraph 4(d)(4) below for further explanation). In a few cases, entries added to the bibliography late in the review may be preceded by a nine character temporary identifier. These entries are listed after all MRID entries. This temporary identifying number is also to be used whenever specific reference is needed.
4. **FORM OF ENTRY.** In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standard of the American National Standards Institute (ANSI), expanded to provide for certain special needs.
  - a. **Author.** Whenever the author could confidently be identified, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as the author. When no author or laboratory could be identified, the Agency has shown the first submitter as the author.
  - b. **Document date.** The date of the study is taken directly from the document. When the date is followed by a question mark, the bibliographer has deduced the date from the evidence contained in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.

- c. Title. In some cases, it has been necessary for the Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.
- d. Trailing parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:
  - (1) Submission date. The date of the earliest known submission appears immediately following the word "received."
  - (2) Administrative number. The next element immediately following the word "under" is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.
  - (3) Submitter. The third element is the submitter. When authorship is defaulted to the submitter, this element is omitted.
  - (4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," which stands for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume.

## BIBLIOGRAPHY

### MRID

### CITATION

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- 00063986 LeBlanc, G.A. (1977) Acute Toxicity of CGA-48988 Technical to the Water Flea (*Daphnia magna*). (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by EG&G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-C)
- 00063988 Sachsse, K.; Ullmann, L. (1976) 8-Day-Feeding Toxicity in the Japanese Quail of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-G)
- 00063989 Fink, R.; Beavers, J.B.; Brown, R. (1977) Final Report: Eight-Day Dietary LC50--Mallard Duck: Project No. 108-148. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Wildlife International, Ltd. and Washington College, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-H)
- 00063990 Sachsse, K.; Bathe, R. (1976) Acute Oral LD50 in the Rat of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-I)
- 00063991 Sachsse, K.; Bathe, R. (1976) Acute Oral LD50 in the Mouse of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-J)
- 00063993 Sachsse, K.; Ullmann, L. (1978) Acute Dermal LD50 in the Rabbit of Technical CGA 48988: Project No. 408378--Siss 6547. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-L)
- 00063994 Sachsse, K.; Bathe, R. (1976) Acute Dermal LD50 in the Rat of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-M)
- 00071301 U.S. Environmental Protection Agency, Animal Biology Laboratory (1979) Ridomil 2%: Bluegill (*Lepomis macrochirus*): Test # 2411. (Unpublished study; CDL:244183-B)

## BIBLIOGRAPHY

### MRID

### CITATION

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- 00071302 U.S. Environmental Protection Agency, Terrestrial & Aquatic Biology Laboratory (1979) Ridomil Tech: Bluegill (*Lepomis macrochirus*): Test # 2413. (Unpublished study; CDL:244183-E)
- 00071303 U.S. Environmental Protection Agency, Terrestrial & Aquatic Biology Laboratory (1979) Ridomil Tech: Rainbow Trout (*Salmo gairdneri*): Test # 2414. (Unpublished study; CDL:244183-F)
- 00071304 U.S. Environmental Protection Agency, Terrestrial & Aquatic Biology Laboratory (1979) Ridomil 2%: *Daphnia magna*: Test # 2416. (Unpublished study; CDL:244183-G)
- 00071306 U.S. Environmental Protection Agency, Terrestrial & Aquatic Biology Laboratory (1979) Ridomil Tech: *Daphnia magna*: Test # 2415. (Unpublished study; CDL:244183-I)
- 00071307 LeBlanc, G.A.; Mastone, J.; Altshul, L.; et al. (1980) The Chronic Toxicity of CGA-48988 to the Water Flea (*Daphnia magna*): Report # BW-80-5-668. (Unpublished study received Jan 23, 1981 under 100-607; prepared by EG & G, Bionomics, submitted by CibaGeigy Corp., Greensboro, N.C.; CDL:244183-J; 244782)
- 00071308 LeBlanc, G.A.; Mastone, J.; Wilson, B.F.; et al. (1980) The Toxicity of CGA-48988 to Fathead Minnow (*Pimephales promelas*) Eggs and Fry: Report # BW-80-4-642. (Unpublished study received Jan 23, 1981 under 100-607; prepared by EG & G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:244183-K; 244782)
- 00071598 Beck, L.S.; DeWard, J.; Kitchen, D.N.; et al. (1981) Six Month Chronic Oral Toxicity Study with CGA-48988 Technical in Beagle Dogs: Project No. 1545. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Elars Bioresearch Laboratories, Inc., submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL: 070016-A)
- 00071600 Cozens, D.D.; Allen, P.A.; Clark, R.; et al. (1980) Effect of CGA 48-988 on Reproductive Function of Multiple Generations in the Rat: CBG 181/80254. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Huntingdon Research Centre, England, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070015-A)

## BIBLIOGRAPHY

## MRID

## CITATION

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- |          |   |
|----------|---|
| 00071601 | Fischer, W.C.; Cassidy, J.E. (1978) Balance and Metabolism of Phenyl 14C-CGA-48988 in Potatoes: M6-69-1P, 1S: Report No. ABR-78001. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL: 070018-A)   |
| 00071602 | Foster, R.A.; Fischer, W.C.; Cassidy, J.E. (1978) Uptake of Phenyl-14C-CGA-48988 in Potatoes Grown in a Field Plot--Preparation of Rotational Plots: M6-69-2P, 2S; Report No. ABR-78013. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-B) |
| 00071603 | Honeycutt, R.C.; Fischer, W.C.; Madrid, S.; et al. (1980) Uptake, Balance and Metabolism of Phenyl-14C-CGA-48988 in Field Grown Potatoes: M11-69-14P, 14S; Report No. ABR-80042. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-C)         |
| 00071604 | Honeycutt, R.C.; Cassidy, J.E. (1980) Translocation of Phenyl 14C-CGA-48988 and Metabolites from Leaves into Potato Tubers: M11-69-12P, 12S; Report No. ABR-80048. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-D)                       |
| 00071605 | Gross, D. (1977) Metabolism of CGA 48 988 in Field Grown Potato Plants: Project Report 30/77. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-F)  |
| 00071606 | Gross, D. (1978) Metabolism of CGA 48 988 in Grapevine: Project Report 11/78. (Unpublished study received Apr 15, 1981 under 100607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-F)   |
| 00071607 | Gross, D. (1979) Identification of Metabolites of CGA 48 988 (Ridomil in Grapevine: Project Report 06/79. (Unpublished study received Apr 15, 1981 under 100-607; prepared by CibaGeigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-G)                                       |
| 00071608 | Gross, D. (1979) Fate of CGA 48 988 in Lettuce: Project Report 38/ 79. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by CibaGeigy Corp., Greensboro, N.C.;  |

## BIBLIOGRAPHY

### MRID

### CITATION

---

- CDL:070018-H)
- 00071609 Gross, D. (1979) Identification of Metabolites of CGA 48 988 (Ridomil) in Field Grown Potato Plants: Project Report 39/79. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-I)
- 00071610 Gross, D. (1980) Identification of Degradation Products of CGA 48988 (Ridomil) in Lettuce: Project Report 38/80. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-J)
- 00071611 Seim, V.W. (1978) Biological Report for the Metabolism of Phenyl 14C-CGA-48988 in a Lactating Goat: Report No. BIOL-78002. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-K)
- 00071612 Fischer, W.C.; Foster, R.A.; Cassidy, J.E. (1978) Balance and Metabolism of Phenyl-14C-CGA-48988 in a Lactating Goat: M6-693A: Report No. ABR-78046. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-L)
- 00071613 Hambock, H. (1977) Distribution, Degradation and Excretion of CGA 48 988 in the Rat: Project Report 18/77. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-M)
- 00071614 Hambock, H. (1978) Metabolism of CGA 48 988 in the Rat: Project Report 26/78. (Unpublished study received Apr 15, 1981 under 100-607; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070018-N)
- 00071615 Ciba-Geigy Corporation (1980) Study of Metalaxyl (Ridomil 2E) Residue Tolerances in Cottonseed, Soybeans, Wheat, and Certain Vegetable Crops: AG-A 5457 I. (Compilation; unpublished study, including AG-A 5725, 5456 I, 5545 I, II..., received Apr 15, 1981 under 100-607; CDL:070019-A)
- 00071616 Ciba-Geigy Corporation (1981) Study of Various Compounds for Residue Tolerances in Potatoes: AG-A 4601. (Compilation; unpublished study, including



## BIBLIOGRAPHY

### MRID

### CITATION

- 
- AG-A 4614, 4615, 4903..., received Apr 15, 1981 under 100-607;  
CDL:070020-A)
- 00071622 Balasubramanian, K. (1980) Analytical method for the Determination of Total Residues of Metalaxyl in Animal Tissues, Milk and Eggs as 2,6-Dimethylaniline. Method no. AG-349 dated Nov 25, 1980. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070022-L)
- 00071623 Balasubramanian, K. (1980) Analytical Method for the Determination of Total Residues of Metalaxyl in Oil Seed Fractions as 2,6-Dimethylaniline. Method no. AG-350 dated Dec 18, 1980. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070022-M)
- 00071672 Ciba-Geigy Corporation (1981) Series of Tests Performed with Metalaxyl on Various Crops: AG-A 5638. (Compilation; unpublished study, including AG-A nos. 5639 I,II, 5754 I,II, 5805 I,II, ..., received Apr 15, 1981 under 100-607; CDL:070021-A)
- 00071673 Seim, V.W.; Thomas, W.A. (1980) Biological Report For CGA-48988: Residue Test in Laying Hens: Report No. Biol-80009. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070021-B)
- 00071674 Seim, V.; Thomas, W.; Brown, G. (1980) Biological Report for CGA48988: Residue Test in Lactating Cows: Report No. Biol-79009. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070021-C)
- 00071675 Balasubramanian, K.; Ross, J.A. (1979) Validation of Method AG-330 for the Determination of CGA-48988 and Its Metabolites Containing the 2,6-Dimethylaniline Common Moiety in Tobacco: Report No. ABR-79016. (Unpublished study received Apr 15, 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL: 070021-D)
- 00071676 Balasubramanian, K.; Ross, J.A. (1981) Comparison of Analyses of Potato Tubers Treated with Metalaxyl Using the Parent Method AG-325 and the Total Method AG-348: Report No. ABR-80056. (Unpublished study received Apr 15,

## BIBLIOGRAPHY

### MRID

### CITATION

---

- 1981 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070021-E)
- 00072394 Calkins, J.E.; Morgan, J.M.; Casey, H.W.; et al. (1980) A 21-day Subacute Dermal Toxicity Study in Albino Rabbits with CGA-48988 Technical: Study No. 410-0226. Rev. (Unpublished study received Jan 23, 1981 under 100-607; prepared by Whitaker Corp., submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:244182-A)
- 00072396 U.S. Environmental Protection Agency, Terrestrial & Aquatic Biology Laboratory (1979) Ridomil 2%: Rainbow Trout (*Salmo gairdneri*): Test # 2417. (Unpublished study; CDL:244183-C)
- 00074488 Ciba-Geigy Corporation (1981) Residues of Metalaxyl in Avocados Resulting from Soil Surface Granular, Soil Drench, and Drip Fungigation Applications: Report No. ABR-81016. (Compilation; unpublished study received Jun 9, 1981 under 100-607; CDL: 070151-A)
- 00077334 Fink, R.; Beavers, J.B.; Brown, R. (1977) Final Report: Acute Oral LD50--Mallard Duck: Project No. 108-149. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Wildlife International, Ltd. in cooperation with Washington College, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-D)
- 00077335 Fink, R.; Beavers, J.B.; Brown, R. (1977) Final Report: Eight-Day Dietary LC50--Bobwhite Quail: Project No. 108-147. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Wildlife International, Ltd. and Washington College, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234439-F)
- 00079433 Kahrs, R.A. (1981) Residues of Metalaxyl in Hops Resulting from Soil Drench Applications: Report No. ABR-81024. (Unpublished study received Jul 15, 1981 under 100-607; submitted by CibaGeigy Corp., Greensboro, N.C.; CDL:070188-A)
- 00084107 Sachsse, K.; Ullmann, L. (1976) Skin Irritation in the Rabbit after Single Application of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-E)



## BIBLIOGRAPHY

### MRID

### CITATION

---

- 00084108      Sachsse, K.; Ullmann, L. (1975) Eye Irritation in the Rabbit of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-F)
- 00084109      Sachsse, K.; Ullmann, L. (1976) Skin Sensitizing (Contact Allergenic) Effect in Guinea Pigs of Technical CGA 48988: Project No. Siss 5388. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-G)
- 00084110      Drake, J.C. (1977) 3 Months Dietary Study in Rats in Compound CGA 48 988. (Unpublished study received Jul 13, 1978 under 100EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-H)
- 00084111      Finn, J.P.; Rider, L.; Briggs, K.; et al. (1977) CGA 48.988: 91 Day Dietary Toxicity Study in Beagle Dogs: Report No. 653/380/4. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Hazleton Laboratories Europe, Ltd., submitted by CibaGeigy Corp., Greensboro, N.C.; CDL:234428-I)
- 00084113      Arni, P.; Muller, D. (1978) Salmonella/Mammalian-microsome Mutagenicity Test with CGA 48 988: (Test for Mutagenicity Properties in Bacteria). (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-K)
- 00084114      Fritz, H. (1978) Dominant Lethal Study--CGA 48 988 Tech.: Mouse: (Test for Cytotoxic or Mutagenic Effects on Male Germinal Cells). (Unpublished study received Jul 13, 1978 under 100EX-62; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234428-L)
- 00097511      Ciba-Geigy Corporation (1981) Residues of Ridomil(R) in Lettuce. (Compilation; unpublished study received Apr 1, 1982 under 100-EX-71; CDL:070732-A)
- 00098428      Kahrs, R.A. (1982) Metalaxyl--Melons, Cucumbers, Squash, Green Onions, Bulb Onions, Potatoes--Supportive Data Requested by EPA: Report No. ABR-82014. (Unpublished study received Apr 7, 1982 under 1F2500; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070765-A)

## BIBLIOGRAPHY

### MRID

### CITATION

---

- 00098481 Ashby, R.; Whitney, J.C.; Bhatt, A.; et al. (1980) Cga 48 988: Toxicity and Oncogenicity in Dietary Administration to Rats for Two Years: 80/CIA009/315. Final rept. (Unpublished study received Apr 15, 1982 under 1F2500; prepared by Life Science Research, England, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070767-A; 070768; 070769)
- 00099084 Hambock, H. (1981) Metabolic Pathways of CGA 48 988 in the Rat: Project Report 31/81. (Unpublished study received Apr 23, 1982 under 1F2500; prepared by Ciba-Geigy Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:070800-B)
- 00100446 Buccafusco, R.; Stiefel, C.; Fratus, G.; et al. (1978) Acute Toxicity of CGA-48988 Technical to Bluegill (*Lepomis macrochirus*): Report #BW-78-12-381. (Unpublished study received Feb 21, 1979 under 100-601; prepared by EG & G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:236854-A)
- 00100447 Buccafusco, R.; Stiefel, C.; Fratus, G.; et al. (1978) Acute Toxicity of CGA-48988 Technical to Rainbow Trout (*Salmo gairdneri*): Report #BW-78-12-376. (Unpublished study received Jan 25, 1979 under 100-601; prepared by EG & G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:236854-B)
- 00100448 Suprenant, D. (1978) Acute Toxicity of CGA-48988 to the Water Flea (*Daphnia magna*): Report #BW-78-12-364. (Unpublished study received Jan 25, 1979 under 100-601; prepared by EG & G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL: 236854-C)
- 00100455 Burkhard, N. (1977) Volatilization of CGA-48988 from Soil under Laboratory Conditions: Project Report 29/77. (Unpublished study received Apr 26, 1979 under 100-600; prepared by CibaGeigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:238231-D)
- 00100456 Burkhard, N. (1978) Photolysis of CGA-48988 (Ridomil) on Soil Surfaces under Artificial Sunlight Conditions: Project Report 09/78. (Unpublished study received Apr 26, 1979 under 100-600; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by CibaGeigy Corp., Greensboro, NC; CDL:238231-E)

## BIBLIOGRAPHY

## MRID

## CITATION

- 
- |          |   |
|----------|---|
| 00100464 | Guth, J. (1976) Leaching Model Study with the Fungicide CGA-48988 in Four Standard Soils: Project Report 30/76. (Unpublished study received Apr 26, 1979 under 100-600; prepared by CibaGeigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:238232-A)  |
| 00100465 | Guth, J. (1978) Leaching Characteristics of Aged 14C-CGA 48988 (Ridomil) Residues in Two Standard Soils: Project Report 33/78. (Unpublished study received Apr 26, 1979 under 100-600; prepared by Ciba-Geigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:238232-B)  |
| 00100466 | Guth, J. (1978) Adsorption and Desorption of CGA 48988 (Ridomil) in Various Soil Types: Project Report 35/78. (Unpublished study received Apr 26, 1979 under 100-600; prepared by CibaGeigy, Ltd., Switzerland, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:238232-C)  |
| 00100468 | Ladd, S.; Wilson, W. (1979) Accumulation and Elimination of 14Cresidues by Bluegill Sunfish ... Exposed to 0-14C-CGA-48988: Report #BW-78-10-328. (Unpublished study received Apr 26, 1979 under 100-600; prepared by EG & G, Bionomics; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:238232-E)   |
| 00100470 | Ladd, S.; Enos, J. (1979) Kinetics of Phenyl-14C-CGA in a Model Aquatic Ecosystem: Report #BW-79-2-401. (Unpublished study received Apr 26, 1979 under 100-600; prepared by EG & G, Bionomics, submitted by Ciba-Geigy Corp., Greensboro, NC; CDL: 238232-G)  |
| 00100476 | Cassidy, J.; Ross, J. (1979) Metalaxyl (CGA-48988)--Tobacco: Results of Tests on the Amounts and Nature of Metalaxyl Residues in Tobacco and Its Smoke: Report No. ABR-79103. Summary of studies 241245-A, 241245-B, 241246-A. (Unpublished study received Oct 31, 1979 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:241244-A) |
| 00100477 | Honeycutt, R.; Szolics, I.; Simoneaux, B.; et al. (1979) Identification of the Major Aglycones of Phenyl-14C-CGA-48988 Conjugated Metabolites in Cured Greenhouse Grown Bright Tobacco, M11-69-2Y: Report No. ABR-79008. (Unpublished study received Oct 31, 1979 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:241245-A)       |
| 00100478 | Honeycutt, R.; Fischer, W.; Cassidy, J. (1979) Uptake and Balance of phi-14C-CGA-48988 and Its Metabolites in Field Grown Bright Tobacco,   |

## BIBLIOGRAPHY

### MRID

### CITATION

---

- M11-69-11P, 11S: Report No. ABR-79100. (Unpublished study received Oct 31, 1979 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:241245-B)
- 00100753 Ciba-Geigy Corp. (1982)  $\phi$ Residues of Metalaxyl in Cattle and Goats. (Compilation; unpublished study received May 11, 1982 under 1F2500; CDL:070836-A)
- 00103354 McSheehy, T.; Macrae, S.; Whitney, J. (1981) CGA 48 988: Oncogenicity in Dietary Administration to Mice for Two Years: LSR Report No.: 80/CIA008/442. (Unpublished study received Jun 11, 1982 under 100-607; prepared by Life Science Research, Eng., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:247660-B)
- 00103359 Arni, P. (1982) *Saccharomyces Cerevisiae* D7/Mammalian-microsome Mutagenicity Test in vitro with CGA 48 988 (Test for Mutagenic Properties in Yeast Cells): No. of Experiment 811561. (Unpublished study received Jun 11, 1982 under 100-607; prepared by Ciba-Geigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:247661-B)
- 00103361 Langauer, M.; Muller, D. (1979) Nucleus Anomaly Test in Somatic Interphase Nuclei: CGA 48 988: Chinese Hamster (Test for Mutagenic Effects on Bone Marrow Cells): No. of Experiment 783007. (Unpublished study received Jun 11, 1982 under 100-607; prepared by Ciba-Geigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:247661-D)
- 00103362 Strasser, F. (1982) L5178Y/TK+/-Mouse Lymphoma Mutagenicity Test: CGA 48 988 (In vitro Test for Mutagenic Properties of Chemical Substances in Mammalian Cells): No. of Experiment 811258. (Unpublished study received Jun 11, 1982 under 100-607; prepared by Ciba-Geigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:247661-E)
- 00103363 Puri, E. (1982) Autoradiographic DNA Repair Test on Rat Hepatocytes: CGA 48 988 (In vitro Test for DNA-damaging Properties): No. of Experiment 811259. (Unpublished study received Jun 11, 1982 under 100-607; prepared by Ciba-Geigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:247661-F)

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |   |
|----------|---|
| 00104378 | Balasubramanian, K.; Nixon, W. (1978) Gas Chromatographic Residue Determination of CGA-48988 in Crop Samples: Method No. AG-325. (Unpublished study received Oct 31, 1979 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:241243-D)   |
| 00104387 | Ciba-Geigy Corp. (1979) Residues of CGA-48988 on Wheat, Rye, Forage and Other Crops. (Compilation; unpublished study received Oct 31, 1979 under 100-607; CDL:241243-N)   |
| 00104390 | Ciba-Geigy Corp. (1979) Residue Studies of CGA-48988 on Soybeans and Other Crops. (Compilation; unpublished study received Oct 31, 1979 under 100-607; CDL:241243-Q)  |
| 00104483 | Ciba-Geigy Corp. (1978) Chemical Data on the Fungicide Ridomil. (Compilation; unpublished study received Jul 13, 1978 under 100EX-63; CDL:234427-A)   |
| 00104485 | Honeycutt, R.; Simoneaux, B.; Szolics, I.; et al. (1978) Characterization of Polar Metabolites of Phenyl-14C-CGA-48988 in Greenhouse Grown Bright Tobacco: Report No. ABR-78044. (Unpublished study received Jul 13, 1978 under 100-EX-62; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:234431-C)   |
| 00104493 | Burkhard, N. (1976) Hydrolysis of CGA-48988 under Laboratory Conditions: Project Report 26/76. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by Ciba-Geigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL: 234438-C)  |
| 00104494 | Ellgehausen, H. (1977) Distribution of the Non-extractable Radioactivity between Different Soil Organic Matter Fractions of a Field Soil Treated with 14C-labeled CGA 48988 (Addendum to Project Report 55/77): Project Report 56/77. (Unpublished study received Jul 13, 1978 under 100-EX-62; prepared by CibaGeigy, Ltd., Switz., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:234438-G) |
| 00104498 | Ciba-Geigy Corp. (1978) Chemistry of CGA-48988 Technical. (Compilation; unpublished study received Sep 5, 1978 under 100-601; CDL:235062-A)   |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |   |
|----------|---|
| 00104654 | Ross, J.; Marco, G. (1978) CGA-48988--Potatoes Residues Observed and Metabolism Data Including the Analytical Methods Used: Report No. ABR-78055. (Unpublished study received Sep 5, 1978 under 100-EX-1; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:097387-A)                    |
| 00104656 | Ciba-Geigy Corp. (1978) Ridomil 2E Fungicide Residue Study-Potatoes. (Compilation; unpublished study received Sep 5, 1978 under 100-EX-1; CDL:097389-A)   |
| 00109402 | Ciba-Geigy Corp. (1981) Metalaxyl--Cotton In-furrow Applications of Ridomil 2E and 5G Including Mixtures with PCNB: Report No. ABR81046. (Compilation; unpublished study received Jul 28, 1982 under 100-607; CDL:247934-A)   |
| 00109471 | Coate, W. (1982) Correction Pages and Addendum: Subchronic Inhalation Study in Rats: CGA-48988: Project No. 483-202. (Unpublished study received Aug 12, 1982 under 1F2500; prepared by Hazleton Laboratories America, Inc., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:071032-A) |
| 00109472 | Ciba-Geigy Corp. (1982) Metalaxyl Residues in Pineapple Resulting from a Preplant Dip Application of Ridomil 2E. (Compilation; unpublished study received Aug 12, 1982 under 100-607; CDL: 071034-A)  |
| 00114376 | Ciba-Geigy Corp. (1982) Metalaxyl--Rotational Wheat: Report # ABR82061. (Compilation; unpublished study received Sep 23, 1982 under 100-607; CDL:071104-A)  |
| 00114377 | Ciba-Geigy Corp. (1982) Metalaxyl--Lettuce: Report # ABR-82060. (Compilation; unpublished study received Sep 23, 1982 under 100607; CDL:071106-A)   |
| 00114378 | Ciba-Geigy Corp. (1982) Metalaxyl--Spinach: Report # ABR-82050. (Compilation; unpublished study received Sep 23, 1982 under 100607; CDL:071107-A)   |
| 00114379 | Collins, P.; Williams, S.; Cassidy, J. (1982) Metabolism of Phenyl-14C-CGA-48988 in Greenhouse Head Lettuce: Report No. ABR82054. (Unpublished study received Sep 23, 1982 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:071108-A)                                    |



