

US EPA ARCHIVE DOCUMENT

FILE COPY

Date Out EFB: DEC 7 1981

To: Product Manager 25 Ellenberger
TS-767

From Dr. Willa Garner *WJ*
Chief, Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 464-448, 464-523

Chemical: chlorpyrifos

Type Product: Insecticide

Product Name: Lorsban

Company Name: Dow

Submission Purpose: Adding sunflowers to labels

ZBB Code: 3(c)(7)

ACTION CODE: 335

Date in: 10/28/81

EFB # 26, 27

Date Completed: DEC 7 1981

TAIS (level II)

Days

Deferrals To:

63

1

 Ecological Effects Branch

 Residue Chemistry Branch

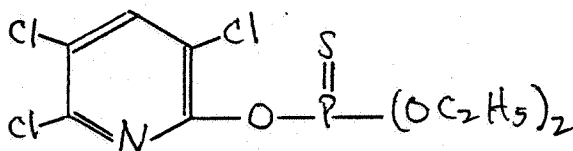
 Toxicology Branch

1.0 Introduction

Chemical Name and Type Pesticide: Chlorpyrifos, 0,0,-diethyl 0-(3,5,6-trichloro-2-pyridyl) phosphorothioate, 40.7% ai, Insecticide.

Trade Name: LORSBAN 4E, LORSBAN 15G granular insecticide

Chemical Structure:



The registrant requests the addition of sunflower to the LORSBAN 4E and LORSBAN 15G labels. These formulations are currently registered on certain field, fruit, nut, and vegetable crops (LORSBAN 4E) and corn, peanuts, sugar beets, sweet potatoes, and vegetables (LORSBAN 15G).

2.0 Directions for Use

See attached pages.

3.0 Discussion of Data

No new environmental fate data submitted.

4.0 Recommendation

EFB concurs with the proposed addition of sunflower to the LORSBAN 4E and LORSBAN 15G labels, since no significant incremental risk should result from this use.

Herbert L. Manning

Herbert L. Manning, Ph.D.
Review Section #1
EFB/HED

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LORSBAN* 4E

INSECTICIDE

For Control of Various Insects Infesting Certain Field, Fruit, Nut, and Vegetable Crops

Complete Directions for Use, Use Precautions and Restrictions, Hazards and Other Important Information for the Proper Use, Handling, Storage and Disposal of this Product

M481
45378

EPA Reg. No. 444-448
EPA Est. 444-061

*Trademark of the DOW CHEMICAL COMPANY



THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN 48640, USA
MORGES, SWITZERLAND
HONG KONG
CORAL GABLES, FLORIDA 33134, USA
SARNIA, ONTARIO, CANADA
†Trademark of the DOW CHEMICAL COMPANY

SPECIMEN LABEL
(BACK)
REDUCED TO 68%

READ ENTIRE LABEL BEFORE USING THIS PRODUCT

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le hay sido explicada ampliamente.
TRANSLATION: (TO THE USER): If you cannot read English, do not use this product until the label has been fully explained to you.

In case of an emergency endangering life or property involving this product, call collect 817-436-4400.

ACTIVE INGREDIENTS:

Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate) 40.7%
Aromatic petroleum derivative solvent 22.8%
INERT INGREDIENTS 36.5%
Contains 4 pounds of chlorpyrifos per gallon.

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GRAIN SORGHUM: Use LORSBAN 4E to control infestations of the Sorghum midge by application as a broadcast, foliar spray at the rate of 1/2 pint per acre. Mix the specified dosage in enough water to ensure thorough coverage and apply using suitable aerial or ground spray equipment. Make the first application when 30 to 50 percent of the seed heads are in bloom and midge adults are present. A second and third treatment at 3-day intervals may be needed, but do not exceed 3 applications. To avoid phytotoxicity, do not treat plants that are under extreme heat and drought stress.

Restrictions: The treated crop is not to be used for forage, fodder, hay, or silage within 14 days after the last treatment. Do not treat sweet varieties of sorghum.

PEACHES, NECTARINES: Use LORSBAN 4E insecticide for the control of peach tree borers by application as a trunk spray before newly hatched borers enter the trees. Mix 3 quarts of LORSBAN 4E with 100 gallons of water and apply as a coarse, low-pressure spray to give uniform coverage of tree trunks. Thoroughly wet all bark areas from ground level to scaffold limbs. Do not allow spray to contact fruit. Consult your State Agricultural Experiment Station or Extension Service Specialist for proper time to treat in your area.