## BIBLIOGRAPHY

### MRID

### CITATION

---

- 00117969 Cheung, M.; Manuli, P. (1982) Metalaxyl--Citrus: Residues Resulting from Soil or Trunk-spray Applications of Ridomil 2E: Report No. ABR-82069. (Unpublished study received Nov 16, 1982 under 100-607; submitted by Ciba-Geigy Corp., Greensboro, NC; CDL: 071238-A)
- 00126315 Ciba-Geigy Corp. (1983) Summary of Section D: Metalaxyl--Apples. (Compilation; unpublished study received Mar 7, 1983 under 100-607; CDL:071476-A)
- 00127769 Ciba-Geigy Corp. (1983) Metalaxyl--Red Raspberries: Residues Resulting from Soil Application of Ridomil 2E or 5G. (Compilation; unpublished study received Mar 7, 1983 under 100-607; CDL:071478-A)
- 00128102 Ciba-Geigy Corp. (1982) Metalaxyl (Apron 2E) Seed Treatments. (Compilation; unpublished study received Feb 3, 1983 under 100-626; CDL:071388-A)
- 00128738 Ciba-Geigy Corp. (1983) Summary of Section D: Metalaxyl--Peanuts: Residue Reports. (Compilation; unpublished study received Jun 29, 1983 under 100-607; CDL:071718-A)
- 00129003 Ciba-Geigy Corp. (1983) Summary of Section D: Metalaxyl--Pod Vegetables. (Compilation; unpublished study received Jun 23, 1983 under 3F2918; CDL:071711-A)
- 00130693 Ciba-Geigy Corp. (1983) Residue Summary: Metalaxyl--Cucumbers, Melons, and Squash. (Compilation; unpublished study received Aug 19, 1983 under 100-607; CDL:251019-A)
- 00130694 Ciba-Geigy Corp. (1983) Residue Summary: Metalaxyl--Green and Dry Bulb Onions. (Compilation; unpublished study received Aug 19, 1983 under 100-607; CDL:251020-A)
- 00130695 Ciba-Geigy Corp. (1983) Residue Summary: Metalaxyl--Lettuce and Spinach. (Compilation; unpublished study received Aug 19, 1983 under 100-607; CDL:251021-A)
- 00130773 Ciba-Geigy Corp. (1983) Residue Summary: Metalaxyl--Broccoli, Cabbage and Cauliflower. (Compilation; unpublished study received Aug 26, 1983 under 100-607; CDL:071918-A)

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |   |
|----------|---|
| 00132009 | Hardisty, J. (1983) Toxicity and Oncogenicity Dietary Administration of CGA-48988 in Rats for Two Years: Part 1. (Unpublished study received Oct 12, 1983 under 100-607; prepared by Experimental Pathology Laboratories, Inc., submitted by Ciba-Geigy Corp., Greensboro, NC; CDL:251487-A)                              |
| 00133020 | Ciba-Geigy Corp. (1983) Metalaxyl--Citrus Residues Resulting from Soil Applications of Ridomil 5G. (Compilation; unpublished study received Dec 8, 1983 under 100-628; CDL:251988-A)  |
| 00138818 | Ciba-Geigy Corp. (1984) Residue Summary: Metalaxyl--Field Grapes. (Compilation; unpublished study received Jan 30, 1984 under 100-EX-81; CDL:072298-A)  |
| 00140371 | Cassidy, J.E.; Ross, J.A. (1978) CGA-48988--Tobacco: Results of Tests on the Amounts and Nature of Residues in Tobacco and Its Smoke: Report No. ABR-78045. (Unpublished study received Jul 13, 1978 under 100-EX-62; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234430-A)                                      |
| 00141519 | Ciba-Geigy Corp. (1984) Metalaxyl--Apples: Residue Chemistry Data. Unpublished compilation. 77 p.   |
| 00144371 | Laughlin, K. (1984) Range-finding Teratology Study in Rabbits: Metalaxyl: 382-097. Unpublished study prepared by International Research and Development Corp. 52 p.   |
| 00144372 | Laughlin, K. (1984) Teratology Study in Rabbits: Metalaxyl: 382-098. Unpublished study prepared by International Research and Development Corp. 78 p.   |
| 00144423 | Leng, J. (1985) Teratology Study in Rats: Metalaxyl: Study No. 382-100. Unpublished study prepared by International Research and Development Corp. 94 p.  |
| 00148087 | Ashby, R.; Fowler, J.; Finn, J. (1985) Metalaxyl Technical : Combination 30-day to 90-day Subchronic Dietary Toxicity Study in Albino Mice: Final Report: Addendum 1 : Supplementary Clinical -, Macro and Micro Pathology: Report No. 85/CIA064/180. Unpublished study prepared by Life Science Research Limited. 733 p. |



## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 00148103 | Ciba-Geigy Corp. (1985) Metalaxyl (Ridomil 2E and Ridomil MZ58) in All Crops: Comparison Studies on Ground Vs. Aerial Treatments: Residue Data. Unpublished compilation. 88 p.   |
| 00148440 | Ciba-Geigy Corp. (1985) Metalaxyl (Ridomil 5G) in All Crops: Crossover Comparison Studies of Ridomil 2E and 5G. Unpublished compilation. 577 p.  |
| 00148866 | International Research and Development Corp. (1984) IRDC Historical Control Data for Repeat Teratology Studies: Dutch Belted Rabbits: Study No. 382-098. Unpublished study. 10 p.  |
| 00148867 | International Research and Development Corp. (1984) IRDC Historical Control Data for Repeated Teratology Studies: Albino Rats: Study No. 382-100. Unpublished study. 20 p.   |
| 00150094 | Hardisty, J. (1985) Metalaxyl: Oncogenicity in Dietary Administration to Mice for Two Years: Pathology Report Study Number CIA/008/48988. Unpublished study prepared by Experimental Pathology Laboratories, Inc. 946 p. |
| 00150185 | Experimental Pathology Laboratories, Inc. (1985) Metalaxyl: Toxicity & Oncogenicity in Dietary Administration to Rats for Two Years: Pathology Report: Ciba-Geigy Study No. CIA-009-48988. Unpublished study. 1213 p.    |
| 00154301 | Deperade, E. (1985) Salmonella/Mammalian-microsome Mutagenicity Test: Test No.: 851007. Unpublished study prepared by CibaGeigy Ltd. 18 p.   |
| 00154302 | Moriya, M.; Ohta, T.; Shirasu, Y. (1981) Report on Mutagenicity Study with CG-48988 in a Microbial System. Unpublished study prepared by Institute of Environmental Toxicology. 6 p.                                     |
| 00154306 | Puri, E. (1985) Autoradiographic DNA Repair Test on Rat Hepatocytes: Test Material: CGA 48 988: Supplement to the Report (dated January 19, 1982): Test No.: 811259. Unpublished study prepared by Ciba-Geigy Ltd. 37 p. |
| 00154307 | Arni, P. (1985) Nucleus Anomaly Test in Somatic Interphase Cells: Test Material: CGA 48 988: Amendment No. 1 to the Report: Test No.: 783007. Unpublished study prepared by Ciba-Geigy Ltd. 5 p.                         |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 00154308 | Thomann, P.; Pericin, C. (1977) Acute Oral LD50 in the Chinese Hamster of CGH4A 48 988: No. PH 2.634. Unpublished study prepared by Ciba-Geigy Ltd. 3 p.   |
| 00154309 | Strasser, F. (1985) L5178Y/TK+/Mouse Lymphoma Mutagenicity Test: Test Material: CGA 48 988: Amendment No. 1 to the Report: Test No. 811258. Unpublished study prepared by Ciba-Geigy Ltd. 16 p.  |
| 00154310 | Fritz, H. (1985) Dominant Lethal Study / Mouse: (Test for Cytotoxic or Mutagenic Effects on Male Germinal Cells): Test Material: CGA 48 988 Tech.: Amendment No. 1 to the Report: Test No.: 327761. Unpublished study prepared by Ciba-Geigy Ltd. 3 p. |
| 00154446 | Ciba-Geigy Corp. (1985) Analytical Methodology and Metalaxyl Residues in Asparagus. Unpublished compilation. 85 p.   |
| 00154663 | Puri, E. (1982) Autoradiographic DNA Repair Test on Human Fibroblasts: CGA 48 988: (In vitro Test for DNA-damaging Properties): No. of Experiment: 811660. Unpublished study prepared by Ciba-Geigy Ltd. 23 p.   |
| 00154938 | Ciba-Geigy Corp. (1983) IRDC Historical Control Data: Dutch Belted Rabbits: Rabbit Teratology Study: Metalaxyl:382-098. Unpublished study: Replacement pages for MRID 144372. 6 p.   |
| 00155237 | Ciba-Geigy Corp. (1985) Metalaxyl Strawberries Residue and Analytical Methodology. Unpublished compilation. 102 p.   |
| 00155845 | Ciba-Geigy Corp. (19??) Metalaxyl Field Grapes Residue Analysis. Unpublished compilation. 161 p.   |
| 00157480 | Ciba-Geigy Corp. (1984) Residue Chemistry: Methods and Summary of Results: Metalaxyl. Unpublished compilation. 280 p.  |
| 00160037 | Puri, E. (1985) Autoradiographic DNA Repair Test on Rat Hepatocytes: CGA 48988 Tech.: Test No. 851004. Unpublished study prepared by Ciba-Geigy Limited. 35 p.   |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |   |
|----------|---|
| 00161402 | Williams, S.; Marco, G. (1984) Advanced Product Chemistry: Dermal Absorption of Carbon-14-Metalaxyl in Rats: Report No. ABR83059. Unpublished study prepared by Ciba-Geigy Corp. 71 p.  |
| 00161404 | Fritz, P. (1984) Expanded Report on a Segment II Reproduction Study in the Rabbit with CGA-48988 Technical (Test for Teratogenic or Embryotoxic Effects): Study No. 784868. Unpublished study prepared by Ciba-Geigy, Corp. 459 p.  |
| 00161405 | Fritz, P. (1984) Expanded Report on the Segment II Reproduction Study with CGA-48988 Technical in the Rat (Test for Teratogenic or Embryotoxic Effects): Study No. 227716. Unpublished study prepared by Ciba-Geigy Corp. 359 p.  |
| 00164649 | Marco, G.; Gold, B. (1986) Summary of Section D: Metalaxyl Blueberries Residue Data from Field Trials in New York. Unpublished compilation. 103 p.  |
| 00164650 | Nixon, W. (1985) Summary of Section D: Metalaxyl Stone Fruits Residue Data. Unpublished compilation. 129 p.   |
| 00164651 | Nixon, W. (1985) Summary of Section D: Metalaxyl Walnuts and Almonds Residue Data. Unpublished compilation. 111 p.  |
| 40106601 | Gold, B. (1987) Total Metalaxyl Residues in Sugar Beet Fractions following Applications of Ridomil 2E and Ridomil MZ58: (Magnitude of Residues): Including Residue Analytical Method and Storage Stability: Study No. ABR-87009. Unpublished compilation prepared by Ciba-Geigy Corp. 56 p. |
| 40276701 | Hoxter, K.; Jaber, M. (1987) An Acute Contact Toxicity Study with the Honey Bee: Metalaxyl: Study No. 108-282. Unpublished study prepared by Wildlife International, Ltd. 18 p.   |
| 40435001 | Ciba Geigy Corp. (1982) Product Chemistry for Product Containing Metalaxyl. Unpublished study. 4 p.   |
| 40490501 | Biehn, W. (1987) Metalaxyl--Magnitude of Residue on Papays, including a Description of the Analytical Method Used: IR-4 PR #2532. Unpublished study prepared by University of Hawaii. 104 p.  |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 40503101 | Williams, B.; Condra, C. (1987) Multiresidue Method Testing of Metalaxyl and Metabolites in Crops and Animal Tissues: Final Report No. 36320. Unpublished study prepared by Analytical BioChemistry Laboratories. 188 p.         |
| 40569301 | Gold, B.; Cheung, M. (1987) Metalaxyl--Sugar Beets: Residue Chemistry Data: Project ID: ABR-87077. Unpublished study prepared by Ciba-Geigy Corp., in cooperation with Enviro-Bio-Tech, Ltd. 130 p.                              |
| 40569303 | Cheung, M. (1986) Metalaxyl--Legume Vegetables (Dry or Succulent) Crop Grouping: Project ID: ABR-87085. Unpublished study prepared by Ciba-Geigy Corp. 117 p.  |
| 40746901 | Kuehne, R. (1988) Additional Analyses of Metalaxyl on German-treated Hops: Laboratory Study No.: 2366/67/87. Unpublished study prepared by Ciba-Geigy Ltd. 10 p.   |
| 40775801 | Cheung, M. (1988) Metalaxyl (Ridomil 5G)--Head Lettuce: Laboratory Study No. ABR-88079. Unpublished study prepared by Ciba-Geigy Corp. 86 p.   |
| 40832901 | Cheung, M. (1988) Metalaxyl Residues in Alfalfa Resulting from the Application of Ridomil 2E to Alfalfa at Seeding: Laboratory Project ID: ABR-88114. Unpublished study prepared by Ciba-Geigy Corp. 84 p.                       |
| 40838301 | Cheung, M. (1988) Metalaxyl (Ridomil 2E and Ridomil MZ58) Root and Tuber Vegetable Crop Grouping: Laboratory Project ID: ABR-88112. Unpublished study prepared by Ciba-Geigy Corp. 265 p.  |
| 40838302 | Singh, H. (1987) Standard Operating Procedure for Determination of Dithiocarbamate Residues by Carbon Disulfide Evolution Method: Laboratory Project ID: SOP EBT-201.00. Unpublished study prepared by Enviro-Bio-Tech, Ltd 9 p. |
| 40880401 | Cheung, M. (1988) Response to EPA Review of Metalaxyl (Ridomil 2E) on Strawberries Including Results of Additional Field Trials: Laboratory Project ID ABR-88131. Unpublished study prepared by Ciba-Geigy Corp. 152 p.          |
| 40909401 | Cheung, M. (1988) Summary of Residue in Hops Following Applications of Ridomil 2E and Metalaxyl 48.8 WP: Lab. Proj. ID ABR-88152. Unpublished study prepared by Ciba-Geigy Corp. 47 p.   |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 41055201 | Lail, L. (1989) Technical Metalaxyl: Product Chemistry: Study No. PC-88-005. Unpublished study prepared by Ciba-Geigy Corp. 51 p.  |
| 41055202 | Lail, L. (1989) Technical Metalaxyl: Product Chemistry: Study No. PC-88-005. Unpublished study prepared by Ciba-Geigy Corp. 120 p.   |
| 41055203 | Hubbard, H. (1989) Determination of the Metalaxyl Metabolites CGA100255 and CGA-94689 (A&B Isomers) by U.S. Food and Drug Administration Multiresidue Procedures: Proj. ID ABR-88156. Unpublished study prepared by Ciba-Geigy Corp. 78 p. |
| 41150101 | Cheung, M. (1989) Metalaxyl Residues in Grapes and Grape Fractions Resulting from Applications of Ridomil MZ58: Project ID ABR89016. Unpublished study prepared by Ciba-Geigy Corp. 225 p.   |
| 41156001 | Martinson, J. (1988) Photodegradation of Aqueous solutions of Metalaxyl Exposed to Natural Sunlight: SLS Report No. 88-09-2799. Unpublished study prepared by Springborn Life Sciences, Inc. 32 p.   |
| 41288101 | Dionne, E. (1989) Acute Toxicity to Eastern Oyster ( <i>Crassostrea virginica</i> ) under Flow-Through Conditions: Lab Project Number: 89/9/3093. Unpublished study prepared by Springborn Laboratories, Inc. 47 p.                        |
| 41288102 | Dionne, E. (1989) Acute Toxicity to Eastern Oyster ( <i>Crassostrea virginica</i> ) under Flow Through Conditions: Lab Project Number: 89/10/3118. Unpublished study prepared by Springborn Laboratories, Inc. 46 p.                       |
| 41288103 | Hoberg, J. (1989) Acute Toxicity to Mysid Shrimp ( <i>Mysidopsis bahia</i> ) under Flow-Through Conditions: Lab Project Number: 89/10/3125. Unpublished study prepared by Springborn Laboratories, Inc. 48 p.                              |
| 41288104 | Hoberg, J. (1989) Acute Toxicity to Mysid Shrimp ( <i>Mysidopsis bahia</i> ) under Flow-Through Conditions: Lab Project Number: 89/10/3126. Unpublished study prepared by Springborn Laboratories, Inc. 47 p.                              |
| 41449001 | Ross, J. (1990) Metalaxyl Sample Storage Interval Summary: Lab Project Nos. ABR-90016; 409925. Unpublished study prepared by Ciba-Geigy Corp., Residue Chemistry Dept. 265 p.  |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- 41587801 Cheung, M. (1990) Metalaxyl: Leafy Vegetables Crop Grouping (Excluding Spinach) Residue Summary: Lab Project Number: ABR-89113: 409187. Unpublished study prepared by Ciba-Geigy Corp. 574 p.
- 41636201 Cheung, M. (1990) Metalaxyl: Response to EPA Review of Metalaxyl (Ridomil 5G) on Spinach Including Results of Additional Field Trials: Lab Project Number: ABR-90042. Unpublished study prepared by Ciba-Geigy Corp. 127 p.
- 41664501 Itterly, W. (1990) Metalaxyl: Characterization and Identification of Phenyl-carbon-14-Metalaxyl Metabolites in Rats: Lab Project Number: ABR/90079. Unpublished study prepared by CIBA GEIGY Corp., and Others. 267 p.
- 41664503 Emrani, J. (1990) Metalaxyl: Metabolism of carbon 14-Metalaxyl in Goats: Lab Project Number: ABR/90078. Unpublished study prepared by CIBA-GEIGY Corp. , and Others. 205 p.
- 41664504 Kennedy, E. (1990) Metalaxyl: Metabolism of phi-carbon 14-Metalaxyl in Hens: Lab Project Number: ABR/90077. Unpublished study prepared by CIBA-GEIGY Corp., and Others. 129 p.
- 41664505 Ross, J. (1990) Preparation of Diazomethane: Lab Project Number: AG/345. Unpublished study prepared by CIBA-GEIGY Corp. 9 p.
- 41664506 McDonald, J. (1990) Procedure for Incubating Animal Tissue Samples with the Enzyme Collagenase: Lab Project Number: SOP/NUMBER/7/22. Unpublished study prepared by CIBA-GEIGY Corp. 7 p.
- 41688900 Interregional Research Project No. 4 (1990) Submission of Data in Support of Proposed Tolerance for Metalaxyl: Residue Chemistry Study. Transmittal of 1 study.
- 41688901 Eudy, L. (1990) Metalaxyl-Ginseng: Residue Summary: Lab Project Number: ABR-90033. Unpublished study prepared by Ciba-Geigy Corp. 178 p.
- 41689701 Ross, J. (1990)Metalaxyl-Magnitude of Residues in Field Corn Forage Silage-stage Forage, Fodder, and Grain Following Seed Treatment with Apron 25W: Lab Project Number: ABR 90075. Unpublished study prepared by Residue Chemical Department, Agriculutre Div. Ciba-Geigy Corp. 187 p.



## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 41689702 | Ross, J. (1990) Metalaxyl Magnitude of Residues in Field Corn Forage Silage-stage forage, Fodder, and Grain following Seed Treatment with Apron 25W: Lab Project No. ABR-90075. Unpublished study prepared by Residue Chemistry Department, Agricultural Division, Ciba-Geigy Corp. 107 p.                         |
| 41765001 | LeRoy, R. (1991) Terrestrial Field Dissipation of Ridomil 2E on Bare Ground: Lab Project Number: EF-88-04B: 80202. Unpublished Study prepared by Pan-Agricultural Laboratories, Inc. & ChemAlysis Inc. 234 p.  |
| 41765002 | Braxton, S.; Bird, R. (1991) Ridomil 2E-Field Dissipation-Tobacco And Bare Soil-North Carolina: Lab Project Number: 23TBBS. Unpublished study prepared by Enviromental Technologies Institute & ChemAlysis Laboratories. 491 p.  |
| 41809301 | Leroy, R. (1990) Metalaxyl: Terrestrial Field Dissipation of Ridomil 2E on Citrus: Final Report: Lab Project Number: EF-88-04A: 80201. Unpublished study prepared by Pan-Agricultural Labs, Inc. and ChemAlysis, Inc. 254 p.   |
| 41855801 | Surprenant, D. (1991) Technical Metalaxyl: Response to EPA ECOTOX Review...Regarding Four Marine Estuarine Studies Conducted with Technical Metalaxyl/Ridomil 2E. (Related to MRIDs 41288101; 41288102; 41288103; 41288104). Unpublished study prepared by Springborn Labs, Inc. 32 p.                             |
| 41870301 | Ross, J. (1990) Amendment 1 to ABR-90075: Metalaxyl Magnitude of the Residues in Field Corn Forage, Silage-stage Forage, Fodder, and Grain Following Seed Treatment with Apron 25W. (Related to MRIDs 41689701 and 41689702): Lab Project Number: ABR-90075. Unpublished study prepared by Ciba-Geigy Corp. 222 p. |
| 41870302 | Eudy, L. (1991) Metalaxyl: Magnitude of the Residues in Processed Food/Feed Commodities of Grain Sorghum Following Seed Treatment with Apron 25W: Lab Project Number: ABR-90103. Unpublished study prepared by Ciba-Geigy Corp. 147 p.   |
| 41870303 | Smith, J. (1991) Metalaxyl: Magnitude of the Residues in Processed Food/Feed Commodities of Rice Following Seed Treatment with Apron 25W plus Preemergence Application of Ridomil 2E: Lab Project Number: ABR-90102. Unpublished study prepared by CibaGeigy Corp. 135 p.  |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 41870304 | Smith, J. (1991) Metalaxyl: Magnitude of the Residues in Processed Food/Feed Commodities of Sunflowers Following Seed Treatment with Apron 25W: Lab Project Number: ABR-90105. Unpublished study prepared by Ciba-Geigy Corp. 138 p.   |
| 41870305 | Smith, J. (1991) Metalaxyl: Magnitude of the Residues in Processed Food/Feed Commodities of Cottonseed Following Seed Treatment with Apron 25W plus In-Furrow Application of Ridomil 5G: Lab Project Number: ABR-90104. Unpublished study prepared by CibaGeigy Corp. 120 p. |
| 41870306 | Eudy, L. (1991) Metalaxyl: Magnitude of the Residues in Peanut Vines, Hay, Nutmeats and Shells Following In-Furrow plus Banded Applications of Ridomil 5G: Lab Project Number: ABR-90107. Unpublished study prepared by Ciba-Geigy Corp. 172 p.                              |
| 41870307 | Eudy, L. (1991) Metalaxyl: Magnitude of the Residues in Processed Food/Feed Commodities of Potatoes Following Application of Ridomil 2E plus Ridomil MZ58: Lab Project Number: ABR-90106. Unpublished study prepared by Ciba-Geigy Corp. 119 p.                              |
| 41870308 | Dickson, G. (1983) Metalaxyl: Rotational Crop Studies: Lab Project Number: EIR-82011. Unpublished study prepared by Ciba-Geigy Corp. 491 p.  |
| 41912901 | Lail, L. (1989) Technical Metalaxyl: A Supplement to the Product Chemistry. Unpublished study prepared by Ciba-Geigy Corp. 31 p.   |
| 41912902 | Ross, J. (1990) Metalaxyl: Sample Storage Interval Summary Amendment 1: Lab Project Number: ABR-90016. Unpublished study prepared by Ciba-Geigy Corporation. 29 p.   |
| 41912903 | Ross, J. (1991) Metalaxyl: Response to EPA Review of Metalaxyl on Corn: Lab Project Number: ABR-91035. Unpublished study prepared by Ciba-Geigy Corporation. 13 p.   |
| 41996401 | Smith, J. (1991) Metalaxyl--Cranberries/Residue Summary: Lab Project Number: ABR-90046. Unpublished study prepared by CibaGeigy Corp., Ag. Div. 161 p.   |



## BIBLIOGRAPHY

## MRID

## CITATION

- 
- |          |   |
|----------|---|
| 42021101 | Cheung, M. (1991) Metalaxyl: Response to EPA Review of Metalaxyl on Leafy Vegetables Crop Grouping (Excluding Spinach): Lab Project Number: ABR-91058. Unpublished study prepared by Ciba-Geigy Corp. 20 p.   |
| 42115801 | Ermani, J. (1990) Amendment to: Metabolism of phi-carbon 14 Metalaxyl in Goats. Unpublished study prepared by Ciba-Geigy Corp. 4 p.   |
| 42115802 | Emrani, J. (1990) Supplemental to: Metabolism of phi-carbon 14 Metalaxyl in Goats. Unpublished study prepared by Ciba-Geigy Corp. 74 p.   |
| 42115803 | Kennedy, E. (1990) Amendment to Metabolism of phi-carbon 14 Metalaxyl in Hens. Unpublished study prepared by Ciba-Geigy Corp. 4 p.  |
| 42115804 | Kennedy, E. (1990) Supplemental to Metabolism of phi-carbon 14 Metalaxyl in Hens. Unpublished study prepared by Ciba-Geigy Corp. 176 p.   |
| 42115805 | Kim Ha, J.; Lindsay, R. (1990) Method for the quantitative analysis of volatile free and total branched-chain fatty acids in cheese and milk fat. J. of Dairy Sci. 73(8): 1988-1999.  |
| 42115806 | Massart-Leen, A.; De Pooter, H.; DeCloedt, M.; et al. (1981) Composition and variability of the branched-chain fatty acid fraction in the milk of goats and cows. Lipids 16(5): 286-292.  |
| 42115807 | Eudy, L. (1991) Improved Analytical Method for the Determination of Total Terminal Residues of Metalaxyl in Poultry Tissues and Eggs as 2,6-Dimethyl Aniline: Lab Project Number: AG-576. Unpublished study prepared by Ciba-Geigy Corp. 45 p.      |
| 42115808 | Yokley, R. (1991) Validation of Analytical Method AG-576 for the Determination of Total Residues of Metalaxyl in Goat Tissues, Milk, Poultry Tissues and Eggs: Lab Project Number: ABR-91008. Unpublished study prepared by Ciba-Geigy Corp. 125 p. |
| 42115809 | Eudy, L. (1991) Metalaxyl: Three Level/28-Day Poultry Study: Lab Project Number: ABR-91047. Unpublished study prepared by Ciba-Geigy Corp. 23 p.  |

## BIBLIOGRAPHY

## MRID

## CITATION

- 
- |          |   |
|----------|---|
| 42115810 | Cheung, M. (1982) Metalaxyl: Gas Chromatographic Determination of Metalaxyl (Apron) Coatings on Seed: Lab Project Number: AG-397. Unpublished study prepared by Ciba-Geigy Corp. 11 p.  |
| 42196501 | McFarland, J. (1992) Uptake and Metabolism of Metalaxyl in Greenhouse Rotational Crops Following Target Tobacco Grown in Soil Treated with Phenyl-carbon 14-Metalaxyl: Lab Project Number: ABR-91084. Unpublished study prepared by Ciba-Geigy Corp. 272 p.                                 |
| 42196502 | Madrid, S. (1981) Uptake, Balance and Metabolism of carbon 14-CGA-48988 in Field Grown Potatoes: Lab Project Number: ABR-81037. Unpublished study prepared by Ciba-Geigy Corp. 32 p.  |
| 42196503 | Honeycutt, R. (1980) Identification of Four Sugar Conjugate Metabolites of carbon 14-CGA-48988 in Tobacco: Lab Project Number: ABR-80035. Unpublished study prepared by Ciba-Geigy Corp. 25 p.  |
| 42233501 | Eudy, L. (1992) Metalaxyl: Magnitude of the Residue in Processed Food/Feed Commodities of Pineapples Following Seed Piece Dip with Ridomil 2E: Lab Project Number: ABR-91086. Unpublished study prepared by Ciba-Geigy Corp. 110 p.   |
| 42259801 | Vithala, R. (1992) Anaerobic Aquatic Metabolism of carbon 14-Metalaxyl: Amended Final Report: Lab Project Number: 005/001/007/89. Unpublished study prepared by Center for Hazardous Materials Research. 229 p.   |
| 42259802 | Vithala, R. (1991) Aerobic Aquatic Metabolism of carbon 14-Metalaxyl: Lab Project Number: 005/002/008/89. Unpublished study prepared by Center for Hazardous Materials Research. 130 p.   |
| 42259803 | Leech, G.; Wiekpe, T. (1992) Aquatic Dissipation of Metalaxyl (Ridomil 2E) in a California Rice Paddy: Lab Project Number: EF-90-326: 31/90-CGA.1. Unpublished study prepared by Pan-Agricultural Laboratories, Inc. and Twin City Testing Corp. 272 p.                                     |
| 42259804 | Biever, R. (1992) Ridomil 2E (metalaxyl): An Aquatic Dissipation Study for Water Seeded Rice in Memphis, Tennessee: Final Report: Lab Project Number: 91-11-4013: 1781-0490-6242-330. Unpublished study prepared by Springborn Laboratories, Inc. and Agricenter International, Inc. 173 p. |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 42259805 | Eudy, L. (1992) Metalaxyl: Magnitude of Residues in Water-Seeded Rice Following Application of Ridomil 2E: Lab Project Number: ABR-91018. Unpublished study prepared by Ciba-Geigy Corp. 200 p.  |
| 42319901 | Lail, L. (1992) Technical Metalazyl Supplement to Product Chemistry. Unpublished study prepared by Ciba-Geigy Corp. 18 p.  |
| 42337501 | Machado, M. (1991) Ridomil 2E: Acute Toxicity to Mysid Shrimp ( <i>Mysidopsis bahia</i> ) Under Flow-through Conditions: Lab Project Number: 92-4-4196. Unpublished study prepared by Springborn Labs., Inc. 59 p.                                   |
| 42350101 | Biehn, W. (1992) Metalaxyl: Magnitude of the Residue on Kiwifruit: Lab Project Number: 3050. Unpublished study prepared by IR-4, Western Reg. Analytical Lab. 67 p.  |
| 42378101 | Dionne, E. (1992) Ridomil 2E: Acute Toxicity to Eastern Oyster ( <i>Crassostrea virginica</i> ) Under Flow--Through Conditions: Lab Project Number: 92-6-4291: 1781.0189.6199.504. Unpublished study prepared by Springborn Laboratories, Inc. 56 p. |
| 42409201 | Lail, L. (1989) Technical Metalaxyl: Supplement to Product Chemistry. Unpublished study prepared by Ciba-Geigy Corp. 7 p.  |
| 42409202 | Lail, L. (1989) Technical Metalaxyl: Supplement to Product Chemistry. Unpublished study prepared by Ciba-Geigy Corp. 7 p.  |
| 42498701 | Ross, J. (1992) Response to EPA Review of Metalaxyl on Cereal Grains, Soybeans, Potatoes, Peanuts, Cottonseed, Sunflower Seed, and Pineapples: Lab Project Number: ABR-92054. Unpublished study prepared by Ciba-Geigy Corp. 81 p.                   |
| 42762801 | Lail, L. (1992) Technical Metalaxyl: Supplement to Product Chemistry. Unpublished study prepared by Ciba Plant Protection. 8 p.  |
| 42762802 | Lail, L. (1992) Technical Metalaxyl: Supplement to Product Chemistry. Unpublished study prepared by Ciba Plant Protection. 28 p.   |

## BIBLIOGRAPHY

### MRID

### CITATION

- 
- |          |  |
|----------|--|
| 42919401 | Eudy, L. (1993) Storage Stability of Total Residues of Metalaxyl in Weathered Crops Under Freezer Storage Conditions: Lab Project Number: ABR-93009. Unpublished study prepared by Ciba-Geigy Corporation. 127 p.  |
| 43317301 | Itterly, W. (1990) Supplemental Report on the Metabolism of Phenyl-(carbon 14)-Metalaxyl in Rats: Identification of Major Metabolites: Report Amendment 1: Lab Project Number ABR/90079. Unpublished study prepared by Ciba Plant Protection. 40 p.  |
| 43317302 | McFarland, J. (1992) Final Report Amendment on the Uptake and Metabolism of Metalaxyl in Greenhouse Rotational Crops Following Target Tobacco Grown in Soil Treated with (Phenyl-(carbon 14))-Metalaxyl: Report Amendment 1: Lab Project Number: ABR/91084. Unpublished study prepared by Ciba Plant Protection. 49 p. |

## **APPENDIX D. List of Available Related Documents**



The following is a list of available documents related to 0081. Its purpose is to provide a path to more detailed information if it is needed. These accompanying documents are part of the Administrative Record for 0081 and are included in the EPA's Office of Pesticide Programs Public Docket.

1. Health and Environmental Effects Science Chapters
2. Detailed Label Usage Information System (LUIS) Report
3. 0081 RED Fact Sheet
4. PR Notice 86-5 (included in this appendix)
5. PR Notice 91-2 (included in this appendix) pertains to the Label Ingredient Statement





## **APPENDIX E. PR Notices 86-5 and 91-2**



*PR Notice 86-5*





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

July 29, 1986

## PR NOTICE 86-5

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

### NOTICE TO PRODUCERS, FORMULATORS, DISTRIBUTORS AND REGISTRANTS

Attention: Persons responsible for Federal registration of pesticides.

Subject: Standard format for data submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and certain provisions of the Federal Food, Drug, and Cosmetic Act (FFDCA).

#### I. Purpose

To require data to be submitted to the Environmental Protection Agency (EPA) in a standard format. This Notice also provides additional guidance about, and illustrations of, the required formats.

#### II. Applicability

This PR Notice applies to all data that are submitted to EPA to satisfy data requirements for granting or maintaining pesticide registrations, experimental use permits, tolerances, and related approvals under certain provisions of FIFRA and FFDCA. These data are defined in FIFRA §10(d)(1). This Notice does not apply to commercial, financial, or production information, which are, and must continue to be, submitted differently under separate cover.

#### III. Effective Date

This notice is effective on November 1, 1986. Data formatted according to this notice may be submitted prior to the effective date. As of the effective date, submitted data packages that do not conform to these requirements may be returned to the submitter for necessary revision.

#### IV. Background

On September 26, 1984, EPA published proposed regulations in the Federal Register (49 FR 37956) which include Requirements for Data Submission (40 CFR §158.32), and Procedures for Claims of Confidentiality of Data (40 CFR §158.33). These regulations specify the format for data submitted to EPA under Section 3 of FIFRA and Sections 408 and 409 of FFDCA, and procedures which must be followed to make and substantiate claims of confidentiality. No entitlements to data confidentiality are changed, either by the proposed regulation or by this notice.

OPP is making these requirements mandatory through this Notice to gain resource-saving benefits from their use before the

entire proposed regulation becomes final. Adequate lead time is being provided for submitters to comply with the new requirements.

## V. Relationship of this Notice to Other OPP Policy and Guidance

While this Notice contains requirements for organizing and formatting submittals of supporting data, it does not address the substance of test reports themselves. "Data reporting" guidance is now under development in OPP, and will specify how the study objectives, protocol, observations, findings, and conclusions are organized and presented within the study report. The data reporting guidance will be compatible with submittal format requirements described in this Notice.

OPP has also promulgated a policy (PR Notice 86-4 dated April 15, 1986) that provides for early screening of certain applications for registration under FIFRA §3. The objective of the screen is to avoid the additional costs and prolonged delays associated with handling significantly incomplete application packages. As of the effective date of this Notice, the screen will include in its criteria for acceptance of application packages the data formatting requirements described herein.

OPP has also established a public docket which imposes deadlines for inserting into the docket documents submitted in connection with Special Reviews and Registration Standards (see 40 CFR §154.15 and §155.32). To meet these deadlines, OPP is requiring an additional copy of any data submitted to the docket. Please refer to Page 10 for more information about this requirement.

For several years, OPP has required that each application for registration or other OPP action include a list of all applicable data requirements and an indication of how each is satisfied--the statement of the method of support for the application. Typically, many requirements are satisfied by reference to data previously submitted--either by the applicant or by another party. That requirement is not altered by this notice, which applies only to data submitted with an application.

## VI. Format Requirements

A more detailed discussion of these format requirements follows the index on the next page, and samples of some of the requirements are attached. Except for the language of the two alternative forms of the Statement of Data Confidentiality Claims (shown in Attachment 3) which cannot be altered, these samples are illustrative. As long as the required information is included and clearly identifiable, the form of the samples may be altered to reflect the submitter's preference.

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#### A. Organization of Submittal Package

A "submittal package" consists of all studies submitted at the same time for review in support of a single regulatory action, along with a transmittal document and other related administrative material (e.g. the method of support statement, EPA Forms 8570-1, 8570-4, 8570-20, etc.) as appropriate.

Data submitters must organize each submittal package as described in this Notice. The transmittal and any other administrative material must be grouped together in the first physical volume. Each study included in the submittal package must then be bound separately.

Submitters sometimes provide additional materials that are intended to clarify, emphasize, or otherwise comment to help Product Managers and reviewers better understand the submittal.

- If such materials relate to one study, they should be included as an appendix to that study.
- If such materials relate to more than one study (as for example a summary of all studies in a discipline) or to the submittal in general, they must be included in the submittal package as a separate study (with title page and statement of confidentiality claims).

#### B. Transmittal Document

The first item in each submittal package must be a transmittal document. This document identifies the submitter or all joint submitters; the regulatory action in support of which the package is being submitted--i.e., a registration application, petition, experimental use permit (EUP), §3(c)(2)(B) data call-in, §6(a)(2) submittal, or a special review; the transmittal date; and a list of all individual studies included in the package in the order of their appearance, showing (usually by Guideline reference number) the data requirement(s) addressed by each one. The EPA-assigned number for the regulatory action (e.g. the registration, EUP, or tolerance petition number) should be included in the transmittal document as well, if it is known to the submitter. See Attachment 1 for an example of an acceptable transmittal document.

The list of included studies in the transmittal of a data submittal package supporting a registration application should be subdivided by discipline, reflecting the order in which data requirements appear in 40 CFR 158.

The list of included studies in the transmittal of a data submittal package supporting a petition for tolerance or an

US EPA ARCHIVE DOCUMENT

application for an EUP should be subdivided into sections A, B, C,.... of the petition or application, as defined in 40 CFR 180.7 and 158.125, (petitions) or Pesticide Assessment Guidelines, Subdivision I (EUPs) as appropriate.

When a submittal package supports a tolerance petition and an application for a registration or an EUP, list the petition studies first, then the balance of the studies. Within these two groups of studies follow the instructions above.

### C. Individual Studies

A study is the report of a single scientific investigation, including all supporting analyses required for logical completeness. A study should be identifiable and distinguishable by a conventional bibliographic citation including author, date, and title. Studies generally correspond in scope to a single Guideline requirement for supporting data, with some exceptions discussed in section C.1. Each study included in a submittal package must be bound as a separate entity. (See comments on binding studies on page 9.)

Each study must be consecutively paginated, beginning from the title page as page 1. The total number of pages in the complete study must be shown on the study title page. In addition (to ensure that inadvertently separated pages can be reassociated with the proper study during handling or review) use either of the following:

- Include the total number of pages in the complete study on each page (i.e., 1 of 250, 2 of 250, ...250 of 250).

- Include a company name or mark and study number on each page of the study, e g , Company Name-1986-23. Never reuse a study number for marking the pages of subsequent studies.

When a single study is extremely long, binding it in multiple volumes is permissible so long as the entire study is paginated in a single series, and each volume is plainly identified by the study title and its position in the multi-volume sequence.

#### C.1 Special Considerations for Identifying Studies

Some studies raise special problems in study identification, because they address Guidelines of broader than normal scope or for other reasons.

a. Safety Studies. Several Guidelines require testing for safety in more than one species. In these cases each species tested should be reported as a separate study, and bound separately.

Extensive supplemental reports of pathology reviews, feed analyses, historical control data, and the like are often associated with safety studies. Whenever possible these should be submitted with primary reports of the study, and bound with the primary study as appendices. When such supplemental reports are submitted independently of the primary report, take care to fully identify the primary report to which they pertain.

Batteries of acute toxicity tests, performed on the same end use product and covered by a single title page, may be bound together and reported as a single study.

b. Product Chemistry Studies. All product chemistry data within a submittal package submitted in support of an end-use product produced from registered manufacturing-use products should be bound as a single study under a single title page.

Product chemistry data submitted in support of a technical product, other manufacturing-use product, an experimental use permit, an import tolerance petition, or an end-use product



produced from unregistered source ingredients, should be bound as a single study for each Guideline series (61, 62, and 63) for conventional pesticides, or for the equivalent subject range for biorational pesticides. The first of the three studies in a complete product chemistry submittal for a biochemical pesticide would cover Guidelines 151-10, 151-11, and 151-12; the second would cover Guidelines 151-13, 151-15, and 151-16; the third would cover Guideline 151-17. The first study for a microbial pesticide would cover Guidelines 151-20, 151-21, and 151-22; the second would cover Guidelines 151-23 and 151-25; the third would cover Guideline 151-26.

Note particularly that product chemistry studies are likely to contain Confidential Business Information as defined in FIFRA §10(d)(1)(A), (B), or (C), and if so must be handled as described in section D.3. of this notice.

c. Residue Chemistry Studies. Guidelines 171-4, 153-3, and 153-4 are extremely broad in scope; studies addressing residue chemistry requirements must thus be defined at a level below that of the Guideline code. The general principle, however, of limiting a study to the report of a single investigation still applies fully. Data should be treated as a single study and bound separately for each analytical method, each report of the nature of the residue in a single crop or animal species, and for each report of the magnitude of residues resulting from treatment of a single crop or from processing a single crop. When more than one commodity is derived from a single crop (such as beet tops and beet roots) residue data on all such commodities should be reported as a single study. When multiple field trials are associated with a single crop, all such trials should be reported as a single study.

#### D. Organization of Each Study Volume

Each complete study must include all applicable elements in the list below, in the order indicated. (Also see Page 17.) Several of these elements are further explained in the following paragraphs. Entries in the column headed "example" cite the page number of this notice where the element is illustrated.

<u>Element</u>	<u>When Required</u>	<u>Example</u>
Study Title Page	Always	Page 12
Statement of Data Confidentiality Claims	One of the two alternative forms of this statement is always required	Page 13
Certification of Good Laboratory Practice	If study reports laboratory work subject to GLP requirements	Page 16
Flagging statements	For certain toxicology studies (When flagging requirements are finalized.)	
Body of Study	Always - with an English language translation if required.	
Study Appendices	At submitter's option	
Cover Sheet to Confidential Attachment	If CBI is claimed under FIFRA §10(d)(1)(A), (B), or (C)	
CBI Attachment	If CBI is claimed under FIFRA §10(d)(1)(A), (B), or (C)	Page 15
Supplemental Statement of Data Confidentiality Claims	Only if confidentiality is claimed on a basis other than FIFRA §10(d)(1)(A), (B), or (C)	Page 14

#### D.1. Title Page

A title page is always required for each submitted study, published or unpublished. The title page must always be freely releasable to requestors; **DO NOT INCLUDE CBI ON THE TITLE PAGE.** An example of an acceptable title page is on page 12 of this notice. The following information must appear on the title page:

- a. Study title. The study title should be as descriptive as possible. It must clearly identify the substance(s) tested and correspond to the name of the data requirement as it appears in the Guidelines.
- b. Data requirement addressed. Include on the title page the Guideline number(s) of the specific requirement(s) addressed by the study.
- c. Author(s). Cite only individuals with primary intellectual responsibility for the content of the study. Identify them plainly as authors, to distinguish them from the performing laboratory, study sponsor, or other names that may also appear on the title page.
- d. Study Date. The title page must include a single date for the study. If parts of the study were performed at different times, use only the date of the latest element in the study.
- e. Performing Laboratory Identification. If the study reports work done by one or more laboratories, include on the title page the name and address of the performing laboratory or laboratories, and the laboratory's internal project number(s) for the work. Clearly distinguish the laboratory's project identifier from any other reference numbers provided by the study sponsor or submitter.
- f. Supplemental Submissions. If the study is a commentary on or supplement to another previously submitted study, or if it responds to EPA questions raised with respect to an earlier study, include on the title page elements a. through d. for the previously submitted study, along with the EPA Master Record Identifier (MRID) or Accession number of the earlier study if you know these numbers. (Supplements submitted in the same submittal package as the primary study should be appended to and bound with the primary study. Do not include supplements to more than one study under a single title page).
- g. Facts of Publication. If the study is a reprint of a published document, identify on the title page all relevant facts of publication, such as the journal title, volume, issue, inclusive page numbers, and publication date.

#### D.2. Statements of Data Confidentiality Claims Under FIFRA §10(d)(1).

Each submitted study must be accompanied by one of the two alternative forms of the statement of Data Confidentiality Claims specified in the proposed regulation in §158.33 (b) and (c) (See Attachment 3). These statements apply only to claims of data confidentiality based on FIFRA §10(d)(1)(A), (B), or (C). Use the appropriate alternative form of the statement either to assert a claim of §10(d)(1) data confidentiality (§158.33(b)) or to waive such a claim (§158.33(c)). In either case, the statement must be signed and dated, and must include the typed name and title of the official who signs it. Do not make CBI

claims with respect to analytical methods associated with petitions for tolerances or emergency exemptions (see NOTE Pg 13).