Restrictions: Make only one application per season. Do not apply within 14 days before harvest. Do not allow meat or a yam's to graze in treated orchards.

SUMMARY TABLE OF USES

CROP	PEST	APPROVED LABELING	PAGE
Corn: Field Popcorn Sweet Corn	Armyworms B (blue) Corn rootworms Cutworms Grasshoppers Lesser corn-stalk borer Wireworms	All States	7
Cotton	Armyworms Cotton aphid Cotton leafhopper Plant Bugs (Lygus, Miris) Salt marsh caterpillar Thrips Bollworm (Heliothis sp.) Bollweevil Cutworms Pink bollworm Spider mites	All States	9
Peanuts	Armyworms Corn earworm Cutworms Lesser corn-stalk borer Mice	All States	14
Sorghum	Sorghum midge	All States	13

CROP -
Vegetables
Broccoli
Brussels
sprouts
Cabbage
Cauliflower
Rutabagas
Turnips

CROP	PEST	APPROVED LABELING	PAGE
Sweet Potatoes	Fla beetles (Systema sp.) Sweetpotato fla beetle Wireworms (Conoderus sp.)	All States	14
Tree Fruits: Apples	Rose apple aphid San Jose scale Cutworms	All States	15
Pears	San Jose scale Cutworms	All States	15
Plums, Prunes	San Jose scale Nearly plum aphid Cutworms	All States	15
Almonds, Peaches, Nectarines	San Jose scale Peach twig borer Cutworms	All States	13, 15
Peaches Nectarines	Peachtree borer	All States	13, 15

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PEANUTS: Use LORSBAN 4E for control of the following pests at the dosages indicated:

Lesser cornstalk borer: 2 to 4 quarts per acre (as a directed spray) on the base of the plants or on 8 to 10 inch wide bands;

Armyworms, corn earworms, cutworms, mice: 1 to 2 quarts per acre (as a broadcast, foliar spray using ground or aerial equipment when field counts indicate damaging insect populations are developing or present).

Mix the required dosage in enough water to ensure thorough coverage.

Restrictions: Do not make more than one application per season as a directed spray. Directed and foliar sprays should not exceed 8 quarts of LORSBAN 4E per acre or 4 pounds of chlorpyrifos (active ingredient) per acre per season. Do not harvest within 21 days after treatment. Do not feed treated peanut forage or hay to meat or dairy animals.

SWEET POTATOES: Use LORSBAN 4E to control Conoderus wireworms, Systema flea beetles and the sweet potato flea beetle by preplant application at the rate of 4 quarts per acre as a broadcast (overall) spray to the soil surface followed by incorporation. Mix the specified dosage with enough water to obtain uniform coverage of the treated area and apply as a coarse spray using suitable ground spray equipment. After application, incorporate the insecticide into the soil to a depth of 4 to 6 inches using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant the crop in the usual manner as soon as possible after treatment.

Restrictions: Do not make more than one application per season.

TREE FRUITS:
domestic spray
insects on the

Crop
Apples

Pears

Plums,
Prunes

Almonds,
Peaches,
Nectarines

Take mix the
petroleum spr
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recommended o
Extension S
Restrictions: A
season. Do no
treated orchard
VEGETABLES:
the following c
Broccoli, Bru
sprouts, cabbage
cauliflower

3

APPROVED LABELING	PAGE
AR States	15

Environmental Hazards

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

LORSBAN 4E insecticide is toxic to fish, birds and other wildlife. Fish and crustaceans may be killed if their waters are contaminated with this product. Keep out of lakes, streams, ponds, inlet marshes and estuaries. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes. Use the product only as specified on this label.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

General Information

LORSBAN 4E insecticide forms an emulsion when diluted with water and is suitable for use in all conventional hand- and power-operated ground spray equipment. Aerial spray equipment also may be used where specified.

Mixing Instructions

To prepare the spray, add a portion of the required amount of water to the spray tank and with agitation add the LORSBAN 4E. Complete filling the tank with the balance of the water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

Use and Dosage Recommendations

FIELD CORN, POPCORN, SWEET CORN: For Use to Control Armyworms, Billbugs, Corn rootworms, Cutworms, Grasshoppers, Lesser cornstalk borer, and Wireworms.

Preplant Treatment (Corn rootworms, Cutworms and Wireworms): Use 2 to 4 pints of LORSBAN 4E in not less than 10 gallons of water per acre and apply as a broadcast spray to the soil surface using suitable power-operated ground spray equipment. As soon as possible after treatment incorporate the insecticide into the top 2 to 4 inches of soil using a disc, field cultivator or equivalent equipment.