### D.3. Confidential Attachment

If the claim is made that a study includes confidential business information as defined by the criteria of FIFRA §10(D)(1)(A), (B), or (C) (as described in D.2. above) all such information must be excised from the body of the study and confined to a separate study-specific Confidential Attachment. Each passage of CBI so isolated must be identified by a reference number cited within the body of the study at the point from which the passage was excised (See Attachment 5).

The Confidential Attachment to a study must be identified by a cover sheet fully identifying the parent study, and must be clearly marked "Confidential Attachment." An appropriately annotated photocopy of the parent study title page may be used as this cover sheet. Paginate the Confidential Attachment separately from the body of the study, beginning with page 1 of X on the title page. Each passage confined to the Confidential Attachment must be associated with a specific cross reference to the page(s) in the main body of the study on which it is cited, and with a reference to the applicable passage(s) of FIFRA §10(d)(1) on which the confidentiality claim is based.

### D.4. Supplemental Statement of Data Confidentiality Claims (See Attachment 4)

If you wish to make a claim of confidentiality for any portion of a submitted study other than described by FIFRA §10(d)(1)(A), (B), or (C), the following provisions apply:

- The specific information to which the claim applies must be clearly marked in the body of the study as subject to a claim of confidentiality.
- A Supplemental Statement of Data Confidentiality Claims must be submitted, identifying each passage claimed confidential and describing in detail the basis for the claim. A list of the points to address in such a statement is included in Attachment 4 on Pg 14.
- The Supplemental Statement of Data Confidentiality Claims must be signed and dated and must include the typed name and title of the official who signed it.

### D.5. Good Laboratory Practice Compliance Statement

This statement is required if the study contains laboratory work subject to GLP requirements specified in 40 CFR 160. Samples of these statements are shown in Attachment 6.

### E. Reference to Previously Submitted Data

**DO NOT RESUBMIT A STUDY THAT HAS PREVIOUSLY BEEN SUBMITTED FOR ANOTHER PURPOSE** unless EPA specifically requests it. A copy of the title page plus the MRID number (if known) is sufficient to allow us to retrieve the study immediately for review. This prevents duplicate entries in the Agency files, and saves you the cost of sending more copies of the study. References to previously submitted studies should not be included in the transmittal document, but should be incorporated into the statement of the method of support for the application.

### F. Physical Format Requirements

All elements in the data submittal package must be on uniform 8 1/2 by 11 inch white paper, printed on one side only in black ink, with high contrast and good resolution. Bindings for individual studies must be secure, but easily removable to permit

disassembly for microfilming. Check with EPA for special instructions before submitting data in any medium other than paper, such as film or magnetic media.

Please be particularly attentive to the following points:

- Do not include frayed or torn pages.
- Do not include carbon copies, or copies in other than black ink.
- Make sure that photocopies are clear, complete, and fully readable.
- Do not include oversize computer printouts or fold-out pages.
- Do not bind any documents with glue or binding tapes.
- Make sure that all pages of each study, including any attachments or appendices, are present and in correct sequence.

Number of Copies Required - All submittal packages except those associated with a Registration Standard or Special Review (See Part G below) must be provided in three complete, identical copies. (The proposed regulations specified two copies; three are now being required to expedite and reduce the cost of processing data into the OPP Pesticide Document Management System and getting it into review.)

G. Special Requirements for Submitting Data to the Docket

Data submittal packages associated with a Registration Standard or Special Review must be provided in four copies, from one of which all material claimed as CBI has been excised. This fourth copy will become part of the public docket for the RS or SR case. If no claims of confidentiality are made for the study, the fourth copy should be identical to the other three. When portions of a study submitted in support of an RS or SR are claimed as CBI, the first three copies will include the CBI material as provided in section D of this notice. The following special preparation is required for the fourth copy.

- Remove the "Supplemental Statement of Data Confidentiality Claims".
- Remove the "Confidential Attachment".
- Excise from the body of the study any information you claim as confidential, even if it does not fall within the scope of FIFRA §10(d)(1)(A), (B), or (C). Do not close up or paraphrase text remaining after this excision.
- Mark the fourth copy plainly on both its cover and its title page with the phrase "Public Docket Material - contains no information claimed as confidential".

V. For Further Information

For further information contact John Carley, Chief,  
Information Services Branch, Program Management and Support  
Division, (703) 305-5240.

/S/

James W. Akerman  
Acting Director,  
Registration Division

- Attachment 1. Sample Transmittal Document
- Attachment 2. Sample Title Page for a Newly Submitted Study
- Attachment 3. Statements of Data Confidentiality Claims
- Attachment 4. Supplemental Statement of Data Confidentiality  
Claims
- Attachment 5. Samples of Confidential Attachments
- Attachment 6. Sample Good Laboratory Practice Statements
- Attachment 7. Format Diagrams for Submittal Packages and Studies

## US EPA ARCHIVE DOCUMENT

## ATTACHMENT 2

SAMPLE STUDY TITLE PAGE FOR A NEWLY SUBMITTED STUDY

Study Title

(Chemical name) - Magnitude of Residue on Corn

Data Requirement

Guideline 171-4

Author

John C. Davis

Study Completed On

January 5, 1979

Performing LaboratoryABC Agricultural Laboratories  
940 West Bay Drive  
Wilmington, CA 39897Laboratory Project ID

ABC 47-79



ATTACHMENT 3

STATEMENTS OF DATA CONFIDENTIALITY CLAIMS

1. No claim of confidentiality under FIFRA §10(d)(1)(A), (B), or (C).

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA §10(d)(1)(A), (B), or (C).

Company \_\_\_\_\_

Company Agent: \_\_\_\_\_ Typed Name \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_ Title \_\_\_\_\_ Signature \_\_\_\_\_

2. Claim of confidentiality under FIFRA §10(d)(1)(A), (B), or (C).

Information claimed confidential on the basis of its falling within the scope of FIFRA §10(d)(1)(A), (B), or (C) has been removed to a confidential appendix, and is cited by cross-reference number in the body of the study.

Company: \_\_\_\_\_

Company Agent: \_\_\_\_\_ Typed Name \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_ Title \_\_\_\_\_ Signature \_\_\_\_\_

STATEMENT OF DATA CONFIDENTIALITY CLAIMS

NOTE: Applicants for permanent or temporary tolerances should note that it is OPP policy that no permanent tolerance, temporary tolerance, or request for an emergency exemption incorporating an analytical method, can be approved unless the applicant waives all claims of confidentiality for the analytical method. These analytical methods are published in the FDA Pesticide Analytical Methods Manual, and therefore cannot be claimed as confidential. OPP implements this policy by returning submitted analytical methods, for which confidentiality claims have been made, to the submitter, to obtain the confidentiality waiver before they can be processed.



## SUPPLEMENTAL STATEMENT OF DATA CONFIDENTIALITY CLAIMS

For any portion of a submitted study that is not described by FIFRA §10(d)(1)(A), (B), or (C), but for which you claim confidential treatment on another basis, the following information must be included within a Supplemental Statement of Data Confidentiality Claims:

- Identify specifically by page and line number(s) each portion of the study for which you claim confidentiality.
- Cite the reasons why the cited passage qualifies for confidential treatment.
- Indicate the length of time--until a specific date or event, or permanently--for which the information should be treated as confidential.
- Identify the measures taken to guard against undesired disclosure of this information.
- Describe the extent to which the information has been disclosed, and what precautions have been taken in connection with those disclosures.
- Enclose copies of any pertinent determinations of confidentiality made by EPA, other Federal agencies, of courts concerning this information.
- If you assert that disclosure of this information would be likely to result in substantial harmful effects to you, describe those harmful effects and explain why they should be viewed as substantial.
- If you assert that the information in voluntarily submitted, indicate whether you believe disclosure of this information might tend to lessen the availability to EPA of similar information in the future, and if so, how.

## ATTACHMENT 5

## EXAMPLES OF SEVERAL CONFIDENTIAL ATTACHMENTS

Example 1. (Confidential word or phrase that has been deleted from the study)

<u>CROSS REFERENCE NUMBER 1</u>		This cross reference number is used in the study in place of the following paragraph(s) at the indicated volume and page references.	
DELETED WORDS OR PHRASE:		<u>Ethylene Glycol</u>	
<u>PAGE</u>	<u>LINES</u>	<u>REASON FOR THE DELETION</u>	<u>FIFRA</u>
<u>REFERENCE</u>			
6	14	Identity of Inert Ingredient	\$10(d)(C)
28	25	"	"
100	19	"	"

Example 2. (Confidential paragraph(s) that have been deleted from the study)

<u>CROSS REFERENCE NUMBER 5</u>		This cross reference number is used in the study in place of the following paragraph(s) at the indicated volume and page references.	
DELETED PARAGRAPH(S):			
(		)	
(		Reproduce the deleted paragraph(s) here	
(		)	
<u>PAGE</u>	<u>LINES</u>	<u>REASON FOR THE DELETION</u>	<u>FIFRA REFERENCE</u>
20.	2-17	Description of the quality control process	§10(d)(1)(C)

Example 3. (Confidential pages that have been deleted from the study)

<u>CROSS REFERENCE NUMBER 7</u>		This cross reference number is used in the study in place of the following paragraph(s) at the indicated volume and page references.
DELETED PAGES(S): are attached immediately behind this page		
PAGES	<u>REASON FOR THE DELETION</u>	<u>FIFRA REFERENCE</u>
35-41.	Description of product manufacturing process	§10(d)(1)(A)

# ATTACHMENT 6.

## SAMPLE GOOD LABORATORY PRACTICE STATEMENTS

Example 1.

This study meets the requirements for 40 CFR Part 160

Submitter \_\_\_\_\_

Sponsor \_\_\_\_\_

Example 2.

This study does not meet the requirements of 40 CFR Part 160, and differs in the following ways:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Submitter\_\_\_\_\_

Sponsor\_\_\_\_\_

Study Director\_\_\_\_\_

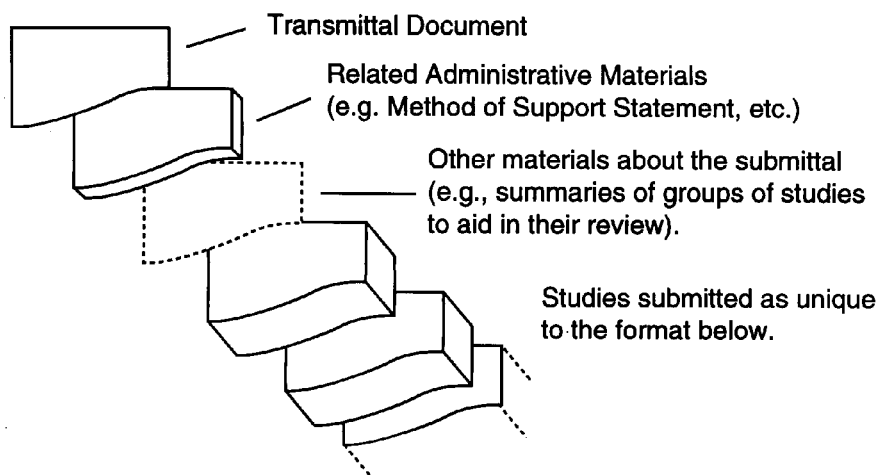
Example 3.

The submitter of this study was neither the sponsor of this study nor conducted it, and does not know whether it has been conducted in accordance with 40 CFR Part 160.

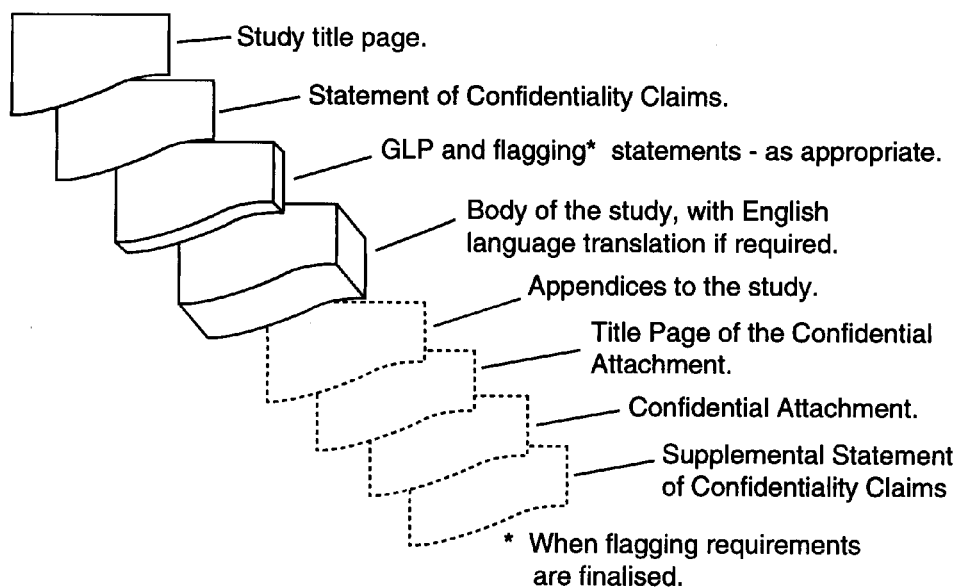
Submitter\_\_\_\_\_

## ATTACHMENT 7.

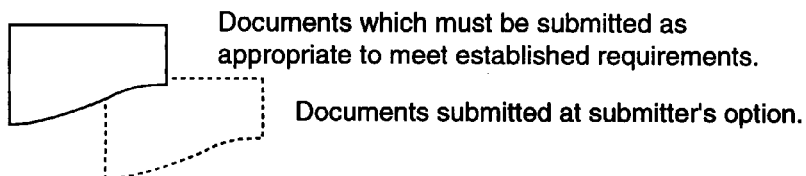
### FORMAT OF THE SUBMITTAL PACKAGE



### FORMAT OF SUBMITTED STUDIES



#### LEGEND



*PR Notice 91-2*





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

## PR NOTICE 91-2

### NOTICE TO MANUFACTURERS, PRODUCERS, FORMULATORS, AND REGISTRANTS OF PESTICIDES

ATTENTION: Persons Responsible for Federal Registration of  
Pesticide Products.

SUBJECT: Accuracy of Stated Percentages for Ingredients  
Statement

#### I. PURPOSE:

The purpose of this notice is to clarify the Office of Pesticide Program's policy with respect to the statement of percentages in a pesticide's label's ingredient statement. Specifically, the amount (percent by weight) of ingredient(s) specified in the ingredient statement on the label must be stated as the nominal concentration of such ingredient(s), as that term is defined in 40 CFR 158.153(i). Accordingly, the Agency has established the nominal concentration as the only acceptable label claim for the amount of active ingredient in the product.

#### II. BACKGROUND

For some time the Agency has accepted two different methods of identifying on the label what percentage is claimed for the ingredient(s) contained in a pesticide. Some applicants claimed a percentage which represented a level between the upper and the lower certified limits. This was referred to as the nominal concentration. Other applicants claimed the lower limit as the percentage of the ingredient(s) that would be expected to be present in their product at the end of the product's shelf-life. Unfortunately, this led to a great deal of confusion among the regulated industry, the regulators, and the consumers as to exactly how much of a given ingredient was in a given product. The Agency has established the nominal concentration as the only acceptable label claim for the amount of active ingredient in the product.

Current regulations require that the percentage listed in the active ingredient statement be as precise as possible reflecting good manufacturing practices 40 CFR 156.10(g)(5). The certified limits required for each active ingredient are intended to encompass any such "good manufacturing practice" variations 40 CFR 158.175(c)(3).

The upper and lower certified limits, which must be proposed in connection with a product's registration, represent the amounts of an ingredient that may legally be present 40 CFR 158.175. The lower certified limit is used as the enforceable lower limit for the product composition according to FIFRA section 12(a)(1)(C), while the nominal concentration appearing on the label would be the routinely achieved concentration used for calculation of dosages and dilutions.

The nominal concentration would in fact state the greatest degree of accuracy that is warranted with respect to actual

product composition because the nominal concentration would be the amount of active ingredient typically found in the product.

It is important for registrants to note that certified limits for active ingredients are not considered to be trade secret information under FIFRA section 10(b). In this respect the certified limits will be routinely provided by EPA to States for enforcement purposes, since the nominal concentration appearing on the label may not represent the enforceable composition for purposes of section 12(a)(1)(C).

### III. REQUIREMENTS

As described below under Unit V. " **COMPLIANCE SCHEDULE,**" all currently registered products as well as all applications for new registration must comply with this Notice by specifying the nominal concentration expressed as a percentage by weight as the label claim in the ingredient(s) statement and equivalence statements if applicable (e.g., elemental arsenic, metallic zinc, salt of an acid). In addition, the requirement for performing sample analyses of five or more representative samples must be fulfilled. Copies of the raw analytical data must be submitted with the nominal ingredient label claim. Further information about the analysis requirement may be found in the 40 CFR 158.170. All products are required to provide certified limits for each active, inert ingredient, impurities of toxicological significance(i.e., upper limit(s) only) and on a case by case basis as specified by EPA. These limits are to be **set based on representative sampling** and chemical analysis(i.e., quality control) of the product.

The format of the ingredient statement must conform to 40 CFR 156-Labeling Requirements For Pesticides and Devices.

**After July 1, 1997, all pesticide ingredient Statements must be changed to nominal concentration.**

### IV. PRODUCTS THAT REQUIRE EFFICACY DATA

All pesticides are required to be efficacious. Therefore, the certified lower limits may not be lower than the minimum level to achieve efficacy. This is extremely important for products which are intended to control pests which threaten the public health, e.g., certain antimicrobial and rodenticide products. Refer to 40 CFR 153.640.

In those cases where efficacy limits have been established, the Agency will not accept certified lower limits which are below that level for the shelf life of the product.

### V. COMPLIANCE SCHEDULE

As described earlier, the purpose of this Notice is to make the registration process more uniform and more manageable for both the agency and the regulated community. It is the Agency's intention to implement the requirements of this notice as smoothly as possible so as not to disrupt or delay the Agency's high priority programs, i.e., reregistration, new chemical, or fast track (FIFRA section 3(c)(3)(B)). Therefore, applicants/registrants are expected to comply with the requirements of this Notice as follows:

- (1) Beginning July 1, 1991, all new product registrations submitted to the Agency are to comply with the requirements of this Notice.



- (2) Registrants having products subject to reregistration under FIFRA section 4(a) are to comply with the requirements of this Notice when specific products are called in by the Agency under Phase V of the Reregistration Program.
- (3) All other products/applications that are not subject to (1) and (2) above will have until July 1, 1997, to comply with this Notice. Such applications should note "Conversion to Nominal Concentrations on the application form. These types Or amendments will not be handled as "Fast Track" applications but will be handled as routine requests.

VI. FOR FURTHER INFORMATION

Contact Tyrone Aiken for information or questions concerning this notice on (703) 308-7031.

/s/  
Anne E. Lindsay, Director  
Registration Division (H-7505C)



**APPENDIX F. Combined Generic and Product Specific  
Data Call-In**



GENERIC AND PRODUCT SPECIFIC  
DATA CALL-IN NOTICE

CERTIFIED MAIL

Dear Sir or Madam:

This Notice requires you and other registrants of pesticide products containing the active ingredient identified in Attachment A of this Notice, the Data Call-In Chemical Status Sheet, to submit certain data as noted herein to the U.S. Environmental Protection Agency (EPA, the Agency). These data are necessary to maintain the continued registration of your product(s) containing this active ingredient. Within 90 days after you receive this Notice you must respond as set forth in Section III below. Your response must state:

1. How you will comply with the requirements set forth in this Notice and its Attachments 1 through 7; or
2. Why you believe you are exempt from the requirements listed in this Notice and in Attachment 3 (for both generic and product specific data), the Requirements Status and Registrant's Response Form, (see section III-B); or
3. Why you believe EPA should not require your submission of data in the manner specified by this Notice (see section III-D).

If you do not respond to this Notice, or if you do not satisfy EPA that you will comply with its requirements or should be exempt or excused from doing so, then the registration of your product(s) subject to this Notice will be subject to suspension. We have provided a list of all of your products subject to this Notice in Attachment 2. All products are listed on both the generic and product specific Data Call-In Response Forms. Also included is a list of all registrants who were sent this Notice (Attachment 6).

The authority for this Notice is section 3(c)(2)(B) of the Federal Insecticide, Fungicide and Rodenticide Act as amended (FIFRA), 7 U.S.C. section 136a(c)(2)(B). Collection of this information is authorized under the Paperwork Reduction Act by OMB Approval No. 2070-0107 and 2070-0057 (expiration date 3-31-96).

This Notice is divided into six sections and seven Attachments. The Notice itself contains information and instructions applicable to all Data Call-In Notices. The Attachments contain specific chemical information and instructions. The six sections of the Notice are:

Section I	-	Why You are Receiving this Notice
Section II	-	Data Required by this Notice
Section III	-	Compliance with Requirements of this Notice
Section IV	-	Consequences of Failure to Comply with this Notice
Section V	-	Registrants' Obligation to Report Possible Unreasonable Adverse Effects
Section VI	-	Inquiries and Responses to this Notice

The Attachments to this Notice are:

- 1 - Data Call-In Chemical Status Sheet

- 2 - Generic Data Call-In and Product Specific Data Call-In Response Forms with Instructions
- 3 - Generic Data Call-In and Product Specific Data Call-In Requirements Status and Registrant's Response Forms with Instructions
- 4 - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
- 5 - EPA Acceptance Criteria
- 6 - List of Registrants Receiving This Notice
- 7 - Cost Share and Data Compensation Forms

## **SECTION I. WHY YOU ARE RECEIVING THIS NOTICE**

The Agency has reviewed existing data for this active ingredient(s) and reevaluated the data needed to support continued registration of the subject active ingredient(s). This reevaluation identified additional data necessary to assess the health and safety of the continued use of products containing this active ingredient(s). You have been sent this Notice because you have product(s) containing the subject active ingredients.

## **SECTION II. DATA REQUIRED BY THIS NOTICE**

### **II-A. DATA REQUIRED**

The data required by this Notice are specified in the Requirements Status and Registrant's Response Forms: Attachment 3 (for both generic and product specific data requirements). Depending on the results of the studies required in this Notice, additional studies/testing may be required.

### **II-B. SCHEDULE FOR SUBMISSION OF DATA**

You are required to submit the data or otherwise satisfy the data requirements specified in the Requirements Status and Registrant's Response Forms (Attachment 3) within the timeframes provided.

### **II-C. TESTING PROTOCOL**

All studies required under this Notice must be conducted in accordance with test standards outlined in the Pesticide Assessment Guidelines for those studies for which guidelines have been established.

These EPA Guidelines are available from the National Technical Information Service (NTIS), Attn: Order Desk, 5285 Port Royal Road, Springfield, Va 22161 (Telephone number: 703-487-4650).

Protocols approved by the Organization for Economic Cooperation and Development (OECD) are also acceptable if the OECD recommended test standards conform to those specified in the Pesticide Data Requirements regulation (40 CFR § 158.70). When using the OECD protocols, they should be modified as appropriate so that the data generated by the study will satisfy the requirements of 40 CFR § 158. Normally, the Agency will not extend deadlines for complying with data requirements when the studies were not conducted in accordance with acceptable standards. The OECD protocols are available from OECD, 2001 L Street, N.W., Washington, D.C. 20036 (Telephone number 202-785-6323; Fax telephone number 202-785-0350).

All new studies and proposed protocols submitted in response to this Data Call-In Notice must be in accordance with Good Laboratory Practices [40 CFR Part 160].

## II-D. REGISTRANTS RECEIVING PREVIOUS SECTION 3(c)(2)(B) NOTICES ISSUED BY THE AGENCY

Unless otherwise noted herein, this Data Call-In does not in any way supersede or change the requirements of any previous Data Call-In(s), or any other agreements entered into with the Agency pertaining to such prior Notice. Registrants must comply with the requirements of all Notices to avoid issuance of a Notice of Intent to Suspend their affected products.

## SECTION III. COMPLIANCE WITH REQUIREMENTS OF THIS NOTICE

You must use the correct forms and instructions when completing your response to this Notice. The type of Data Call-In you must comply with (Generic or Product Specific) is specified in item number 3 on the four Data Call-In forms (Attachments 2 and 3).

### III-A. SCHEDULE FOR RESPONDING TO THE AGENCY

The appropriate responses initially required by this Notice for generic and product specific data must be submitted to the Agency within 90 days after your receipt of this Notice. Failure to adequately respond to this Notice within 90 days of your receipt will be a basis for issuing a Notice of Intent to Suspend (NOIS) affecting your products. This and other bases for issuance of NOIS due to failure to comply with this Notice are presented in Section IV-A and IV-B.

### III-B. OPTIONS FOR RESPONDING TO THE AGENCY

#### 1. Generic Data Requirements

The options for responding to this Notice for generic data requirements are: (a) voluntary cancellation, (b) delete use(s), (c) claim generic data exemption, (d) agree to satisfy the generic data requirements imposed by this Notice or (e) request a data waiver(s).

A discussion of how to respond if you choose the Voluntary Cancellation option, the Delete Use(s) option or the Generic Data Exemption option is presented below. A discussion of the various options available for satisfying the generic data requirements of this Notice is contained in Section III-C. A discussion of options relating to requests for data waivers is contained in Section III-D.

Two forms apply to generic data requirements, one or both of which must be used in responding to the Agency, depending upon your response. These two forms are the Data-Call-In Response Form, and the Requirements Status and Registrant's Response Form, (contained in Attachments 2 and 3, respectively).

The Data Call-In Response Forms must be submitted as part of every response to this Notice. The Requirements Status and Registrant's Response Forms also must be submitted if you do not qualify for a Generic Data Exemption or are not requesting voluntary cancellation of your registration(s). Please note that the company's authorized representative is required to sign the first page of both Data Call-In Response Forms and the Requirements Status and Registrant's Response Forms (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person(s) identified in Attachment 1.

#### a. Voluntary Cancellation -

You may avoid the requirements of this Notice by requesting voluntary cancellation of your product(s) containing the active ingredient that is the subject of this Notice. If you wish to voluntarily cancel your product, you must submit completed Generic and Product Specific Data Call-In Response Forms (Attachment 2), indicating your election of this option. Voluntary

cancellation is item number 5 on both Data Call-In Response Form(s). If you choose this option, these are the only forms that you are required to complete.

If you chose to voluntarily cancel your product, further sale and distribution of your product after the effective date of cancellation must be in accordance with the Existing Stocks provisions of this Notice, which are contained in Section IV-C.

b. Use Deletion -

You may avoid the requirements of this Notice by eliminating the uses of your product to which the requirements apply. If you wish to amend your registration to delete uses, you must submit the Requirements Status and Registrant's Response Form (Attachment 3), a completed application for amendment, a copy of your proposed amended labeling, and all other information required for processing the application. Use deletion is option number 7 under item 9 in the instructions for the Requirements Status and Registrant's Response Forms. You must also complete a Data Call-In Response Form by signing the certification, item number 8. Application forms for amending registrations may be obtained from the Registration Support Branch, Registration Division, Office of Pesticide Programs, EPA, by calling (703) 308-8358.

If you choose to delete the use(s) subject to this Notice or uses subject to specific data requirements, further sale, distribution, or use of your product after one year from the due date of your 90 day response, is allowed only if the product bears an amended label.

c. Generic Data Exemption -

Under section 3(c)(2)(D) of FIFRA, an applicant for registration of a product is exempt from the requirement to submit or cite generic data concerning an active ingredient if the active ingredient in the product is derived exclusively from purchased, registered pesticide products containing the active ingredient. EPA has concluded, as an exercise of its discretion, that it normally will not suspend the registration of a product which would qualify and continue to qualify for the generic data exemption in section 3(c)(2)(D) of FIFRA. To qualify, all of the following requirements must be met:

- (i). The active ingredient in your registered product must be present solely because of incorporation of another registered product which contains the subject active ingredient and is purchased from a source not connected with you;
- (ii). Every registrant who is the ultimate source of the active ingredient in your product subject to this DCI must be in compliance with the requirements of this Notice and must remain in compliance; and
- (iii). You must have provided to EPA an accurate and current "Confidential Statement of Formula" for each of your products to which this Notice applies.

To apply for the Generic Data Exemption you must submit a completed Data Call-In Response Form, Attachment 2 and all supporting documentation. The Generic Data Exemption is item number 6a on the Data Call-In Response Form. If you claim a generic data exemption you are not required to complete the Requirements Status and Registrant's Response Form. Generic Data Exemption cannot be selected as an option for responding to product specific data requirements.

If you are granted a Generic Data Exemption, you rely on the efforts of other persons to provide the Agency with the required data. If the registrant(s) who have committed to generate and submit the required data fail to take appropriate steps to meet requirements or are no longer in compliance with this Data Call-In Notice, the Agency will consider that both they and you are not compliance and will normally initiate proceedings to suspend the registrations of both your and their product(s), unless you commit to submit and do submit the required data within the



specified time. In such cases the Agency generally will not grant a time extension for submitting the data.

d. Satisfying the Generic Data Requirements of this Notice

There are various options available to satisfy the generic data requirements of this Notice. These options are discussed in Section III-C.1. of this Notice and comprise options 1 through 6 of item 9 in the instructions for the Requirements Status and Registrant's Response Form and item 6b on the Data Call-In Response Form. If you choose item 6b (agree to satisfy the generic data requirements), you must submit the Data Call-In Response Form and the Requirements Status and Registrant's Response Form as well as any other information/data pertaining to the option chosen to address the data requirement. Your response must be on the forms marked "GENERIC" in item number 3.

e. Request for Generic Data Waivers.

Waivers for generic data are discussed in Section III-D.1. of this Notice and are covered by options 8 and 9 of item 9 in the instructions for the Requirements Status and Registrant's Response Form. If you choose one of these options, you must submit both forms as well as any other information/data pertaining to the option chosen to address the data requirement.

2. Product Specific Data Requirements

The options for responding to this Notice for product specific data are: (a) voluntary cancellation, (b) agree to satisfy the product specific data requirements imposed by this Notice or (c) request a data waiver(s).

A discussion of how to respond if you choose the Voluntary Cancellation option is presented below. A discussion of the various options available for satisfying the product specific data requirements of this Notice is contained in Section III-C.2. A discussion of options relating to requests for data waivers is contained in Section III-D.2.

Two forms apply to the product specific data requirements one or both of which must be used in responding to the Agency, depending upon your response. These forms are the Data-Call-In Response Form, and the Requirements Status and Registrant's Response Form, for product specific data (contained in Attachments 2 and 3, respectively). The Data Call-In Response Form must be submitted as part of every response to this Notice. In addition, one copy of the Requirements Status and Registrant's Response Form also must be submitted for each product listed on the Data Call-In Response Form unless the voluntary cancellation option is selected. Please note that the company's authorized representative is required to sign the first page of the Data Call-In Response Form and Requirements Status and Registrant's Response Form (if this form is required) and initial any subsequent pages. The forms contain separate detailed instructions on the response options. Do not alter the printed material. If you have questions or need assistance in preparing your response, call or write the contact person(s) identified in Attachment 1.

a. Voluntary Cancellation

You may avoid the requirements of this Notice by requesting voluntary cancellation of your product(s) containing the active ingredient that is the subject of this Notice. If you wish to voluntarily cancel your product, you must submit a completed Data Call-In Response Form, indicating your election of this option. Voluntary cancellation is item number 5 on both the Generic and Product Specific Data Call-In Response Forms. If you choose this option, you must complete both Data Call-In response forms. These are the only forms that you are required to complete.

If you choose to voluntarily cancel your product, further sale and distribution of your

product after the effective date of cancellation must be in accordance with the Existing Stocks provisions of this Notice which are contained in Section IV-C.

b. Satisfying the Product Specific Data Requirements of this Notice.

There are various options available to satisfy the product specific data requirements of this Notice. These options are discussed in Section III-C.2. of this Notice and comprise options 1 through 6 of item 9 in the instructions for the product specific Requirements Status and Registrant's Response Form and item numbers 7a and 7b (agree to satisfy the product specific data requirements for an MUP or EUP as applicable) on the product specific Data Call-In Response Form. Note that the options available for addressing product specific data requirements differ slightly from those options for fulfilling generic data requirements. Deletion of a use(s) and the low volume/minor use option are not valid options for fulfilling product specific data requirements. It is important to ensure that you are using the correct forms and instructions when completing your response to the Reregistration Eligibility Decision document.

c. Request for Product Specific Data Waivers.

Waivers for product specific data are discussed in Section III-D.2. of this Notice and are covered by option 7 of item 9 in the instructions for the Requirements Status and Registrant's Response Form. If you choose this option, you must submit the Data Call-In Response Form and the Requirements Status and Registrant's Response Form as well as any other information/data pertaining to the option chosen to address the data requirement. Your response must be on the forms marked "PRODUCT SPECIFIC" in item number 3.

### III-C SATISFYING THE DATA REQUIREMENTS OF THIS NOTICE

1. Generic Data

If you acknowledge on the Generic Data Call-In Response Form that you agree to satisfy the generic data requirements (i.e. you select item number 6b), then you must select one of the six options on the Generic Requirements Status and Registrant's Response Form related to data production for each data requirement. Your option selection should be entered under item number 9, "Registrant Response." The six options related to data production are the first six options discussed under item 9 in the instructions for completing the Requirements Status and Registrant's Response Form. These six options are listed immediately below with information in parentheses to guide you to additional instructions provided in this Section. The options are:

- (1) I will generate and submit data within the specified timeframe (Developing Data)
- (2) I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing)
- (3) I have made offers to cost-share (Offers to Cost Share)
- (4) I am submitting an existing study that has not been submitted previously to the Agency by anyone (Submitting an Existing Study)
- (5) I am submitting or citing data to upgrade a study classified by EPA as partially acceptable and upgradeable (Upgrading a Study)
- (6) I am citing an existing study that EPA has classified as acceptable or an existing study that has been submitted but not reviewed by the Agency (Citing an Existing Study)

Option 1. Developing Data

If you choose to develop the required data it must be in conformance with Agency deadlines and with other Agency requirements as referenced herein and in the attachments. All data generated and submitted must comply with the Good Laboratory Practice (GLP) rule (40 CFR Part 160), be conducted according to the Pesticide Assessment Guidelines (PAG) and be in conformance with the requirements of PR Notice 86-5. In addition, certain studies require Agency approval of test protocols in advance of study initiation. Those studies for which a

protocol must be submitted have been identified in the Requirements Status and Registrant's Response Form and/or footnotes to the form. If you wish to use a protocol which differs from the options discussed in Section II-C of this Notice, you must submit a detailed description of the proposed protocol and your reason for wishing to use it. The Agency may choose to reject a protocol not specified in Section II-C. If the Agency rejects your protocol you will be notified in writing, however, you should be aware that rejection of a proposed protocol will not be a basis for extending the deadline for submission of data.

A progress report must be submitted for each study within 90 days from the date you are required to commit to generate or undertake some other means to address that study requirement, such as making an offer to cost share or agreeing to share in the cost of developing that study. This 90-day progress report must include the date the study was or will be initiated and, for studies to be started within 12 months of commitment, the name and address of the laboratory(ies) or individuals who are or will be conducting the study.

In addition, if the time frame for submission of a final report is more than 1 year, interim reports must be submitted at 12 month intervals from the date you are required to commit to generate or otherwise address the requirement for the study. In addition to the other information specified in the preceding paragraph, at a minimum, a brief description of current activity on and the status of the study must be included as well as a full description of any problems encountered since the last progress report.

The time frames in the Requirements Status and Registrant's Response Form are the time frames that the Agency is allowing for the submission of completed study reports or protocols. The noted deadlines run from the date of the receipt of this Notice by the registrant. If the data are not submitted by the deadline, each registrant is subject to receipt of a Notice of Intent to Suspend the affected registration(s).

If you cannot submit the data/reports to the Agency in the time required by this Notice and intend to seek additional time to meet the requirements(s), you must submit a request to the Agency which includes: (1) a detailed description of the expected difficulty and (2) a proposed schedule including alternative dates for meeting such requirements on a step-by-step basis. You must explain any technical or laboratory difficulties and provide documentation from the laboratory performing the testing. While EPA is considering your request, the original deadline remains. The Agency will respond to your request in writing. If EPA does not grant your request, the original deadline remains. Normally, extensions can be requested only in cases of extraordinary testing problems beyond the expectation or control of the registrant. Extensions will not be given in submitting the 90-day responses. Extensions will not be considered if the request for extension is not made in a timely fashion; in no event shall an extension request be considered if it is submitted at or after the lapse of the subject deadline.

#### Option 2. Agreement to Share in Cost to Develop Data

If you choose to enter into an agreement to share in the cost of producing the required data but will not be submitting the data yourself, you must provide the name of the registrant who will be submitting the data. You must also provide EPA with documentary evidence that an agreement has been formed. Such evidence may be your letter offering to join in an agreement and the other registrant's acceptance of your offer, or a written statement by the parties that an agreement exists. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or the mechanism to resolve the terms. Section 3(c)(2)(B) provides that if the parties cannot resolve the terms of the agreement they may resolve their differences through binding arbitration.

### Option 3. Offer to Share in the Cost of Data Development

If you have made an offer to pay in an attempt to enter into an agreement or amend an existing agreement to meet the requirements of this Notice and have been unsuccessful, you may request EPA (by selecting this option) to exercise its discretion not to suspend your registration(s), although you do not comply with the data submission requirements of this Notice. EPA has determined that as a general policy, absent other relevant considerations, it will not suspend the registration of a product of a registrant who has in good faith sought and continues to seek to enter into a joint data development/cost sharing program, but the other registrant(s) developing the data has refused to accept the offer. To qualify for this option, you must submit documentation to the Agency proving that you have made an offer to another registrant (who has an obligation to submit data) to share in the burden of developing that data. You must also submit to the Agency a completed EPA Form 8570-32, Certification of Offer to Cost Share in the Development of Data, Attachment 7. In addition, you must demonstrate that the other registrant to whom the offer was made has not accepted your offer to enter into a cost-sharing agreement by including a copy of your offer and proof of the other registrant's receipt of that offer (such as a certified mail receipt). Your offer must, in addition to anything else, offer to share in the burden of producing the data upon terms to be agreed to or, failing agreement, to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii) and must not qualify this offer. The other registrant must also inform EPA of its election of an option to develop and submit the data required by this Notice by submitting a Data Call-In Response Form and a Requirements Status and Registrant's Response Form committing to develop and submit the data required by this Notice.

In order for you to avoid suspension under this option, you may not withdraw your offer to share in the burden of developing the data. In addition, the other registrant must fulfill its commitment to develop and submit the data as required by this Notice. If the other registrant fails to develop the data or for some other reason is subject to suspension, your registration as well as that of the other registrant normally will be subject to initiation of suspension proceedings, unless you commit to submit, and do submit, the required data in the specified time frame. In such cases, the Agency generally will not grant a time extension for submitting the data.

### Option 4. Submitting an Existing Study

If you choose to submit an existing study in response to this Notice, you must determine that the study satisfies the requirements imposed by this Notice. You may only submit a study that has not been previously submitted to the Agency or previously cited by anyone. Existing studies are studies which predate issuance of this Notice. Do not use this option if you are submitting data to upgrade a study. (See Option 5).

You should be aware that if the Agency determines that the study is not acceptable, the Agency will require you to comply with this Notice, normally without an extension of the required date of submission. The Agency may determine at any time that a study is not valid and needs to be repeated.

To meet the requirements of the DCI Notice for submitting an existing study, all of the following three criteria must be clearly Met:

- a. You must certify at the time that the existing study is submitted that the raw data and specimens from the study are available for audit and review and you must identify where they are available. This must be done in accordance with the requirements of the Good Laboratory Practice (GLP) regulation, 40 CFR Part 160. As stated in 40 CFR 160.3 'Raw data' means any laboratory worksheets, records, memoranda, notes, or exact copies thereof, that are the result of original observations and activities of a study and are necessary for the reconstruction and evaluation of the report of that study. In the event that exact transcripts of raw data have been prepared (e.g., tapes which have been transcribed verbatim, dated,



and verified accurate by signature), the exact copy or exact transcript may be substituted for the original source as raw data. 'Raw data' may include photographs, microfilm or microfiche copies, computer printouts, magnetic media, including dictated observations, and recorded data from automated instruments." The term "specimens", according to 40 CFR 160.3, means "any material derived from a test system for examination or analysis."

- b. Health and safety studies completed after May 1984 also must also contain all GLP-required quality assurance and quality control information, pursuant to the requirements of 40 CFR Part 160. Registrants also must certify at the time of submitting the existing study that such GLP information is available for post May 1984 studies by including an appropriate statement on or attached to the study signed by an authorized official or representative of the registrant.
- c. You must certify that each study fulfills the acceptance criteria for the Guideline relevant to the study provided in the FIFRA Accelerated Reregistration Phase 3 Technical Guidance and that the study has been conducted according to the Pesticide Assessment Guidelines (PAG) or meets the purpose of the PAG (both available from NTIS). A study not conducted according to the PAG may be submitted to the Agency for consideration if the registrant believes that the study clearly meets the purpose of the PAG. The registrant is referred to 40 CFR 158.70 which states the Agency's policy regarding acceptable protocols. If you wish to submit the study, you must, in addition to certifying that the purposes of the PAG are met by the study, clearly articulate the rationale why you believe the study meets the purpose of the PAG, including copies of any supporting information or data. It has been the Agency's experience that studies completed prior to January 1970 rarely satisfied the purpose of the PAG and that necessary raw data usually are not available for such studies.

If you submit an existing study, you must certify that the study meets all requirements of the criteria outlined above.

If EPA has previously reviewed a protocol for a study you are submitting, you must identify any action taken by the Agency on the protocol and must indicate, as part of your certification, the manner in which all Agency comments, concerns, or issues were addressed in the final protocol and study.

If you know of a study pertaining to any requirement in this Notice which does not meet the criteria outlined above but does contain factual information regarding unreasonable adverse effects, you must notify the Agency of such a study. If such study is in the Agency's files, you need only cite it along with the notification. If not in the Agency's files, you must submit a summary and copies as required by PR Notice 86-5.

#### Option 5. Upgrading a Study

If a study has been classified as partially acceptable and upgradeable, you may submit data to upgrade that study. The Agency will review the data submitted and determine if the requirement is satisfied. If the Agency decides the requirement is not satisfied, you may still be required to submit new data normally without any time extension. Deficient, but upgradeable studies will normally be classified as supplemental. However, it is important to note that not all studies classified as supplemental are upgradeable. If you have questions regarding the classification of a study or whether a study may be upgraded, call or write the contact person listed in Attachment 1. If you submit data to upgrade an existing study you must satisfy or supply information to correct all deficiencies in the study identified by EPA. You must provide a clearly articulated rationale of how the deficiencies have been remedied or corrected and why the study should be rated as acceptable to EPA. Your submission must also specify the MRID number(s) of the study which you are attempting to upgrade and must be in conformance with PR Notice 86-5.

Do not submit additional data for the purpose of upgrading a study classified as unacceptable and determined by the Agency as not capable of being upgraded.

This option also should be used to cite data that has been previously submitted to upgrade a study, but has not yet been reviewed by the Agency. You must provide the MRID number of the data submission as well as the MRID number of the study being upgraded.

The criteria for submitting an existing study, as specified in Option 4 above, apply to all data submissions intended to upgrade studies. Additionally, your submission of data intended to upgrade studies must be accompanied by a certification that you comply with each of those criteria, as well as a certification regarding protocol compliance with Agency requirements.

#### Option 6. Citing Existing Studies

If you choose to cite a study that has been previously submitted to EPA, that study must have been previously classified by EPA as acceptable, or it must be a study which has not yet been reviewed by the Agency. Acceptable toxicology studies generally will have been classified as "core-guideline" or "core-minimum." For ecological effects studies, the classification generally would be a rating of "core." For all other disciplines the classification would be "acceptable." With respect to any studies for which you wish to select this option, you must provide the MRID number of the study you are citing and, if the study has been reviewed by the Agency, you must provide the Agency's classification of the study.

If you are citing a study of which you are not the original data submitter, you must submit a completed copy of EPA Form 8570-31, Certification with Respect to Data Compensation Requirements.

#### 2. Product Specific Data

If you acknowledge on the product specific Data Call-In Response Form that you agree to satisfy the product specific data requirements (i.e. you select option 7a or 7b), then you must select one of the six options on the Requirements Status and Registrant's Response Form related to data production for each data requirement. Your option selection should be entered under item number 9, "Registrant Response." The six options related to data production are the first six options discussed under item 9 in the instructions for completing the Requirements Status and Registrant's Response Form. These six options are listed immediately below with information in parentheses to guide registrants to additional instructions provided in this Section. The options are:

- (1) I will generate and submit data within the specified time-frame (Developing Data)
- (2) I have entered into an agreement with one or more registrants to develop data jointly (Cost Sharing)
- (3) I have made offers to cost-share (Offers to Cost Share)
- (4) I am submitting an existing study that has not been submitted previously to the Agency by anyone (Submitting an Existing Study)
- (5) I am submitting or citing data to upgrade a study classified by EPA as partially acceptable and upgradeable (Upgrading a Study)
- (6) I am citing an existing study that EPA has classified as acceptable or an existing study that has been submitted but not reviewed by the Agency (Citing an Existing Study)

Option 1. Developing Data -- The requirements for developing product specific data are the same as those described for generic data (see Section III.C.1, Option 1) except that normally no protocols or progress reports are required.

Option 2. Agree to Share in Cost to Develop Data -- If you enter into an agreement to cost share, the same requirements apply to product specific data as to generic data (see Section III.C.1, Option 2). However, registrants may only choose this option for acute toxicity data and certain

efficacy data and only if EPA has indicated in the attached data tables that your product and at least one other product are similar for purposes of depending on the same data. If this is the case, data may be generated for just one of the products in the group. The registration number of the product for which data will be submitted must be noted in the agreement to cost share by the registrant selecting this option.

Option 3. Offer to Share in the Cost of Data Development -- The same requirements for generic data (Section III.C.1., Option 3) apply to this option. This option only applies to acute toxicity and certain efficacy data as described in option 2 above.

Option 4. Submitting an Existing Study -- The same requirements described for generic data (see Section III.C.1., Option 4) apply to this option for product specific data.

Option 5. Upgrading a Study -- The same requirements described for generic data (see Section III.C.1., Option 5) apply to this option for product specific data.

Option 6. Citing Existing Studies -- The same requirements described for generic data (see Section III.C.1., Option 6) apply to this option for product specific data.

Registrants who select one of the above 6 options must meet all of the requirements described in the instructions for completing the Data Call-In Response Form and the Requirements Status and Registrant's Response Form, and in the generic data requirements section (III.C.1.), as appropriate.