Postemergence Treatment: Use LORSBAN 4E at the following rate by application in sufficient water to ensure thorough coverage of treated plants:

Billbugs, Cutworms, Lesser cornstalk borer	2 to 3 pints per acre
Armyworms	1 to 2 pints per acre
Grasshoppers	1/2 to 1 pint per acre

Apply as a broadcast spray using either aerial (fixed-wing or helicopter) or power-operated ground spray equipment. For aerial application use at least 1 gallon of water per acre. Treat when field counts indicate that pests are or may become a problem. For cutworms it is preferable to apply LORSBAN 4E when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy, or crusty at time of treatment, worms may be protected from the spray and effectiveness will be reduced. If such conditions exist, shallow cultivation using a rotary hoe or equivalent equipment before or soon after treatment may improve control. Consult your State Agricultural Experiment Station or Extension Service specialist for additional information concerning cutworm control practices in your area.

Resistances: Do not apply more than 3 pints of LORSBAN 4E by postemergence application per season. Do not allow livestock to graze in treated areas nor feed treated corn silage, fodder or grain to meat or dairy animals within 30 days after treatment.

For direct-seeded crops apply the specified dosage in a water-based spray as a 2 to 4 inch wide band over the row or planting line, either ahead of the planter shoe or in front of the press wheel to achieve shallow incorporation. Apply in a minimum of 20 gallons of total spray per acre.

For transplanted crops apply LORSBAN 4E as a water-based drench to transplants immediately after setting. Use a minimum of 20 gallons of total drench per acre and apply to soil at the base of the plants.

Resistances: Do not apply more than 4 1/2 pints per acre. Do not make more than one application per season. Do not apply within 30 days before harvest.

Radishes	1.5 to 3.0 oz per 1000 linear feet of row
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Apply the specified dosage in a water-based drench in the seed furrow with the seed at planting time. Use at least 20 gallons of total drench per acre.

Resistances: Do not apply more than 5 1/2 pints of LORSBAN 4E per acre. Do not make more than one application per season.

Rutabagas	1.6 to 3.3 oz per 1000 linear feet of row
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Apply the specified dosage in a water-based spray or 2 to 4 inch wide band over the row at planting time, either ahead of the planter shoe or in front of the press wheel to achieve shallow incorporation. Apply a minimum of 20 gallons of total spray per acre.

Resistances: Do not apply more than 4 1/2 pints of LORSBAN 4E per acre. Do not apply more than one application per season. Do not use rutabaga tops for food or feed purposes.

Attention: Before using this product read and carefully observe all hazard information given in this booklet.

COTTON: Use LORSBAN 4E for control of the following pests in all states except Arizona and California at the dosages indicated:

Cotton fleahopper, plant bug (Lygus, Mirisid)	1/2 to 1 pint per acre
Cotton aphid, fall armyworm, spider mite, thrips, yellow-striped armyworm	1/2 to 1 pint per acre

Best armyworm, bollworms (Heliothis spp.), boll weevil, cutworms, pink bollworm, salt marsh caterpillar

NOTE: The recommended dosage rate of 1/2 pint per acre will not achieve the high degree of control of the higher label rate but will minimize the damage done by plant bugs and cotton fleahopper and allow the beneficial insects to survive, build up, and be available to aid in the control of bollworms infesting cotton.

Use LORSBAN 4E for control of the following pests in Arizona and California at the dosages indicated:

Armyworms, cotton aphid, cotton fleahopper, Lygus, salt marsh caterpillar, thrips	1 to 2 pints per acre
Bollworms (Heliothis spp.), boll weevil, cutworms, pink bollworm	2 pints per acre

NOTE: The 2 pint rate will not be satisfactory since the cotton leafhopper and spider mites.

Mix the required dosage with sufficient water to ensure thorough coverage of plants and apply using aerial or power-operated ground spray equipment. For aerial application, use at least 1 gallon of spray per acre. Treat when field counts indicate damaging insect populations are developing or present. Re-treat as necessary to maintain control.

For effective control of spider mites when large numbers of eggs are present, apply a second spray 3 to 5 days after usual treatment to control newly hatched nymphs.

For best results on bollworms, it is suggested that fields be scouted twice per week and treatments made when worms are 1/4 inch or less in length. The following table illustrates the size of worms in relation to age and stage of development (instar) as a guide to timing of treatments for best control.