### III-D REQUESTS FOR DATA WAIVERS

#### 1. Generic Data

There are two types of data waiver responses to this Notice. The first is a request for a low volume/minor use waiver and the second is a waiver request based on your belief that the data requirement(s) are not appropriate for your product.

##### a. Low Volume/Minor Use Waiver

Option 8 under item 9 on the Requirements Status and Registrant's Response Form. Section 3(c)(2)(A) of FIFRA requires EPA to consider the appropriateness of requiring data for low volume, minor use pesticides. In implementing this provision, EPA considers low volume pesticides to be only those active ingredients whose total production volume for all pesticide registrants is small. In determining whether to grant a low volume, minor use waiver, the Agency will consider the extent, pattern and volume of use, the economic incentive to conduct the testing, the importance of the pesticide, and the exposure and risk from use of the pesticide. If an active ingredient is used for both high volume and low volume uses, a low volume exemption will not be approved. If all uses of an active ingredient are low volume and the combined volumes for all uses are also low, then an exemption may be granted, depending on review of other information outlined below. An exemption will not be granted if any registrant of the active ingredient elects to conduct the testing. Any registrant receiving a low volume minor use waiver must remain within the sales figures in their forecast supporting the waiver request in order to remain qualified for such waiver. If granted a waiver, a registrant will be required, as a condition of the waiver, to submit annual sales reports. The Agency will respond to requests for waivers in writing.

To apply for a low volume, minor use waiver, you must submit the following information, as applicable to your product(s), as part of your 90-day response to this Notice:

- (i). Total company sales (pounds and dollars) of all registered product(s) containing the active ingredient. If applicable to the active ingredient, include foreign

sales for those products that are not registered in this country but are applied to sugar (cane or beet), coffee, bananas, cocoa, and other such crops. Present the above information by year for each of the past five years.

(ii) Provide an estimate of the sales (pounds and dollars) of the active ingredient for each major use site. Present the above information by year for each of the past five years.

(iii) Total direct production cost of product(s) containing the active ingredient by year for the past five years. Include information on raw material cost, direct labor cost, advertising, sales and marketing, and any other significant costs listed separately.

(iv) Total indirect production cost (e.g. plant overhead, amortized plant and equipment) charged to product(s) containing the active ingredient by year for the past five years. Exclude all non-recurring costs that were directly related to the active ingredient, such as costs of initial registration and any data development.

(v) A list of each data requirement for which you seek a waiver. Indicate the type of waiver sought and the estimated cost to you (listed separately for each data requirement and associated test) of conducting the testing needed to fulfill each of these data requirements.

(vi) A list of each data requirement for which you are not seeking any waiver and the estimated cost to you (listed separately for each data requirement and associated test) of conducting the testing needed to fulfill each of these data requirements.

(vii) For each of the next ten years, a year-by-year forecast of company sales (pounds and dollars) of the active ingredient, direct production costs of product(s) containing the active ingredient (following the parameters in item 2 above), indirect production costs of product(s) containing the active ingredient (following the parameters in item 3 above), and costs of data development pertaining to the active ingredient.

(viii) A description of the importance and unique benefits of the active ingredient to users. Discuss the use patterns and the effectiveness of the active ingredient relative to registered alternative chemicals and non-chemical control strategies. Focus on benefits unique to the active ingredient, providing information that is as quantitative as possible. If you do not have quantitative data upon which to base your estimates, then present the reasoning used to derive your estimates. To assist the Agency in determining the degree of importance of the active ingredient in terms of its benefits, you should provide information on any of the following factors, as applicable to your product(s): (a) documentation of the usefulness of the active ingredient in Integrated Pest Management, (b) description of the beneficial impacts on the environment of use of the active ingredient, as opposed to its registered alternatives, (c) information on the breakdown of the active ingredient after use and on its persistence in the environment, and (d) description of its usefulness against a pest(s) of public health significance.

Failure to submit sufficient information for the Agency to make a determination regarding a request for a low volume/minor use waiver will result in denial of the request for a waiver.

b. Request for Waiver of Data

Option 9, under Item 9, on the Requirements Status and Registrant's Response Form. This option may be used if you believe that a particular data requirement should not apply because the requirement is inappropriate. You must submit a rationale explaining why you believe the data requirements should not apply. You also must submit the current label(s) of your product(s) and, if a current copy of your Confidential Statement of Formula is not already on file you must submit a current copy.



You will be informed of the Agency's decision in writing. If the Agency determines that the data requirements of this Notice are not appropriate to your product(s), you will not be required to supply the data pursuant to section 3(c)(2)(B). If EPA determines that the data are required for your product(s), you must choose a method of meeting the requirements of this Notice within the time frame provided by this Notice. Within 30 days of your receipt of the Agency's written decision, you must submit a revised Requirements Status and Registrant's Response Form indicating the option chosen.

## 2. Product Specific Data

If you request a waiver for product specific data because you believe it is inappropriate, you must attach a complete justification for the request including technical reasons, data and references to relevant EPA regulations, guidelines or policies. (Note: any supplemental data must be submitted in the format required by PR Notice 86-5). This will be the only opportunity to state the reasons or provide information in support of your request. If the Agency approves your waiver request, you will not be required to supply the data pursuant to section 3(c)(2)(B) of FIFRA. If the Agency denies your waiver request, you must choose an option for meeting the data requirements of this Notice within 30 days of the receipt of the Agency's decision. You must indicate and submit the option chosen on the product specific Requirements Status and Registrant's Response Form. Product specific data requirements for product chemistry, acute toxicity and efficacy (where appropriate) are required for all products and the Agency would grant a waiver only under extraordinary circumstances. You should also be aware that submitting a waiver request will not automatically extend the due date for the study in question. Waiver requests submitted without adequate supporting rationale will be denied and the original due date will remain in force.

## SECTION IV. CONSEQUENCES OF FAILURE TO COMPLY WITH THIS NOTICE

### IV-A NOTICE OF INTENT TO SUSPEND

The Agency may issue a Notice of Intent to Suspend products subject to this Notice due to failure by a registrant to comply with the requirements of this Data Call-In Notice, pursuant to FIFRA section 3(c)(2)(B). Events which may be the basis for issuance of a Notice of Intent to Suspend include, but are not limited to, the following:

1. Failure to respond as required by this Notice within 90 days of your receipt of this Notice.
2. Failure to submit on the required schedule an acceptable proposed or final protocol when such is required to be submitted to the Agency for review.
3. Failure to submit on the required schedule an adequate progress report on a study as required by this Notice.
4. Failure to submit on the required schedule acceptable data as required by this Notice.
5. Failure to take a required action or submit adequate information pertaining to any option chosen to address the data requirements (e.g., any required action or information pertaining to submission or citation of existing studies or offers, arrangements, or arbitration on the sharing of costs or the formation of Task Forces, failure to comply with the terms of an agreement or arbitration concerning joint data development or failure to comply with any terms of a data waiver).

6. Failure to submit supportable certifications as to the conditions of submitted studies, as required by Section III-C of this Notice.
7. Withdrawal of an offer to share in the cost of developing required data.
8. Failure of the registrant to whom you have tendered an offer to share in the cost of developing data and provided proof of the registrant's receipt of such offer or failure of a registrant on whom you rely for a generic data exemption either to:
  - i. Inform EPA of intent to develop and submit the data required by this Notice on a Data Call-In Response Form and a Requirements Status and Registrant's Response Form.
  - ii. Fulfill the commitment to develop and submit the data as required by this Notice; or
  - iii. Otherwise take appropriate steps to meet the requirements stated in this Notice,
 unless you commit to submit and do submit the required data in the specified time frame.
9. Failure to take any required or appropriate steps, not mentioned above, at any time following the issuance of this Notice.

#### IV-B. BASIS FOR DETERMINATION THAT SUBMITTED STUDY IS UNACCEPTABLE

The Agency may determine that a study (even if submitted within the required time) is unacceptable and constitutes a basis for issuance of a Notice of Intent to Suspend. The grounds for suspension include, but are not limited to, failure to meet any of the following:

- 1) EPA requirements specified in the Data Call-In Notice or other documents incorporated by reference (including, as applicable, EPA Pesticide Assessment Guidelines, Data Reporting Guidelines, and GeneTox Health Effects Test Guidelines) regarding the design, conduct, and reporting of required studies. Such requirements include, but are not limited to, those relating to test material, test procedures, selection of species, number of animals, sex and distribution of animals, dose and effect levels to be tested or attained, duration of test, and, as applicable, Good Laboratory Practices.
- 2) EPA requirements regarding the submission of protocols, including the incorporation of any changes required by the Agency following review.
- 3) EPA requirements regarding the reporting of data, including the manner of reporting, the completeness of results, and the adequacy of any required supporting (or raw) data, including, but not limited to, requirements referenced or included in this Notice or contained in PR 86-5. All studies must be submitted in the form of a final report; a preliminary report will not be considered to fulfill the submission requirement.

#### IV-C EXISTING STOCKS OF SUSPENDED OR CANCELLED PRODUCTS

EPA has statutory authority to permit continued sale, distribution and use of existing stocks of a pesticide product which has been suspended or cancelled if doing so would be consistent with the purposes of the Act.

The Agency has determined that such disposition by registrants of existing stocks for a suspended registration when a section 3(c)(2)(B) data request is outstanding generally would not be consistent with the Act's purposes. Accordingly, the Agency anticipates granting registrants permission to sell, distribute, or use existing stocks of suspended product(s) only in exceptional circumstances. If you believe such disposition of existing stocks of your product(s) which may

be suspended for failure to comply with this Notice should be permitted, you have the burden of clearly demonstrating to EPA that granting such permission would be consistent with the Act. You also must explain why an "existing stocks" provision is necessary, including a statement of the quantity of existing stocks and your estimate of the time required for their sale, distribution, and use. Unless you meet this burden, the Agency will not consider any request pertaining to the continued sale, distribution, or use of your existing stocks after suspension.

If you request a voluntary cancellation of your product(s) as a response to this Notice and your product is in full compliance with all Agency requirements, you will have, under most circumstances, one year from the date your 90 day response to this Notice is due, to sell, distribute, or use existing stocks. Normally, the Agency will allow persons other than the registrant such as independent distributors, retailers and end users to sell, distribute or use such existing stocks until the stocks are exhausted. Any sale, distribution or use of stocks of voluntarily cancelled products containing an active ingredient for which the Agency has particular risk concerns will be determined on a case-by-case basis.

Requests for voluntary cancellation received after the 90 day response period required by this Notice will not result in the agency granting any additional time to sell, distribute, or use existing stocks beyond a year from the date the 90 day response was due, unless you demonstrate to the Agency that you are in full compliance with all Agency requirements, including the requirements of this Notice. For example, if you decide to voluntarily cancel your registration six months before a 3-year study is scheduled to be submitted, all progress reports and other information necessary to establish that you have been conducting the study in an acceptable and good faith manner must have been submitted to the Agency, before EPA will consider granting an existing stocks provision.

#### **SECTION V. REGISTRANTS' OBLIGATION TO REPORT POSSIBLE UNREASONABLE ADVERSE EFFECTS**

Registrants are reminded that FIFRA section 6(a)(2) states that if at any time after a pesticide is registered a registrant has additional factual information regarding unreasonable adverse effects on the environment by the pesticide, the registrant shall submit the information to the Agency. Registrants must notify the Agency of any factual information they have, from whatever source, including but not limited to interim or preliminary results of studies, regarding unreasonable adverse effects on man or the environment. This requirement continues as long as the products are registered by the Agency.

#### **SECTION VI. INQUIRIES AND RESPONSES TO THIS NOTICE**

If you have any questions regarding the requirements and procedures established by this Notice, call the contact person(s) listed in Attachment 1, the Data Call-In Chemical Status Sheet.

All responses to this Notice must include completed Data Call-In Response Forms (Attachment 2) and completed Requirements Status and Registrant's Response Forms (Attachment 3), for both (generic and product specific data) and any other documents required by this Notice, and should be submitted to the contact person(s) identified in Attachment 1. If the voluntary cancellation or generic data exemption option is chosen, only the Generic and Product Specific Data Call-In Response Forms need be submitted.

The Office of Compliance (OC) of the Office of Enforcement and Compliance Assurance (OECA), EPA, will be monitoring the data being generated in response to this Notice.

Sincerely yours,

Louis P. True, Jr., Acting Director  
Special Review and  
Reregistration Division

Attachments

The Attachments to this Notice are:

- 1 - Data Call-In Chemical Status Sheet
- 2 - Generic Data Call-In and Product Specific Data Call-In Response Forms with Instructions
- 3 - Generic Data Call-In and Product Specific Data Call-In Requirements Status and Registrant's Response Forms with Instructions
- 4 - EPA Grouping of End-Use Products for Meeting Acute Toxicology Data Requirements for Reregistration
- 5 - EPA Acceptance Criteria
- 6 - List of Registrants Receiving This Notice
- 7 - Confidential Statement of Formula, Cost Share and Data Compensation Forms

## **Attachment 1. Chemical Status Sheets**



## Metalaxyl DATA CALL-IN CHEMICAL STATUS SHEET

### INTRODUCTION

You have been sent this Generic Data Call-In Notice because you have products containing metalaxyl.

This Generic Data Call-In Chemical Status Sheet, contains an overview of data required by this notice, and point of contact for inquiries pertaining to the reregistration of metalaxyl. This attachment is to be used in conjunction with (1) the Generic Data Call-In Notice, (2) the Generic Data Call-In Response Form (Attachment 2), (3) the Requirements Status and Registrant's Form (Attachment 2), (4) a list of registrants receiving this DCI (Attachment 4), (5) the EPA Acceptance Criteria (Attachment 5), and (6) the Cost Share and Data Compensation Forms in replying to this Generic Data Call-In (Attachment F). Instructions and guidance accompany each form.

### DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the generic database for metalaxyl are contained in the Requirements Status and Registrant's Response, Attachment C. The Agency has concluded that additional product chemistry data on metalaxyl are needed. These data are needed to fully complete the reregistration of all eligible metalaxyl products.

### INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic data requirements and procedures established by this Notice, please contact Judy Loranger at (703) 308-8056.

All responses to this Notice for the generic data requirements should be submitted to:

Judy Loranger, Chemical Review Manager  
Reregistration Branch  
Special Review and Registration Division (H7508W)  
Office of Pesticide Programs  
U.S. Environmental Protection Agency  
Washington, D.C. 20460  
RE: Metalaxyl, Case 0081

## Metalaxyl DATA CALL-IN CHEMICAL STATUS SHEET

### INTRODUCTION

You have been sent this Product Specific Data Call-In Notice because you have products containing metalaxyl.

This Product Specific Data Call-In Chemical Status Sheet, contains an overview of data required by this notice, and point of contact for inquiries pertaining to the reregistration of metalaxyl. This attachment is to be used in conjunction with (1) the Product Specific Data Call-In Notice, (2) the Product Specific Data Call-In Response Form (Attachment 2), (3) the Requirements Status and Registrant's Form (Attachment 3), (4) EPA's Grouping of End-Use Products for Meeting Acute Toxicology Data Requirement (Attachment 4), (5) the EPA Acceptance Criteria (Attachment 5), (6) a list of registrants receiving this DCI (Attachment 6) and (7) the Cost Share and Data Compensation Forms in replying to this Product Specific Data Call-In (Attachment 7). Instructions and guidance accompany each form.

### DATA REQUIRED BY THIS NOTICE

The additional data requirements needed to complete the database for metalaxyl are contained in the Requirements Status and Registrant's Response, Attachment 3. The Agency has concluded that additional data on metalaxyl are needed for specific products. These data are required to be submitted to the Agency within the time frame listed. These data are needed to fully complete the reregistration of all eligible metalaxyl products.

### INQUIRIES AND RESPONSES TO THIS NOTICE

If you have any questions regarding the generic database of metalaxyl, please contact Judy Loranger at (703) 308-8056.

If you have any questions regarding the product specific data requirements and procedures established by this Notice, please contact Franklin Gee at (703) 308-8008 or Veronica Dutch at (703)-308-8585.

All responses to this Notice for the Product Specific data requirements should be submitted to:

Veronica Dutch  
Chemical Review Manager Team 81  
Product Reregistration Branch  
Special Review and Reregistration Branch 7508W  
Office of Pesticide Programs  
U.S. Environmental Protection Agency  
Washington, D.C. 20460

RE: Metlalaxyl, **0081**



**Attachment 2. Combined Generic and Product Specific  
Data Call-In Response Forms (Form A inserts) Plus  
Instructions**



## Instructions For Completing The "Data Call-In Response Forms" For The Generic And Product Specific Data Call-In

### **INTRODUCTION**

These instructions apply to the Generic and Product Specific "Data Call-In Response Forms" and are to be used by registrants to respond to generic and product specific Data Call-Ins as part of EPA's Reregistration Program under the Federal Insecticide, Fungicide, and Rodenticide Act. **The type of data call-in (generic or product specific) is indicated in item number 3 ("Date and Type of DCI") on each form. BOTH "Data Call-In Response" forms must be completed.**

Although the form is the same for both generic and product specific data, instructions for completing these forms are different. Please read these instructions carefully before filling out the forms.

EPA has developed these forms individually for each registrant, and has preprinted these forms with a number of items. **DO NOT** use these forms for any other active ingredient.

Items 1 through 4 have been preprinted on the form. Items 5 through 7 must be completed by the registrant as appropriate. Items 8 through 11 must be completed by the registrant before submitting a response to the Agency.

The public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, Mail Code 2136, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D.C. 20503.

INSTRUCTIONS FOR COMPLETING THE DATA CALL-IN RESPONSE FORMS  
Generic and Product Specific Data Call-In

Item 1.**ON BOTH FORMS:** This item identifies your company name, number and address.

Item 2.**ON BOTH FORMS:** This item identifies the case number, case name, EPA chemical number and chemical name.

Item 3.**ON BOTH FORMS:** This item identifies the type of Data Call-In. The date of issuance is date stamped.

Item 4.**ON BOTH FORMS:** This item identifies the EPA product registrations relevant to the data call-in. Please note that you are also responsible for informing the Agency of your response regarding any product that you believe may be covered by this Data Call-In but that is not listed by the Agency in Item 4. You must bring any such apparent omission to the Agency's attention within the period required for submission of this response form.

Item 5.**ON BOTH FORMS:** Check this item for each product registration you wish to cancel voluntarily. If a registration number is listed for a product for which you previously requested voluntary cancellation, indicate in Item 5 the date of that request. Since this Data Call-In requires both generic and product specific data, you must complete item 5 on both Data Call-In response forms. You do not need to complete any item on the Requirements Status and Registrant's Response Forms.

Item 6a.**ON THE GENERIC DATA FORM:** Check this Item if the Data Call-In is for generic data as indicated in Item 3 and you are eligible for a Generic Data Exemption for the chemical listed in Item 2 and used in the subject product. By electing this exemption, you agree to the terms and conditions of a Generic Data Exemption as explained in the Data Call-In Notice.

If you are eligible for or claim a Generic Data Exemption, enter the EPA registration Number of each registered source of that active ingredient that you use in your product.

Typically, if you purchase an EPA-registered product from one or more other producers (who, with respect to the incorporated product, are in compliance with this and any other outstanding Data Call-In Notice), and

INSTRUCTIONS FOR COMPLETING THE DATA CALL-IN RESPONSE FORMS  
Generic and Product Specific Data Call-In

incorporate that product into all your products, you may complete this item for all products listed on this form. If, however, you produce the active ingredient yourself, or use any unregistered product (regardless of the fact that some of your sources are registered), you may not claim a Generic Data Exemption and you may not select this item.

Item 6b.**ON THE GENERIC DATA FORM:** Check this Item if the Data Call-In is for generic data as indicated in Item 3 and if you are agreeing to satisfy the generic data requirements of this Data Call-In. Attach the Requirements Status and Registrant's Response Form that indicates how you will satisfy those requirements.

**NOTE: Item 6a and 6b are not applicable for Product Specific Data.**

Item 7a.**ON THE PRODUCT SPECIFIC DATA FORM:** For each manufacturing use product (MUP) for which you wish to maintain registration, you must agree to satisfy the data requirements by responding "yes."

Item 7b.For each end use product (EUP) for which you wish to maintain registration, you must agree to satisfy the data requirements by responding "yes."

FOR BOTH MUP and EUP products

You should also respond "yes" to this item (7a for MUP's and 7b for EUP's) if your product is identical to another product and you qualify for a data exemption. You must provide the EPA registration numbers of your source(s); do not complete the Requirements Status and Registrant's Response form. Examples of such products include repackaged products and Special Local Needs (Section 24c) products which are identical to federally registered products.

If you are requesting a data waiver, answer "yes" here; in addition, on the "Requirements Status and Registrant's Response" form under Item 9, you must respond with option 7 (Waiver Request) for each study for which you are requesting a waiver.

**NOTE: Item 7a and 7b are not applicable for Generic Data.**

**INSTRUCTIONS FOR COMPLETING THE DATA CALL-IN RESPONSE FORMS**  
**Generic and Product Specific Data Call-In**

Item 8.**ON BOTH FORMS:** This certification statement must be signed by an authorized representative of your company and the person signing must include his/her title. Additional pages used in your response must be initialled and dated in the space provided for the certification.

Item 9.**ON BOTH FORMS:** Enter the date of signature.

Item 10.**ON BOTH FORMS:** Enter the name of the person EPA should contact with questions regarding your response.

Item 11.**ON BOTH FORMS:** Enter the phone number of your company contact.

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Note: You may provide additional information that does not fit on this form in a signed letter that accompanies your response. For example, you may wish to report that your product has already been transferred to another company or that you have already voluntarily cancelled this product. For these cases, please supply all relevant details so that EPA can ensure that its records are correct.

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**Attachment 3. Generic and Product Specific Requirement  
Status and Registrant's Response Forms (Form B inserts)  
and Instructions**





Instructions For Completing  
The  
"Requirements Status and Registrant's Response Forms"  
For The Generic and Product Specific Data Call-In

## **INTRODUCTION**

These instructions apply to the Generic and Product Specific "Requirements Status and Registrant's Response Forms" and are to be used by registrants to respond to generic and product specific Data Call-In's as part of EPA's reregistration program under the Federal Insecticide, Fungicide, and Rodenticide Act. **The type of Data Call-In (generic or product specific) is indicated in item number 3 ("Date and Type of DCI") on each form.** Both "Requirements Status and Registrant's Response" forms must be completed.

Although the form is the same for both product specific and generic data, instructions for completing the forms differ slightly. Specifically, options for satisfying product specific data requirements do not include (1) deletion of uses or (2) request for a low volume/minor use waiver. Please read these instructions carefully before filling out the forms.

EPA has developed these forms individually for each registrant, and has preprinted these forms to include certain information unique to this chemical. **DO NOT** use these forms for any other active ingredient.

Items 1 through 8 have been preprinted on the form. Item 9 must be completed by the registrant as appropriate. Items 10 through 13 must be completed by the registrant before submitting a response to the Agency.

The public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, Mail Code 2136, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Project 2070-0107, Washington, D.C. 20503.