From the table it can be seen that a scouting schedule of only once per week will not be satisfactory since the worms may be too big to control effectively by the seventh or eighth day.

Timing for the best worm control

Age (days)	Size	Instar
Get the worms in this stage	Hatch: 1/16"	Hatch
1	3/16"	I
2	1/8"	II
3	1/4"	III
4	3/8"	IV
5	1/2"	V
6	5/8"	VI
7	3/4"	VII
8	7/8"	VIII



Proper application techniques help to ensure thorough spray coverage and correct dosage and are thus important in obtaining good control of pests. Consider these suggestions when applying LORSBAN 4E insecticide on cotton.

Aerial Application: Shorten boom length to avoid spray entering the vortices at the wing tips. Sweath swath should be reduced when wind direction is the same as direction of spraying.

The proper nozzle arrangement and swath width to avoid skips and vortices effect can be checked out by flying over or paper tape (adding machine paper) using water with or without soluble dye. (The dye gives a permanent record.) Flying at a height of 5-15 feet above the target results in the best coverage.

Nozzle orientation of the boom is important. More break-up occurs when nozzles are pointed straight down versus the straight back position. Desired droplet size (100-200 microns) can be obtained by angling the nozzles somewhere in this range.

Marking of swaths by flagging or permanent markers is essential.

Ground Application: Orient the boom and nozzles so the uniform coverage is obtained. The swath width should not be wider than the boom; drift spray is wasted spray so do not depend on it. Use flat fan or disc-core hollow cone nozzles with maximum spacing of 20 inches and a spray pressure of 40-60 psi with a droplet size of 100-200 microns.

Resistances: Do not apply within 14 days before harvest. Do not allow livestock to graze in treated areas. Do not feed grass or treated forage to livestock.

LORSBAN 4E insecticide may also be used in tank mixtures in all states to control armyworms, bollworms (Heliothis spp.), boll weevil, cutworms, grasshoppers, plant bugs (Lygus, Mirisid), and spider mites as indicated in the following table:

TANK MIXTURE	RATE/ACRE
LORSBAN 4E plus Pyridin® 24E	1 to 2 pints plus 1/5 to 1/2 pint
LORSBAN 4E plus Salsol® 4E	1/2 to 1 pint plus 2/3 to 1-1/3 pints
LORSBAN 4E plus methyl parathion¹ plus toxaphene²	1 pint plus 1 lb a.i. plus 2 lb a.i.
LORSBAN 4E plus methyl parathion¹ plus EPN²	1 pint plus 0.5 lb a.i. plus 0.5 lb a.i.

¹Trademark of Farbwerke/Intrac Bayer Corporation. ²Use only emulsifiable formulations containing these active ingredients (a.i.).

Mix the tank mixture components in sufficient water to ensure thorough coverage of plants (at least 1 gallon of spray per acre) and apply using aerial or ground spray equipment. Treat when field counts indicate damaging insect populations are developing or present. Re-treat as necessary to maintain control.

Resistances: Make no applications of these tank mixtures closer to harvest than the longest pre-harvest interval shown for any of the products in the tank mixture. Do not allow livestock to graze in treated areas. Do not feed grass or treated forage to livestock. Workers entering the field within 48 hours after application should wear protective clothing.

HAZARDS TO CHILDREN LEARNING WRITING STATEMENTS MANS AND DOMESTIC ANIMALS

SWALLOWED • MAY BE SKIN • MAY BE INJURIOUS TO EYES AND SKIN. Do Not Get In Eyes, or Avoid Breathing Vapors and Thoroughly After Handling.

Practical Treatment: Face washing. Contains arsenic physician immediately. Wash face with soap and water. Wash hair with soap and water. Wash hair with soap and water. Wash hair with soap and water. Wash hair with soap and water.

Chemical hazards IRUSTIBLE Near Heat or Open Flame or Weld Container

Agency endangering life or limb of this product, call collect 638-4400

URAL CHEMICAL Store with Food, Feeds, or Clothing

AN 4E as a dormant or delayed application to control the following

Do aphid scale	Do scale	Do scale	Do scale	Do scale	Do scale
1/2 to 1 pint					

Apply with 1 to 2 gallons of water for dormant use in 100% of the entire tree by application to spray equipment. Use the higher dosage for severe infestations. Use of this is Agricultural Experiment Station label.

Application during the dormant or early summer to graze in

AN 4E to control root megnots on dosages indicated: 1.5 to 3.3 oz per 1000 linear

STORAGE AND DISPOSAL

Storage: Keep away from food, feedstuffs, and domestic water supplies. Handle concentrate in a ventilated area. Keep container closed.