INSTRUCTIONS FOR COMPLETING THE "REQUIREMENTS STATUS AND  
REGISTRANT'S RESPONSE FORMS"  
Generic and Product Specific Data Call-In

- Item 1. **ON BOTH FORMS:** This item identifies your company name, number and address.
- Item 2. **ON THE GENERIC DATA FORM:** This item identifies the case number, case name, EPA chemical number and chemical name.
- ON THE PRODUCT SPECIFIC DATA FORM:** This item identifies the case number, case name, and the EPA Registration Number of the product for which the Agency is requesting product specific data.
- Item 3. **ON THE GENERIC DATA FORM:** This item identifies the type of Data Call-In. The date of issuance is date stamped.
- ON THE PRODUCT SPECIFIC DATA FORM:** This item identifies the type of Data Call-In. The date of issuance is also date stamped. Note the unique identifier number (ID#) assigned by the Agency. This ID number must be used in the transmittal document for any data submissions in response to this Data Call-In Notice.
- Item 4. **ON BOTH FORMS:** This item identifies the guideline reference number of studies required. These guidelines, in addition to the requirements specified in the Data Call-In Notice, govern the conduct of the required studies. Note that series 61 and 62 in product chemistry are now listed under 40 CFR 158.155 through 158.180, Subpart c.
- Item 5. **ON BOTH FORMS:** This item identifies the study title associated with the guideline reference number and whether protocols and 1, 2, or 3-year progress reports are required to be submitted in connection with the study. As noted in Section III of the Data Call-In Notice, 90-day progress reports are required for all studies.
- If an asterisk appears in Item 5, EPA has attached information relevant to this guideline reference number to the Requirements Status and Registrant's Response Form.

INSTRUCTIONS FOR COMPLETING THE "REQUIREMENTS STATUS AND  
REGISTRANT'S RESPONSE FORMS"  
Generic and Product Specific Data Call-In

- Item 6. **ON BOTH FORMS:** This item identifies the code associated with the use pattern of the pesticide. In the case of efficacy data (product specific requirement), the required study only pertains to products which have the use sites and/or pests indicated. A brief description of each code follows:
- |   |                      |
|---|----------------------|
| A | Terrestrial food     |
| B | Terrestrial feed     |
| C | Terrestrial non-food |

D	Aquatic food
E	Aquatic non-food outdoor
F	Aquatic non-food industrial
G	Aquatic non-food residential
H	Greenhouse food
I	Greenhouse non-food crop
J	Forestry
K	Residential
L	Indoor food
M	Indoor non-food
N	Indoor medical
O	Indoor residential

Item 7. **ON BOTH FORMS:** This item identifies the code assigned to the substance that must be used for testing. A brief description of each code follows:

EUP	End-Use Product
MP	Manufacturing-Use Product
MP/TGAI	Manufacturing-Use Product and Technical Grade Active Ingredient
PAI	Pure Active Ingredient
PAI/M	Pure Active Ingredient and Metabolites
PAI/PAIRA	Pure Active Ingredient or Pure Active Ingredient Radiolabelled
PAIRA	Pure Active Ingredient Radiolabelled
PAIRA/M	Pure Active Ingredient Radiolabelled and Metabolites
PAIRA/PM	Pure Active Ingredient Radiolabelled and Plant Metabolites
TEP	Typical End-Use Product
TEP ____%	Typical End-Use Product, Percent Active Ingredient Specified
TEP/MET	Typical End-Use Product and Metabolites
TEP/PAI/M	Typical End-Use Product or Pure Active Ingredient and Metabolites
TGAI	Technical Grade Active Ingredient
TGAI/PAI	Technical Grade Active Ingredient or Pure Active Ingredient
TGAI/PAIRA	Technical Grade Active Ingredient or Pure Active Ingredient Radiolabelled
TGAI/TEP	Technical Grade Active Ingredient or Typical End-Use Product
MET	Metabolites
IMP	Impurities
DEGR	Degradates
*	See: guideline comment

Item 8. This item completed by the Agency identifies the time frame allowed for submission of the study or protocol identified in item 5.

**ON THE GENERIC DATA FORM:** The time frame runs from the date of your receipt of the Data Call-In notice.

**ON THE PRODUCT SPECIFIC DATA FORM:** The due date for submission of product specific studies begins from the date stamped on the letter transmitting the Reregistration Eligibility Decision document, and not from the date of receipt. However, your response to the Data Call-In itself is due 90 days from the date of receipt.

Item 9. **ON BOTH FORMS:** Enter the appropriate Response Code or Codes to show how you intend to comply with each data requirement. Brief descriptions of each code follow. The Data Call-In Notice contains a fuller description of each of these options.

Option 1. **ON BOTH FORMS:** (Developing Data) I will conduct a new study and submit it within the time frames specified in item 8 above. By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to the conditions for submittal of this study as outlined in the Data Call-In Notice and that I will provide the protocols and progress reports required in item 5 above.

Option 2. **ON BOTH FORMS:** (Agreement to Cost Share) I have entered into an agreement with one or more registrants to develop data jointly. By indicating that I have chosen this option, I certify that I will comply with all the requirements pertaining to sharing in the cost of developing data as outlined in the Data Call-In Notice.

**However, for Product Specific Data,** I understand that this option is available for acute toxicity or certain efficacy data **ONLY** if the Agency indicates in an attachment to this notice that my product is similar enough to another product to qualify for this option. I certify that another party in the agreement is committing to submit or provide the required data; if the required study is not submitted on time, my product may be subject to suspension.

Option 3. **ON BOTH FORMS:** (Offer to Cost Share) I have made an offer to enter into an agreement with one or more registrants to develop data jointly. I am also submitting a completed "Certification of offer to Cost Share in the Development of Data" form. I am submitting evidence that I have made an offer to another registrant (who has an obligation to submit data) to share in the cost of that data. I am including a copy of my offer and proof of the other registrant's receipt of that offer. I am identifying the party which is committing to submit or provide the required data; if the required study is not submitted on time, my product may be subject to suspension. I understand that other terms under Option 3 in the Data Call-In Notice apply as well.

**However, for Product Specific Data,** I understand that this option is available only for acute toxicity or certain efficacy data and only if the Agency indicates in an attachment to this Data Call-In Notice that my product is similar enough to another product to qualify for this option.

Option 4. **ON BOTH FORMS:** (Submitting Existing Data) I will submit an existing study by the specified due date that has never before been submitted to EPA. By indicating that I have chosen this option, I certify that this study meets all the requirements pertaining to the conditions for submittal of existing data outlined in the Data Call-In Notice and I have attached the needed supporting information along with this response.

Option 5. **ON BOTH FORMS:** (Upgrading a Study) I will submit by the specified due date, or will cite data to upgrade a study that EPA has classified as partially acceptable and potentially upgradeable. By indicating that I have chosen this option, I certify that I have met all the requirements pertaining to the conditions for submitting or citing existing data to upgrade a study described in the Data Call-In Notice. I am indicating on attached

correspondence the Master Record Identification Number (MRID) that EPA has assigned to the data that I am citing as well as the MRID of the study I am attempting to upgrade.

- Option 6. **ON BOTH FORMS: (Citing a Study)** I am citing an existing study that has been previously classified by EPA as acceptable, core, core minimum, or a study that has not yet been reviewed by the Agency. If reviewed, I am providing the Agency's classification of the study.

**However, for Product Specific Data,** I am citing another registrant's study. I understand that this option is available **ONLY** for acute toxicity or certain efficacy data and **ONLY** if the cited study was conducted on my product, an identical product or a product which the Agency has "grouped" with one or more other products for purposes of depending on the same data. I may also choose this option if I am citing my own data. In either case, I will provide the MRID or Accession number (s). If I cite another registrant's data, I will submit a completed "Certification With Respect To Data Compensation Requirements" form.

**FOR THE GENERIC DATA FORM ONLY: The following three options (Numbers 7, 8, and 9) are responses that apply only to the "Requirements Status and Registrant's Response Form" for generic data.**

- Option 7. (Deleting Uses) I am attaching an application for amendment to my registration deleting the uses for which the data are required.
- Option 8. (Low Volume/Minor Use Waiver Request) I have read the statements concerning low volume-minor use data waivers in the Data Call-In Notice and I request a low-volume minor use waiver of the data requirement. I am attaching a detailed justification to support this waiver request including, among other things, all information required to support the request. I understand that, unless modified by the Agency in writing, the data requirement as stated in the Notice governs.
- Option 9. (Request for Waiver of Data) I have read the statements concerning data waivers other than lowvolume minor-use data waivers in the Data Call-In Notice and I request a waiver of the data requirement. I am attaching a rationale explaining why I believe the data requirements do not apply. I am also submitting a copy of my current labels. (You must also submit a copy of your Confidential Statement of Formula if not already on file with EPA). I understand that, unless modified by the Agency in writing, the data requirement as stated in the Notice governs.

**FOR PRODUCT SPECIFIC DATA: The following option (number 7) is a response that applies to the "Requirements Status and Registrant's Response Form" for product specific data.**

- Option 7. (Waiver Request) I request a waiver for this study because it is inappropriate for my product. I am attaching a complete justification for this request, including technical reasons, data and references to relevant EPA regulations, guidelines or policies. [Note: any supplemental data must be submitted in the format required by P.R. Notice 86-5]. I understand that this is my only opportunity to state the reasons or provide information in support of my request. If the Agency approves my waiver request, I will not be required to supply the data pursuant to Section 3(c) (2) (B) of FIFRA. If the Agency denies my waiver request, I must choose

a method of meeting the data requirements of this Notice by the due date stated by this Notice. In this case, I must, within 30 days-of my receipt of the Agency's written decision, submit a revised "Requirements Status" form specifying the option chosen. I also understand that the deadline for submission of data as specified by the original Data Call-In notice will not change.

- Item 10. **ON BOTH FORMS:** This item must be signed by an authorized representative of your company. The person signing must include his/her title, and must initial and date all other pages of this form.
- Item 11. **ON BOTH FORMS:** Enter the date of signature.
- Item 12. **ON BOTH FORMS:** Enter the name of the person EPA should contact with questions regarding your response.
- Item 13. **ON BOTH FORMS:** Enter the phone number of your company contact.

NOTE: You may provide additional information that does not fit on this form in a signed letter that accompanies this your response. For example, you may wish to report that your product has already been transferred to another company or that you have already voluntarily cancelled this product. For these cases, please supply all relevant details so that the Agency can ensure that its records are correct.

**Attachment 4. EPA Batching of End-Use Products for Meeting Data Requirements for Reregistration**





## EPA'S BATCHING OF METALAXYL PRODUCTS FOR MEETING ACUTE TOXICITY DATA REQUIREMENTS FOR REREGISTRATION

In an effort to reduce the time, resources and number of animals needed to fulfill the acute toxicity data requirements for reregistration of products containing metalaxyl as the active ingredient, the Agency has batched products which can be considered similar for purposes of acute toxicity. Factors considered in the sorting process include each product's active and inert ingredients (identity, percent composition and biological activity), type of formulation (e.g., emulsifiable concentrate, aerosol, wettable powder, granular, etc.), and labeling (e.g., signal word, use classification, precautionary labeling, etc.). Note that the Agency is not describing batched products as "substantially similar" since some products within a batch may not be considered chemically similar or have identical use patterns.

Using available information, batching has been accomplished by the process described in the preceding paragraph. Notwithstanding the batching process, the Agency reserves the right to require, at any time, acute toxicity data for an individual product should the need arise.

Registrants of products within a batch may choose to cooperatively generate, submit or cite a single battery of six acute toxicological studies to represent all the products within that batch. It is the registrants' option to participate in the process with all other registrants, only some of the other registrants, or only their own products within a batch, or to generate all the required acute toxicological studies for each of their own products. If a registrant chooses to generate the data for a batch, he/she must use one of the products within the batch as the test material. If a registrant chooses to rely upon previously submitted acute toxicity data, he/she may do so provided that the data base is complete and valid by today's standards (see acceptance criteria attached), the formulation tested is considered by EPA to be similar for acute toxicity, and the formulation has not been significantly altered since submission and acceptance of the acute toxicity data. Regardless of whether new data is generated or existing data is referenced, registrants must clearly identify the test material by EPA Registration Number. If more than one confidential statement of formula (CSF) exists for a product, the registrant must indicate the formulation actually tested by identifying the corresponding CSF.

In deciding how to meet the product specific data requirements, registrants must follow the directions given in the Data Call-In Notice and its attachments appended to the RED. The DCI Notice contains two response forms which are to be completed and submitted to the Agency within 90 days of receipt. The first form, "Data Call-In Response," asks whether the registrant will meet the data requirements for each product. The second form, "Requirements Status and Registrant's Response," lists the product specific data required for each product, including the standard six acute toxicity tests. A registrant who wishes to participate in a batch must decide whether he/she will provide the data or depend on someone else to do so. If a registrant supplies the data to support a batch of products, he/she must select one of the following options: Developing Data (Option 1), Submitting an Existing Study (Option 4), Upgrading an Existing Study (Option 5) or Citing an Existing Study (Option 6). If a registrant depends on another's data, he/she must choose among: Cost Sharing (Option 2), Offers to Cost Share (Option 3) or Citing an Existing Study (Option 6). If a registrant does not want to participate in a batch, the choices are Options 1, 4, 5 or 6. However, a registrant should know that choosing not to participate in a batch does not preclude other registrants in the batch from citing his/her studies and offering to cost share (Option 3) those studies.

Eighty one products were found which contain metalaxyl as the active ingredient. The products have been placed into seven batches and a "no batch" category in accordance with the active and inert ingredients, type of formulation and current labeling. Table 1 identifies the products in each batch. Table 2 lists the products which have been placed in the "no batch" category.

Table 1

Batch	EPA Reg. No.	% Active Ingredient	Formulation Type
1	100-664	Metalaxyl 1.0 PNCB 10.0	Solid
	100-713	Metalaxyl 1.0 PNCB 10.0	Solid
2	100-742	Metalaxyl 7.0 Zinc ion and manganese ethylene bisdi- thiocarbamate 70.0	Solid
	100-749	Metalaxyl 7.0 Zinc ion and manganese ethylene bisdi- thiocarbamate 70.0	Solid
	PA93000600	Metalaxyl 7.0 Zinc ion and manganese ethylene bisdi- thiocarbamate 70.0	Solid
3	100-670	Metalaxyl 12.5 Captan 30.8 Related derivatives 0.7	Solid
	100-140	Metalaxyl 12.5 Captan 30.8 Related derivatives 0.7	Solid
4	100-639	Metalaxyl 25.0	Solid
	100-717	Metalaxyl 25.0	Solid
	100-718	Metalaxyl 25.0	Solid
5	100-735	Metalaxyl 50.0	Solid
	100-738	Metalaxyl 50.0	Solid

Table 1

Batch	EPA Reg. No.	% Active Ingredient	Formulation Type
6	100-607	Metalaxyl 25.1	Liquid
	100-619	Metalaxyl 25.1	Liquid
	100-626	Metalaxyl 25.1	Liquid
	AZ85000800	Metalaxyl 25.1	Liquid

Batch	EPA Reg. No.	% Active Ingredient	Formulation Type
	AZ86001500	Metalaxyl 25.1	Liquid
	CA82002400	Metalaxyl 25.1	Liquid
	CA85006800	Metalaxyl 25.1	Liquid
	CA86001800	Metalaxyl 25.1	Liquid
	CA90004700	Metalaxyl 25.1	Liquid
	CO88000100	Metalaxyl 25.1	Liquid
	FL81001700	Metalaxyl 25.1	Liquid
	FL82008600	Metalaxyl 25.1	Liquid
	FL86000200	Metalaxyl 25.1	Liquid
	FL89002300	Metalaxyl 25.1	Liquid
	GA81000400	Metalaxyl 25.1	Liquid
	ID89000500	Metalaxyl 25.1	Liquid
	KY81000300	Metalaxyl 25.1	Liquid
	LA92000400	Metalaxyl 25.1	Liquid
	MD81001400	Metalaxyl 25.1	Liquid
	NC81001100	Metalaxyl 25.1	Liquid
	OH81001100	Metalaxyl 25.1	Liquid
	OK90000500	Metalaxyl 25.1	Liquid
	OR89000800	Metalaxyl 25.1	Liquid
	PA81001800	Metalaxyl 25.1	Liquid
	SC81000100	Metalaxyl 25.1	Liquid
	TN87001500	Metalaxyl 25.1	Liquid
	TX91001100	Metalaxyl 25.1	Liquid
	VA81000700	Metalaxyl 25.1	Liquid
	VA88000600	Metalaxyl 25.1	Liquid

Table 1

Batch	EPA Reg. No.	% Active Ingredient	Formulation Type
6	WA87000200	Metalaxyl 25.1	Liquid
	WA89001500	Metalaxyl 25.1	Liquid
7	ID83003300	Metalaxyl 35.0 Captan 33.1 Related derivatives 1.9	Solid
	WA83003500	Metalaxyl 35.0 Captan 34.2 Related derivatives 0.8	Solid

The following table lists products that were either considered not to be similar or the Agency lacked sufficient information for decision making and were not placed in any batch. Registrants of these products are responsible for meeting the acute toxicity data requirements separately for each product.

Table 2 (No Batch)

EPA Reg. No.	% Active Ingredient	Formulation
100-601	Metalaxyl 90.0	Solid
100-628	Metalaxyl 5.0	Solid
100-629	Metalaxyl 10.0 Zinc ion and manganese ethylene bisdithiocarbamate 48.0	Solid
100-646	Metalaxyl 5.0	Solid
100-658	Metalaxyl 9.0 Chlorothalonil 72.0	Solid
100-672	Metalaxyl 45.0 Thiabendazole 24.0	Solid
100-676	Metalaxyl 2.0	Solid
100-683	Metalaxyl 2.8 Captan 13.7 Related derivatives 0.3	Liquid
100-684	Metalaxyl 33.3	Liquid
100-720	Metalaxyl 10.0 Copper hydroxide 60.0	Solid
138-185	Metalaxyl 1.21	Solid

EPA Reg. No.	% Active Ingredient	Formulation
538-203	Metalaxyl 16.0 1-(4-chlorophenoxy)-3,3-dimethyl- 1-(1H-1,2,4-triazole-1-yl)-2- butanone 16.0	Liquid
2935-427	Metalaxyl 28.35	Liquid
2935-428	Metalaxyl 3.5 Chloroneb 30.0	Liquid
2935-458	Metalaxyl 11.5	Liquid
7501-42	Metalaxyl 28.35	Liquid
7501-126	Metalaxyl 6.25 Pentachloronitro-benzene 25.0	Solid
7501-132	Metalaxyl 12.5	Solid

Table 2 (No Batch)

EPA Reg. No.	% Active Ingredient	Formulation
7501-145	Metalaxyl 3.12 Pentachloronitro-benzene 15.0 Carboxin 15.0	Solid
7501-148	Metalaxyl 4.25 Pentachloronitro-benzene 16.67 Bacillus subtilis 0.1	Solid
35512-30	Metalaxyl 0.1	Liquid
AR90000501	Metalaxyl 25.1	Liquid
AR90000502	Metalaxyl 5.0	Solid
CA87000700	Metalaxyl 45.0	Solid
CA85007300	Metalaxyl 35.0	Solid
ID86000900	Metalaxyl 28.35	Liquid
ID86001900	Metalaxyl 45.0	Solid
ME92000200	Metalaxyl 10.0	Solid
NC90000400	Metalaxyl 2.0	Solid
ND87000600	Metalaxyl 28.35	Liquid
ND92000200	Metalaxyl 10.0	Solid

EPA Reg. No.	% Active Ingredient	Formulation
TX92001500	Metalaxyl 7.0	Solid
WA83003500	Metalaxyl 35.0	Solid
WA86002800	Metalaxyl 45.0	Solid
WA90003300	Metalaxyl 35.0	Solid
WA92004200	Metalaxyl 10.0	Solid

## **Attachment 5. EPA Acceptance Criteria**





## SUBDIVISION D

Guideline	Study Title
Series 61	Product Identity and Composition
Series 62	Analysis and Certification of Product Ingredients
Series 63	Physical and Chemical Characteristics

## 61 Product Identity and Composition

### ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

- 1.\_\_\_\_ Name of technical material tested (include product name and trade name, if appropriate).
- 2.\_\_\_\_ Name, nominal concentration, and certified limits (upper and lower) for each active ingredient and each intentionally-added inert ingredient.
- 3.\_\_\_\_ Name and upper certified limit for each impurity or each group of impurities present at  $\geq 0.1\%$  by weight and for certain toxicologically significant impurities (e.g., dioxins, nitrosamines) present at  $<0.1\%$ .
- 4.\_\_\_\_ Purpose of each active ingredient and each intentionally-added inert.
- 5.\_\_\_\_ Chemical name from Chemical Abstracts index of Nomenclature and Chemical Abstracts Service (CAS) Registry Number for each active ingredient and, if available, for each intentionally-added inert.
- 6.\_\_\_\_ Molecular, structural, and empirical formulas, molecular weight or weight range, and any company assigned experimental or internal code numbers for each active ingredient.
- 7.\_\_\_\_ Description of each beginning material in the manufacturing process.
  - \_\_\_\_ EPA Registration Number if registered;
  - \_\_\_\_ for other beginning materials, the following:
    - \_\_\_\_ Name and address of manufacturer or supplier.
    - \_\_\_\_ Brand name, trade name or commercial designation.
    - \_\_\_\_ Technical specifications or data sheets by which manufacturer or supplier describes composition, properties or toxicity.
- 8.\_\_\_\_ Description of manufacturing process.
  - \_\_\_\_ Statement of whether batch or continuous process.
  - \_\_\_\_ Relative amounts of beginning materials and order in which they are added.
  - \_\_\_\_ Description of equipment.
  - \_\_\_\_ Description of physical conditions (temperature, pressure, humidity) controlled in each step and the parameters that are maintained.
  - \_\_\_\_ Statement of whether process involves intended chemical reactions.
  - \_\_\_\_ Flow chart with chemical equations for each intended chemical reaction.
  - \_\_\_\_ Duration of each step of process.
  - \_\_\_\_ Description of purification procedures.
  - \_\_\_\_ Description of measures taken to assure quality of final product.
- 9.\_\_\_\_ Discussion of formation of impurities based on established chemical theory addressing (1) each impurity which may be present at  $\geq 0.1\%$  or was found at  $\geq 0.1\%$  by product analyses and (2) certain toxicologically significant impurities (see #3).

## 62 Analysis and Certification of Product Ingredients

### ACCEPTANCE CRITERIA

The following criteria apply to the technical grade of the active ingredient being reregistered. Use a table to present the information in items 6, 7, and 8.

Does your study meet the following acceptance criteria?

- 1.\_\_\_\_ Five or more representative samples (batches in case of batch process) analyzed for each active ingredient and all impurities present at  $\geq 0.1\%$ .
- 2.\_\_\_\_ Degree of accountability or closure  $\geq$  ca 98%.
- 3.\_\_\_\_ Analyses conducted for certain trace toxic impurities at lower than 0.1% (examples, nitrosamines in the case of products containing dinitroanilines or containing secondary or tertiary amines/alkanolamines plus nitrites; polyhalogenated dibenzodioxins and dibenzofurans). [Note that in the case of nitrosamines both fresh and stored samples must be analyzed.].
- 4.\_\_\_\_ Complete and detailed description of each step in analytical method used to analyze above samples.
- 5.\_\_\_\_ Statement of precision and accuracy of analytical method used to analyze above samples.
- 6.\_\_\_\_ Identities and quantities (including mean and standard deviation) provided for each analyzed ingredient.
- 7.\_\_\_\_ Upper and lower certified limits proposed for each active ingredient and intentionally added inert along with explanation of how the limits were determined.
- 8.\_\_\_\_ Upper certified limit proposed for each impurity present at  $\geq 0.1\%$  and for certain toxicologically significant impurities at  $<0.1\%$  along with explanation of how limit determined.
- 9.\_\_\_\_ Analytical methods to verify certified limits of each active ingredient and impurities (latter not required if exempt from requirement of tolerance or if generally recognized as safe by FDA) are fully described.
- 10.\_\_\_\_ Analytical methods (as discussed in #9) to verify certified limits validated as to their precision and accuracy.