Disposal: Do not reuse empty container for any purpose. Promptly crush or perforate and bury with wastes in a location away from water supplies. Follow official local pesticide container disposal regulations where applicable.

ATTENTION

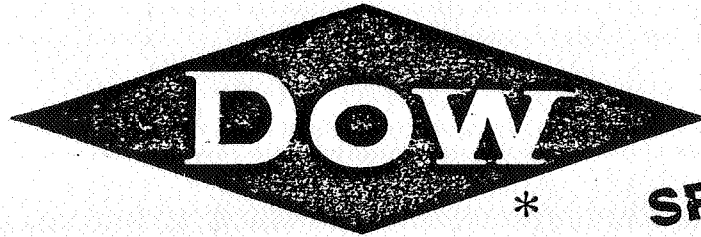
Do Not Cut or Weld Container.

NOTICE: Saller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. But neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

SUNFLOWERS: Use LORSBAN 4E for control of the following pests at the dosage indicated by application in sufficient water to ensure thorough coverage of treated plants:

Cutworms.....2 to 3 pints per acre; Grasshoppers, stem weevil, and sunflower moth1 pint per acre.

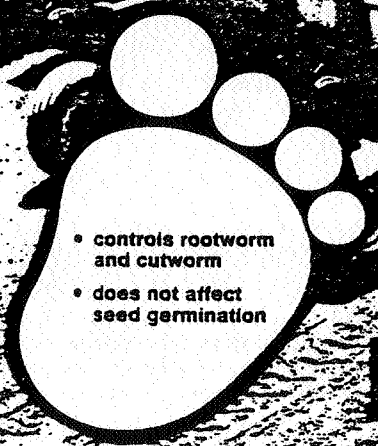
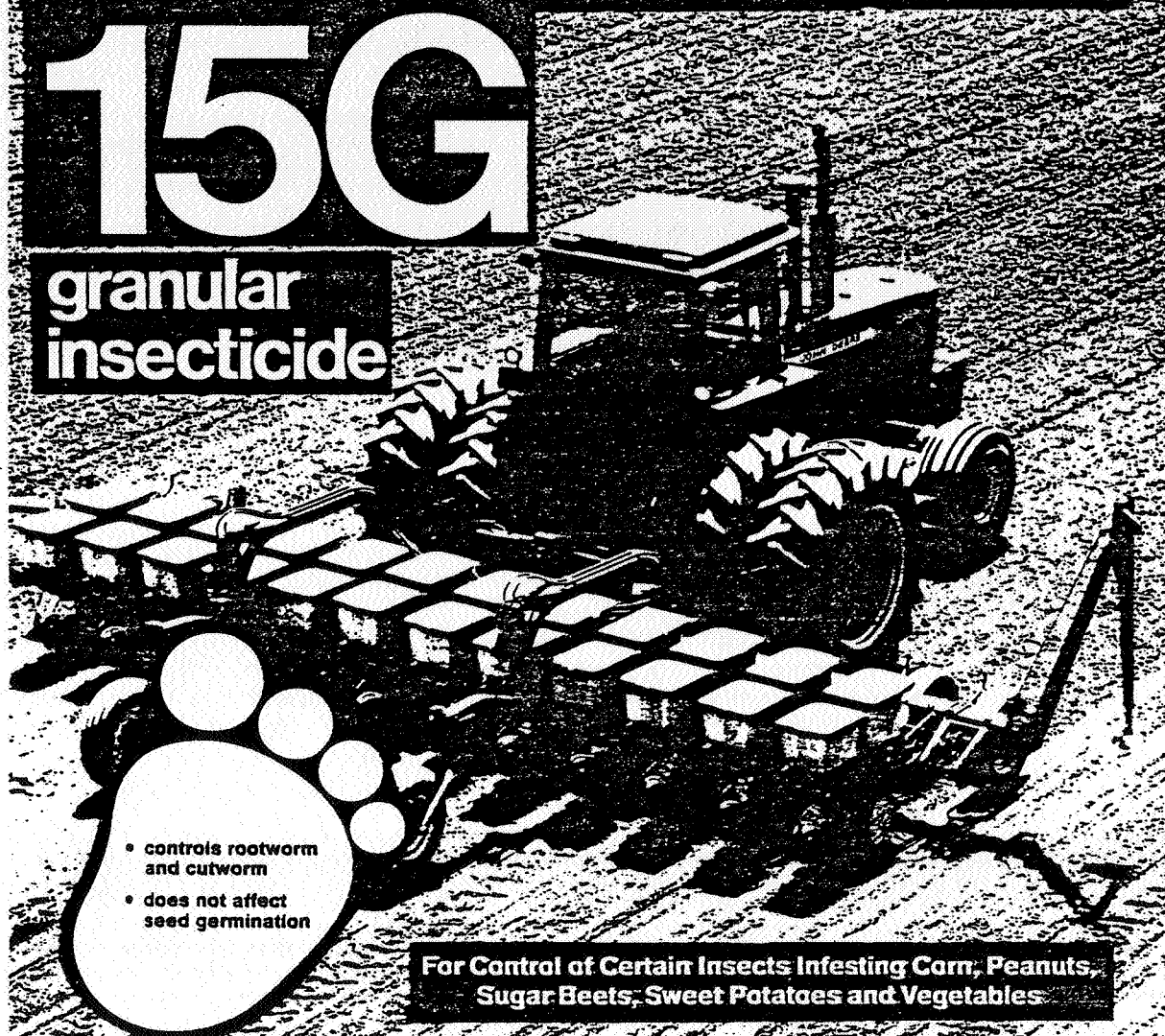
Apply as a broadcast spray using either aerial (fixed-wing or helicopter) or power-operated ground spray equipment when field counts indicate that pests are or may become a problem. For cutworm control, a second treatment may be made 7 to 10 days later, if needed. For stem weevil control, optimal treatment time is within 5 to 7 days after adult weevils begin to appear. For sunflower moth control, make first application during early 1 to 5 percent bloom stage. A second treatment may be made 7 days later, if needed.