### 63 Physical and Chemical Characteristics

#### ACCEPTANCE CRITERIA

The following criteria apply to the technical grade of the active ingredient being reregistered.

Does your study meet the following acceptance criteria?

63-2 Color

- ☐ Verbal description of coloration (or lack of it)
- ☐ Any intentional coloration also reported in terms of Munsell color system

63-3 Physical State

- ☐ Verbal description of physical state provided using terms such as "solid, granular, volatile liquid"
- ☐ Based on visual inspection at about 20-25° C

63-4 Odor

- ☐ Verbal description of odor (or lack of it) using terms such as "garlic-like, characteristic of aromatic compounds"
- ☐ Observed at room temperature

63-5 Melting Point

- ☐ Reported in °C
- ☐ Any observed decomposition reported

63-6 Boiling Point

- ☐ Reported in °C
- ☐ Pressure under which B.P. measured reported
- ☐ Any observed decomposition reported

63-7 Density, Bulk Density, Specific Gravity

- ☐ Measured at about 20-25° C
- ☐ Density of technical grade active ingredient reported in g/ml or the specific gravity of liquids reported with reference to water at 20° C. [Note: Bulk density of registered products may be reported in lbs/ft<sup>3</sup> or lbs/gallon.]

63-8 Solubility

- ☐ Determined in distilled water and representative polar and non-polar solvents, including those used in formulations and analytical methods for the pesticide
- ☐ Measured at about 20-25° C
- ☐ Reported in g/100 ml (other units like ppm acceptable if sparingly soluble)

63-9 Vapor Pressure

- ☐ Measured at 25° C (or calculated by extrapolation from measurements made at higher temperature if pressure too low to measure at 25° C)
- ☐ Experimental procedure described
- ☐ Reported in mm Hg (torr) or other conventional units

63-10 Dissociation Constant

- ☐ Experimental method described
- ☐ Temperature of measurement specified (preferably about 20-25°C)

63-11 Octanol/water Partition Coefficient

- ☐ Measured at about 20-25° C
- ☐ Experimentally determined and description of procedure provided (preferred method-45 Fed. Register 77350)
- ☐ Data supporting reported value provided

63-12 pH

- ☐ Measured at about 20-25° C
- ☐ Measured following dilution or dispersion in distilled water

63-13 Stability

- ☐ Sensitivity to metal ions and metal determined
- ☐ Stability at normal and elevated temperatures
- ☐ Sensitivity to sunlight determined

**SUBDIVISION F**

<u>Guideline</u>	<u>Study Title</u>
81-1	Acute Oral Toxicity in the Rat
81-2	Acute Dermal Toxicity in the Rat, Rabbit or Guinea Pig
81-3	Acute Inhalation Toxicity in the Rat
81-4	Primary Eye Irritation in the Rabbit
81-5	Primary Dermal Irritation Study
81-6	Dermal Sensitization in the Guinea Pig

## 81-1 Acute Oral Toxicity in the Rat

### ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. ☐ Identify material tested (technical, end-use product, etc).
2. ☐ At least 5 young adult rats/sex/group.
3. ☐ Dosing, single oral may be administered over 24 hrs.
4. ☐ Vehicle control if other than water.
5. ☐ Doses tested, sufficient to determine a toxicity category or a limit dose (5000 mg/kg).
6. ☐ Individual observations at least once a day.
7. ☐ Observation period to last at least 14 days, or until all test animals appear normal whichever is longer.
8. ☐ Individual daily observations.
9. ☐ Individual body weights.
10. ☐ Gross necropsy on all animals.

Criteria marked with an \* are supplemental and may not be required for every study.

**81-2 Acute Dermal toxicity in the Rat, Rabbit or Guinea Pig**

## ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. ☐ Identify material tested (technical, end-use product, etc).
2. ☐ At least 5 animals/sex/group.
3. \* ☐ Rats 200-300 gm, rabbits 2.0-3.0 kg or guinea pigs 350-450 gm.
4. ☐ Dosing, single dermal.
5. ☐ Dosing duration at least 24 hours.
6. \* ☐ Vehicle control, only if toxicity of vehicle is unknown.
7. ☐ Doses tested, sufficient to determine a toxicity category or a limit dose (2000 mg/kg).
8. ☐ Application site clipped or shaved at least 24 hours before dosing.
9. ☐ Application site at least 10% of body surface area.
10. ☐ Application site covered with a porous nonirritating cover to retain test material and to prevent ingestion.
11. ☐ Individual observations at least once a day.
12. ☐ Observation period to last at least 14 days.
13. ☐ Individual body weights.
14. ☐ Gross necropsy on all animals.

Criteria marked with an \* are supplemental and may not be required for every study.

### 81-3 Acute Inhalation Toxicity in the Rat

#### ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. \_\_\_ Identify material tested (technical, end-use product, etc).
2. \_\_\_ Product is a gas, a solid which may produce a significant vapor hazard based on toxicity and expected use or contains particles of inhalable size for man (aerodynamic diameter 15  $\mu\text{m}$  or less).
3. \_\_\_ At least 5 young adult rats/sex/group.
4. \_\_\_ Dosing, at least 4 hours by inhalation.
5. \_\_\_ Chamber air flow dynamic, at least 10 air changes/hour, at least 19% oxygen content.
6. \_\_\_ Chamber temperature, 22° C ( $\pm 2^\circ$ ), relative humidity 40-60%.
7. \_\_\_ Monitor rate of air flow.
8. \_\_\_ Monitor actual concentrations of test material in breathing zone.
9. \_\_\_ Monitor aerodynamic particle size for aerosols.
10. \_\_\_ Doses tested, sufficient to determine a toxicity category or a limit dose (5 mg/L actual concentration of respirable substance).
11. \_\_\_ Individual observations at least once a day.
12. \_\_\_ Observation period to last at least 14 days.
13. \_\_\_ Individual body weights.
14. \_\_\_ Gross necropsy on all animals.



#### 81-4 Primary Eye Irritation in the Rabbit

##### ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. \_\_\_\_ Identify material tested (technical, end-use product, etc).
2. \_\_\_\_ Study not required if material is corrosive, causes severe dermal irritation or has a pH of  $\leq 2$  or  $\geq 11.5$ .
3. \_\_\_\_ 6 adult rabbits.
4. \_\_\_\_ Dosing, instillation into the conjunctival sac of one eye per animal.
5. \_\_\_\_ Dose, 0.1 ml if a liquid; 0.1 ml or not more than 100 mg if a solid, paste or particulate substance.
6. \_\_\_\_ Solid or granular test material ground to a fine dust.
7. \_\_\_\_ Eyes not washed for at least 24 hours.
8. \_\_\_\_ Eyes examined and graded for irritation before dosing and at 1, 24, 48 and 72 hr, then daily until eyes are normal or 21 days (whichever is shorter).
- 9.\* \_\_\_\_ Individual daily observations.

Criteria marked with an \* are supplemental and may not be required for every study.

**81-5 Primary Dermal Irritation Study**

## ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. ☐ Identify material tested (technical, end-use product, etc).
2. ☐ Study not required if material is corrosive or has a pH of  $\leq 2$  or  $\geq 11.5$ .
3. ☐ 6 adult animals.
4. ☐ Dosing, single dermal.
5. ☐ Dosing duration 4 hours.
6. ☐ Application site shaved or clipped at least 24 hours prior to dosing.
7. ☐ Application site approximately 6 cm<sup>2</sup>.
8. ☐ Application site covered with a gauze patch held in place with nonirritating tape.
9. ☐ Material removed, washed with water, without trauma to application site.
10. ☐ Application site examined and graded for irritation at 1, 24, 48 and 72 hr, then daily until normal or 14 days (whichever is shorter).
11. ☐ Individual daily observations.

Criteria marked with an \* are supplemental and may not be required for every study.

**81-6 Dermal Sensitization in the Guinea Pig**

## ACCEPTANCE CRITERIA

Does your study meet the following acceptance criteria?

1. ☐ Identify material tested (technical, end-use product, etc).
2. ☐ Study not required if material is corrosive or has a pH of  $\leq 2$  or  $\geq 11.5$ .
3. ☐ One of the following methods is utilized:
  - ☐ Freund's complete adjuvant test
  - ☐ Guinea pig maximization test
  - ☐ Split adjuvant technique
  - ☐ Buehler test
  - ☐ Open epicutaneous test
  - ☐ Maur optimization test
  - ☐ Footpad technique in guinea pig.
4. ☐ Complete description of test.
- 5.\* ☐ Reference for test.
6. ☐ Test followed essentially as described in reference document.
7. ☐ Positive control included (may provide historical data conducted within the last 6 months).

Criteria marked with an \* are supplemental and may not be required for every study.



**Attachment 6. List of All Registrants Sent This Data Call-In (insert) Notice**



**Attachment 7. Cost Share Data Compensation Forms, Confidential  
Statement of Formula Form and Instructions**







## Confidential Statement of Formula

**1. Name and Address of Applicant/Registrant (Include ZIP Code)**

[illegible]



### ***Instructions for Completing the Confidential Statement of Formula***

The Confidential Statement of Formula (CSF) Form 8570-4 must be used. Two legible, signed copies of the form are required. Following are basic instructions:

- a. All the blocks on the form must be filled in and answered completely.
- b. If any block is not applicable, mark it N/A.
- c. The CSF must be signed, dated and the telephone number of the responsible party must be provided.
- d. All applicable information which is on the product specific data submission must also be reported on the CSF.
- e. All weights reported under item 7 must be in pounds per gallon for liquids and pounds per cubic feet for solids.
- f. Flashpoint must be in degrees Fahrenheit and flame extension in inches.
- g. For all active ingredients, the EPA Registration Numbers for the currently registered source products must be reported under column 12.
- h. The Chemical Abstracts Service (CAS) Numbers for all actives and inerts and all common names for the trade names must be reported.
- i. For the active ingredients, the percent purity of the source products must be reported under column 10 and must be exactly the same as on the source product's label.
- j. All the weights in columns 13.a. and 13.b. must be in pounds, kilograms, or grams. In no case will volumes be accepted. Do not mix English and metric system units (i.e., pounds and kilograms).
- k. All the items under column 13.b. must total 100 percent.
- l. All items under columns 14.a. and 14.b. for the active ingredients must represent pure active form.
- m. The upper and lower certified limits for all active and inert ingredients must follow the 40 CFR 158.175 instructions. An explanation must be provided if the proposed limits are different than standard certified limits.
- n. When new CSFs are submitted and approved, all previously submitted CSFs become obsolete for that specific formulation.





United States Environmental Protection Agency  
Washington, DC 20460

**CERTIFICATION OF OFFER TO COST  
SHARE IN THE DEVELOPMENT OF DATA**

Form Approved

OMB No. 2070-0106  
2070-0057

Approval Expires 3-31-96

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name	Company Number
Product Name	EPA Reg. No.

I Certify that:

My company is willing to develop and submit the data required by EPA under the authority of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), if necessary. However, my company would prefer to enter into an agreement with one or more registrants to develop jointly or share in the cost of developing data.

My firm has offered in writing to enter into such an agreement. That offer was irrevocable and included an offer to be bound by arbitration decision under section 3(c)(2)(B)(iii) of FIFRA if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

Name of Firm(s)	Date of Offer
-----------------	---------------

Certification:

I certify that I am duly authorized to represent the company named above, and that the statements that I have made on this form and all attachments therein are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature of Company's Authorized Representative	Date
Name and Title (Please Type or Print)	





United States Environmental Protection Agency  
Washington, DC 20460

**CERTIFICATION WITH RESPECT TO  
DATA COMPENSATION REQUIREMENTS**

Form Approved

OMB No. 2070-0107  
2070-0057

Approval Expires 3-31-96

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name	Company Number
Product Name	EPA Reg. No.

I Certify that:

1. For each study cited in support of registration or reregistration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that is an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter to cite that study.
2. That for each study cited in support of registration or reregistration under FIFRA that is NOT an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter, or I have notified in writing the company(ies) that submitted data I have cited and have offered to: (a) Pay compensation for those data in accordance with sections 3(c)(1)(D) and 3(c)(2)(D) of FIFRA; and (b) Commence negotiation to determine which data are subject to the compensation requirement of FIFRA and the amount of compensation due, if any. The companies I have notified are: (check one)

☐ The companies who have submitted the studies listed on the back of this form or attached sheets, or indicated on the attached "Requirements Status and Registrants' Response Form,"

3. That I have previously complied with section 3(c)(1)(D) of FIFRA for the studies I have cited in support of registration or reregistration under FIFRA.

Signature	Date
Name and Title (Please Type or Print)	

**GENERAL OFFER TO PAY:** I hereby offer and agree to pay compensation to other persons, with regard to the registration or reregistration of my products, to the extent required by FIFRA sections 3(c)(1)(D) and 3(c)(2)(D).

Signature	Date
Name and Title (Please Type or Print)	

EPA Form 8570-31 (4-90)





## **APPENDIX G. FACT SHEET**





# R.E.D. FACTS

## Pesticide Reregistration

## Metalaxyl

All pesticides sold or distributed in the United States must be registered by EPA, based on scientific studies showing that they can be used without posing unreasonable risks to people or the environment. Because of advances in scientific knowledge, the law requires that pesticides which were first registered years ago be reregistered to ensure that they meet today's more stringent standards.

In evaluating pesticides for reregistration, EPA obtains and reviews a complete set of studies from pesticide producers, describing the human health and environmental effects of each pesticide. The Agency imposes any regulatory controls that are needed to effectively manage each pesticide's risks. EPA then reregisters pesticides that can be used without posing unreasonable risks to human health or the environment.

When a pesticide is eligible for reregistration, EPA announces this and explains why in a Reregistration Eligibility Decision (RED) document. This fact sheet summarizes the information in the RED for reregistration Case 0081, metalaxyl.

## Use Profile

Metalaxyl is a systemic fungicide used to control plant diseases caused by the Oomycetes or water-mold fungi. It is used on many food and feed crops, and on non-food, residential and greenhouse crops such as tobacco, ornamental plants, trees, shrubs and vines, and lawns and turf.

Formulations include a dust, granular, wettable powder, emulsifiable concentrate, flowable concentrate, crystalline and ready-to-use liquid. Metalaxyl may be applied by foliar application, soil incorporation, surface spraying, drenching, sprinkler or drip irrigation, soil mix or seed treatment. Use practice limitations on current product labeling prohibit use of treated seed for feed, food or oil; feeding clippings, crop waste or vines to livestock; or grazing treated areas. Preharvest interval restrictions also apply.

## Regulatory History

Metalaxyl was first registered as a pesticide in the U.S. in 1979. EPA issued Registration Standards for metalaxyl in June 1981 (NTIS #PB82-172297) and September 1988 (NTIS #PB89-128979). A June 1991 Data Call-In (DCI) required additional aquatic plant growth and field rotational crop studies.

Currently, 81 metalaxyl products are registered; 35 of these are full Federal registrations and 46 are State special local need registrations. These

products contain metalaxyl as the sole active ingredient or in combination with other active ingredients.

## Human Health Assessment

### Toxicity

Metalaxyl generally is of low acute toxicity but is a moderate eye irritant and has been placed in Toxicity Category II (indicating the second-highest degree of acute toxicity) for eye irritation effects.

In a subchronic feeding study using rats, reduced food consumption and liver cell effects were noted at the highest dose tested. In a dermal study using rabbits, no treatment-related effects were observed.

In a chronic toxicity study using beagle dogs, blood serum enzyme effects and increased liver weights were noted in the highest dose group. A study using rats resulted in liver effects.

Cancer studies using rats and mice raised concerns about the incidence of thyroid, adrenal and liver tumors. EPA reviewed this issue in 1985 and concluded that the studies demonstrated that metalaxyl did not have carcinogenic potential in laboratory animals. In December 1985, EPA classified metalaxyl as a Group E carcinogen; that is, a chemical that does not show evidence of carcinogenicity for humans.

A developmental toxicity study using rats resulted in maternal toxicity and fetotoxicity at the higher dose levels. However, no treatment-related developmental effects were noted in a study using rabbits. Metalaxyl does not cause reproductive toxicity or mutagenicity. A tobacco smoke inhalation study using rats indicates that toxicological effects beyond those associated with heavy cigarette smoking are unlikely.

### Dietary Exposure

People may be exposed to residues of metalaxyl through the diet. Tolerances or maximum residue limits have been established for well over 100 raw agricultural commodities, processed foods and feed (please see 40 CFR 180.408(a), (b) and (c); 40 CFR 185.4000(a), (b) and (d); and 40 CFR 186.4000(a), (b) and (d)). EPA has reassessed the metalaxyl tolerances and found that numerous revisions are necessary. These revisions will be handled administratively.

Numerous international Codex maximum residue limits (MRLs) have been established for metalaxyl. Harmonization of Codex MRLs and U.S. tolerances for metalaxyl is not possible at this time as Codex and U.S. tolerance definitions are incompatible.

EPA has assessed the dietary risk posed by metalaxyl. For the overall U.S. population and 22 population subgroups, exposure from all current metalaxyl tolerances represents 16% of the Reference Dose (RfD), or amount believed not to cause adverse effects if consumed daily over a 70-year lifetime. The exposure level of the most highly exposed subgroup, children ages 1 through 6, represents 31% of the RfD.

Information on the percent of crop actually treated with metalaxyl was included to more accurately estimate the dietary exposure of the same population groups. The resulting Anticipated Residue Contribution (ARC) for the overall U.S. population represents 8% of the RfD, and the ARC for children is 15% of the RfD. When proposed metalaxyl tolerance changes are considered, the exposure estimates for the overall U.S. population and all subgroups are below the RfD. Therefore, it appears that chronic dietary risk is minimal.

### **Occupational and Residential Exposure**

Based on current use patterns, workers may be exposed to metalaxyl both during and after applications in agricultural and other settings. However, neither an application nor a post-application exposure assessment is required because metalaxyl does not pose sufficient toxicity concerns.

Based on a reevaluation of eye irritation data (Toxicity Category II), the 12-hour Restricted Entry Interval (REI) imposed by the Worker Protection Standard (WPS) is being increased to 24 hours to better protect workers. A protective eyewear requirement also is being added to the Personal Protective Equipment (PPE) previously required for early entry.

### **Human Risk Assessment**

Metalaxyl generally is of low acute toxicity but is an eye irritant. It has been classified as a Group E carcinogen; that is, a chemical showing evidence of non-carcinogenicity for humans.

Although people may be exposed to residues of metalaxyl in many food commodities, the chronic dietary risk from all uses is minimal. Application and post-application risks to workers and others also are minimal because metalaxyl has no toxicological endpoints of concern. Since metalaxyl can irritate the eyes, a 24-hour restricted entry interval (REI) is being imposed and use of personal protective equipment (PPE) including protective eyewear is required.

## **Environmental Assessment**

### **Environmental Fate**

Metalaxyl is moderately stable under normal environmental conditions. It is photolytically stable in water when exposed to sunlight, with a half-life of 400 days, and is stable to photodegradation in soil. In aquatic systems, metalaxyl degrades moderately rapidly. Very little of the chemical is lost to volatilization.

Metalaxyl is persistent and mobile, and both metalaxyl and its major degradate readily leach in many soils. Monitoring data demonstrate that metalaxyl and its primary degradate have the potential to reach groundwater. Metalaxyl has been detected in ground water in five states at levels typically reaching up to 3 parts per billion (ppb). Concentrations as high as 236 ppb have been found, but are not likely the result of normal field use.

In order to reduce the possibility of groundwater contamination, EPA is requiring a groundwater label advisory for metalaxyl end use products.

The registrant also has agreed to conduct a user education program if levels of metalaxyl are detected in groundwater at or above 400 ppb.

### **Ecological Effects**

Metalaxyl is used in numerous sites, and exposure to non-target organisms may result from direct application, spray drift and/or runoff from treated areas.

Metalaxyl is practically non-toxic to birds on a dietary basis, and slightly toxic on an acute, single dose basis. The risk to birds from granular metalaxyl is minimal. Avian reproduction studies still are needed. Metalaxyl is practically non-toxic to honeybees, and is not expected to present a risk to small mammals. Minimal risks are posed to freshwater and estuarine organisms. Metalaxyl is not expected to adversely affect aquatic plants.

### **Ecological Effects Risk Assessment**

Metalaxyl poses minimal if any risks to birds, small mammals, fish and estuarine species, honey bees and aquatic plants. The registered uses of metalaxyl do not present an acute hazard to endangered terrestrial and aquatic animals or plant species.

### **Additional Data Required**

EPA is requiring the following additional generic data for metalaxyl to confirm its regulatory assessments and conclusions: product chemistry, animal metabolism, analytical method validation for additional metabolites, storage stability, magnitude of the residue in plants for a newly registered formulation, residue data for cotton gin byproducts, magnitude of the residue in processed tomato products, and avian reproduction studies.

The Agency also is requiring product-specific data including product chemistry and acute toxicity studies, revised Confidential Statements of Formula (CSF) and revised labeling for reregistration.

### **Product Labeling Changes Required**

All metalaxyl end-use products must comply with EPA's current pesticide product labeling requirements, and with the following:

**Worker Protection Standard** - The following entry restrictions are required:  
Non-WPS Occupational Uses

For liquid applications: "Do not enter or allow others to enter the treated area until sprays have dried."

For dry applications: "Do not enter or allow others to enter the treated area until dusts have settled."

### Homeowner Products

For liquid applications: "Do not allow people or pets to enter the treated area until the sprays have dried."

For dry applications: "Do not allow people or pets to enter the treated area until dusts have settled."

### Other Occupational/Residential Requirements

Application Restrictions: "Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application."

Engineering Controls: "When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS."

User Safety Requirements: "Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry."

User Safety Recommendations: "Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet."

"Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."

"Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing."

### Environmental Hazard Statement - The following language is required:

"For terrestrial uses, do not apply to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment wash water or rinsate."

### Groundwater Advisory - The following language is required on all end-use products:

"This chemical is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination."

### Regulatory Conclusion

The use of currently registered products containing metalaxyl in accordance with approved labeling will not pose unreasonable risks or adverse effects to humans or the environment. Therefore, all uses of all products containing the active ingredient metalaxyl are eligible for reregistration.

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These metalaxyl products will be reregistered once the confirmatory generic data, product specific data, revised Confidential Statements of Formula and revised labeling are received and accepted by EPA.

### **For More Information**

EPA is requesting public comments on the Reregistration Eligibility Decision (RED) document for metalaxyl during a 60-day time period, as announced in a Notice of Availability published in the Federal Register. To obtain a copy of the RED document or to submit written comments, please contact the Pesticide Docket, Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs (OPP), US EPA, Washington, DC 20460, telephone 703-305-5805.

Following the comment period, the metalaxyl RED document will be available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, telephone 703-487-4650.

For more information about EPA's pesticide reregistration program, the metalaxyl RED, or reregistration of individual products containing metalaxyl, please contact the Special Review and Reregistration Division (7508W), OPP, US EPA, Washington, DC 20460, telephone 703-308-8000.

For information about the health effects of pesticides, or for assistance in recognizing and managing pesticide poisoning symptoms, please contact the National Pesticides Telecommunications Network (NPTN). Call toll-free 1-800-858-7378, between 8:00 am and 6:00 pm Central Time, Monday through Friday.