SPECIMEN LABEL
REDUCED TO 40%

Lorsban 15G

**granular
insecticide**



- controls rootworm and cutworm
- does not affect seed germination

For Control of Certain Insects Infesting Corn, Peanuts, Sugar Beets, Sweet Potatoes and Vegetables

ACTIVE INGREDIENT:
Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate) 15.0%
INERT INGREDIENTS: 85.0%
E.P.A. Registration No. 466-622
E.P.A. Est. 466-Mk1

22.68 KG / 50 LB

KEEP OUT OF REACH OF CHILDREN

CAUTION

**MAY BE HARMFUL
IF SWALLOWED**

See Back Panel for Other Important Precautionary Statements

In case of an emergency endangering life or property involving this product, call collect

517-636-4400

**AGRICULTURAL
CHEMICAL**

Do Not Ship or Store with Foods, Feeds, Drugs or Clothing

Trademark of THE DOW CHEMICAL COMPANY

86-1375 PRINTED IN U.S.A. IN MAY, 1981.
REPLACES SPECIMEN LABEL 86-1375 PRINTED IN MARCH, 1981.

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PRECAUCION AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.
TRANSLATION: (TO THE USER:) If you cannot read English, do not use this product until the label has been fully explained to you.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
MAY BE HARMFUL IF SWALLOWED

Do Not Take Internally • Avoid Contact With Eyes, Skin, and Clothing • Wash Thoroughly After Handling
 Wash Contaminated Clothing Before Reuse

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.

Environmental Hazards

This product is toxic to wildlife and fish. Use with care when applying in areas frequented by wildlife or adjacent to any body of water. Keep out of lakes, streams or ponds. Treated granules exposed on soil surface may be hazardous to birds and other wildlife. Cover or incorporate granules which are spilled during loading. Incorporate granules visible on the soil surface in the turn area.

DIRECTIONS FOR USE.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Field Corn, Popcorn, Sweet Corn (Band-Treatment): Use LORSBAN 15G for control of the following pests at the dosages indicated:

Insect	Amount of LORSBAN-15G Per 1,000 Feet of Row
Northern Corn Rootworm, Southern Corn Rootworm, Western Corn Rootworm	6 to 8 ounces
Cutworms	8 ounces
Symptomyia	8 to 12 ounces
Billbugs, Lesser Cornstalk Borer, Wireworms	8 to 16 ounces

Apply LORSBAN 15G granular insecticide at planting time for control of billbugs, corn rootworms, cutworms, lesser cornstalk borer, symptomyia, and wireworms or postplant at time of cultivation for control of corn rootworms. For planting time treatment place the granules in a 6 to 7 inch wide band over the row behind the planter shoe in front of the press wheel and incorporate into the top 1 inch of soil using suitable equipment or devices. For postplant treatment apply the granules over the row and cultivate into the soil or superdrill both sides of the row and cultivate into the soil. Consult your State Agricultural Experiment Station or Extension Service specialist for proper time to treat in your area. Equivalent rates of LORSBAN-15G per acre for various row spacings are given in the accompanying table.

Amount of LORSBAN 15G Per 1000 Feet of Row	Pounds of LORSBAN 15G Required Per Acre for Various Row Spacing					
	40"	36"	36"	34"	32"	30"
6 ounces	5.0	5.25	5.5	5.75	6.0	6.5
7.5 ounces	6.25	6.5	6.9	7.2	7.5	8.1
8 ounces	6.5	7.0	7.25	7.75	8.25	8.75
12 ounces	10.0	10.5	11.0	11.5	12.0	13.0
15 ounces	12.5	13.2	13.8	14.4	15.0	16.2
18 ounces	15.0	15.6	16.2	16.8	17.4	18.9

NOTE (Billbug Control): Do not use in soils containing over 10% organic matter. (Cutworm Control): In some cases enough cutworms outside the treated band may survive to cause crop damage. If this situation occurs, it may be necessary to apply a rescue treatment to control the surviving worms. LORSBAN 4E insecticide is recommended for this purpose. Consult your State Agricultural Experiment Station or Extension Service specialist for further information concerning cutworm control in your area. (Wireworm Control): For best control, thoroughly incorporate the granules to a depth of 2 inches.

Field Corn, Popcorn, Sweet Corn (No-Till In-Furrow Treatment): Use LORSBAN 15G for control of the following pests at the dosages indicated:

Insect	Amount of LORSBAN-15G Per 1,000 Feet of Row
Cutworms, Seed-Corn Maggots, Billbugs, Wireworms	8 to 16 ounces

Apply LORSBAN 15G granular insecticide at planting time as a no-till in-furrow treatment. Direct the granules into the planter shoe with the seed or place the applicator tube directly behind the planter shoe so that the granules drop into the seed furrow and are covered with soil. Equivalent rates of LORSBAN 15G per acre for various row spacings are given in the accompanying table.

Field Corn, Popcorn, Sweet Corn (Broadcast Treatment): Use LORSBAN 15G as an aid to reduction of feeding damage by flea beetle larvae by preplant broadcast application at the rate of 13.5 pounds per acre, using equipment that will evenly distribute the granules over the treated area. After application, incorporate the granules into the soil to a depth of 4 to 6 inches using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant the crop in the usual manner as soon as possible after treatment.

Restrictions: Do not make more than one application per season.
Peanuts: Use LORSBAN 15G for control of southern corn rootworm and lesser cornstalk borer. For southern corn rootworm control, use 7.5 to 15.0 ounces of LORSBAN 15G per 1000 linear feet of row by application in a 10 to 18 inch wide band over the fruiting zone just prior to or at pegging. Incorporate the granules into the top 1 to 2 inches of soil using a suitable cultivator. For lesser cornstalk borer control, apply only to irrigated peanuts by application at the rate of 7.5 to 15 ounces of LORSBAN 15G per 1000 linear feet of row just prior to pegging. Apply the granules in a 10 to 18 inch wide band over the fruiting zone and incorporate into the top 1 to 2 inches of soil, plant size permitting. Irrigate within 24 hours after treatment using a minimum of 2 acre inches of water.

Restrictions: Do not make more than one application per season. Do not harvest within 21 days after treatment. Do not feed treated peanut forage or hay to meat or dairy animals.

Sugar Beets: Use LORSBAN 15G to control larvae of the sugarbeet root maggot and cutworms by application as a row treatment at planting time of postemergence (up to the 2 to 4 true leaf stage of the planter). Apply the granules at the rate of 6.5 to 9 ounces per 1000 feet of row (equivalent to 10 to 13.5 pounds per acre based on a 22 inch row spacing) by placing in a 5 to 7 inch wide band over the drill row (at planting) or plants (postemergence). When used at planting, the granules may be applied either ahead of the planter shoe and the seed drilled in the center of the band or behind the planter over the drill row. Incorporate the granules to a depth of 1 to 2 inches with either method. For postemergence treatment incorporate the banded granules to a depth of 1/2 inch to 1 inch using a suitable cultivator. Apply LORSBAN 15G with equipment that will provide uniform distribution of the granules.

Restrictions: Do not make more than one application per year.
Vegetables: Use LORSBAN 15G to control wireworms (Conoderus), flea beetles (Systema), and sweetpotato beetle by application as a broadcast treatment prior to planting (preplant) at a rate of 13.5 pounds per acre using equipment that will evenly distribute the granules over the treated area. After application, incorporate the granules into the soil to a depth of 4 to 6 inches using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant the crop in the usual manner as soon as possible after treatment. Do not make more than one application per season.

Broccoli, Brussels sprouts, Cabbage, Cauliflower, Rutabagas: Use 5.4 to 10.7 ounces of LORSBAN 15G per 1000 linear feet of row by placing over the seed row in a 2 to 4 inch wide band ahead of the planter shoe or in front of the press wheel to achieve shallow incorporation.

Restrictions: Do not apply more than 15 pounds of LORSBAN 15G per acre. Do not use rutabaga tops for food or feed purposes. Do not make more than one application per season.

Redishes: Use 3.3 ounces of granules per 1000 linear feet of row by application in the seed furrow with the seed at planting time.

Restrictions: Do not apply more than 18.3 pounds of LORSBAN 15G per acre. Do not make more than one application per season.

STORAGE AND DISPOSAL

Prohibitions: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Disposal: Pesticide that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.

Container Disposal: Dispose of in an incinerator or landfill approved for pesticide containers, or bury in a safe place.

General: Consult Federal, state or local disposal authorities for approved alternative disposal methods and procedures.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use; but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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GENERAL INSTRUCTIONS FOR EQUIPMENT CALIBRATION

Caution: The following chart lists suggested initial gauge settings for application of LORSBAN 15G insecticide with one hopper opening per row. Be sure to check the actual application rate under your operating conditions.

- Fill hopper.
- Attach a plastic bag to tube opening.
- Set your planter to the initial settings shown on chart.
- Measure off 1,000 row feet and drive your planter the pre-measured distance at your desired speed.

- Each bag should contain 6 to 8 ounces of granules depending on your desired rate.

NOTE:

Ounces (WT) of granules	Approx. ounces (volume)
6 oz. wt.	8 fl. oz. (1 cup)
8 oz. wt.	11 fl. oz.

- If the result is over or under the desired rate — adjust the settings and repeat the calibration.

LORSBAN 15G INSECTICIDE — CALIBRATION

Planter	Speed, mph																	
	2	3	4	5	6	7	8	9	10									
	Application Rate, oz. per 1,000 row ft.																	
	6	8	6	8	6	8	6	8	6	8								
	Gauge Setting																	
Gandy ¹	11.5	13.6	14.4	16.7	16.7	19.7	18.8	22.8	21.0	24.8	22.6	26.3	24.2	27.8	25.8	29.3	27.0	30.7
John Deere ² 7000 Max-Emerge	7	9	10	12	12	16	15	19	18	22	20	25	22	27	24	30	26	31
John Deere ² 71 Flex-Planter	1/21	1/22	1/23	1/25	1/25	1/28	1/29	2/4	2/0	2/7	2/4	2/11	2/6	2/16	2/10	2/22	2/13	2/29
Alko-Chalmers ³ 70 Series	6	8	6	8	6	8	6	8	6	8	6	8	6	8	6	8	6	8
Alko-Chalmers ³ 78 & 79 Series	1/1.8	1/2.9	1/3.4	1/5.1	1/5.0	1/7.3	1/7.0	2/0.5	1/9.0	2/2.8	2/0.3	2/6.0	2/2.7	2/9.0	2/5.0	3/2.3	2/7.5	3/5.5
Noble ¹ Inverl	4	6	6	8	8	10	11	13	12	14	13	15	14	17	15	18	16	20
Noble ¹ Road	6	7	8	10	10	12	13	16	14	19	17	22	19	25	22	27	23	30
International Harvester ⁴	1/1.8	1/2.9	1/3.4	1/5.1	1/5.0	1/7.3	1/7.0	2/0.5	1/9.0	2/2.8	2/0.3	2/6.0	2/2.7	2/9.0	2/5.0	3/2.3	2/7.5	3/5.5
Buffalo All-Flex ⁵ (Heschel Mtg.)	2 1/4	4	3	4 1/4	3 1/4	4 1/2	3 1/2	4 1/2	3 1/2	4 1/2	—	—	—	—	—	—	—	—

¹ Gauge setting

² Gauge setting with range 1 & 2 — number shown is range/match.

³ Gauge setting is constant regardless of speed

⁴ Gauge setting shown with stem gates & final settings — number shown is gate/dial

⁵ Number of turn ops. on the dial — distance in ft.

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