

US EPA ARCHIVE DOCUMENT

100601

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EEE BRANCH REVIEW

ORIGINAL: 11/28/77

AMENDED:)

DATE: IN 6/21/77 OUT 9-27-78 IN _____ OUT _____ IN _____ OUT _____

FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

236

237

FILE OR REG. NO. 3125 283

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED 6/9/77

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, D, H, F, N, R, S Nematicide

DATA ACCESSION NO(S). _____

PRODUCT MGR. NO. (21) Wilson

PRODUCT NAME(S) Nemacur 3; Nemacur 15; Nemacur 10

COMPANY NAME Chemagro

SUBMISSION PURPOSE Label Addition - Cotton and Peanuts

CHEMICAL & FORMULATION Ethyl 3- Methyl 4 (Methylthio) Phenyl

(1-Methylethyl) phosphoramidate

Nemacur 3 (3125-283)	_____	35% A.I.
Nemacur 15 (3125-236)	_____	15% A.I.
Nemacur 10 (3125-237)	_____	10% A.I.

100.0 Pesticidal Use

Nemacur 3, 15G and 10G are ~~not~~ ^{registered} Nematicides, ~~is~~ ^{control} intended to control ~~for~~ nematodes, in cotton, soybeans and peanuts. The purpose of this submission is to add claims for early season reduction of thrips infesting cotton and peanuts.

100.1 Application Methods: Rates

Nemacur 3 Emulsifiable Nematicide -- 35% A.I.
contains 3 LBS A.I. / Gallon = 1 gallon assumed 8.58 lbs

DOSAGE

RECOMMENDED APPLICATIONS

Crop	Dosage NEMACUR 3		REMARKS	A.I. / ACRE
	Band Fluid Oz. / 1,000 Ft. of Row	Broadcast Gals. / Acre		
FIELD CROPS Cotton	5.3 to 10.1 fl. oz. for any row spacing for 2 to 4.3 quarts per acre on 40 inch row!	Use only band application on cotton!	FOR BAND OR BROADCAST APPLICATION. BAND Apply specified dosages in fluid oz. per 1,000 ft. of row as a water emulsion spray in a 12 to 18 inch band over the row in front of the planter shoe. Use sufficient water and incorporate thoroughly to insure uniform distribution. Use the high rate in fields with high population of nematodes or in fields having a history of serious nematode damage. WHEN BAND APPLICATIONS ARE USED ON NARROW ROW CROPS, DO NOT USE BAND WIDTHS THAT WILL ALLOW TREATED AREAS TO OVERLAP. BROADCAST Apply as a water emulsion spray over the entire area to be treated, using sufficient water and thorough incorporation to insure uniform distribution. Use the high rate in fields with high populations of nematodes or in fields having a history of serious nematode damage. Plant crop in the usual manner. NOTE For both band and broadcast applications do not feed or graze cotton foliage, soybean vines, green peanut vines or peanut vine hay. Do not hog down treated peanut fields.	<u>A.I. / ACRE</u> Band Application 1.65 - 3.57 LBS A.I.
Peanuts	4.5 to 7.3 fl. oz. for any row spacing for 2 to 3 quarts per acre on 16-inch row!	1 to 1.7 gallons		BAND APPLICATION 1.5 - 2.48 lbs A.I. Broadcast 3 - 5 LBS A.I.
Soybeans	3 to 11 fl. oz. for any row spacing for 1.3 to 5 quarts per acre on 38-inch row!	1.3 to 2 gallons		Band Application 1 - 3.75 LBS A.I. Broadcast 3 - 9 - 6 LBS A.I.

Add the Following:

Cotton and Peanuts:

When applied according to directions on this label, NEMACUR 10% Granular will provide early season reduction of thrips infesting cotton and peanuts.

Nemacur 10 G

10% A.I.

RECOMMENDED APPLICATIONS

CROP	DOSAGE NEMACUR 10% GRANULAR		REMARKS
	BAND: OZS/ 1,000 Ft. of Row	BROADCAST: LBS./ ACRE	
FIELD CROPS Cotton	30 to 40 OZS for any row spacing or 15.1 to 20.5 pounds per acre on 40-inch rows	(USE ONLY BAND APPLICATION ON COTTON)	A.I. / ACRE BAND APPLICATION 3.3 - 4 LBS A.I. / Acre 40 INCH ROWS
PEANUTS	11 to 20 ounces for any row spacing or 15 to 20.5 pounds per acre on 36-inch rows	20 to 30 pounds	BAND APPLICATION 1.5 - 2.5 LBS A.I. / ACRE 36 INCH ROWS BROADCAST 3 to 5 LBS A.I. / ACRE
SOYBEANS	10 to 20 ounces for any row spacing or 15 to 20.5 pounds per acre on 36-inch rows	20 to 30 pounds	BAND APPLICATION 1.5 - 3 LBS A.I. / ACRE 36 INCH ROWS BROADCAST 4 - 6 LBS A.I. / ACRE
VEGETABLES CABBAGE (direct seeded and transplanted)	11 to 22 ounces for any row spacing or 15 to 20.5 pounds per acre on 36-inch rows	20 to 30 pounds	BAND APPLICATION 1.5 - 3 LBS A.I. / ACRE 36 INCH ROWS BROADCAST 4 - 6 LBS A.I. / ACRE
BRUSSELS SPROUTS (transplanted)	11 to 22 ounces for any row spacing or 15 to 20.5 pounds per acre on 36-inch rows	20 to 30 pounds	BAND APPLICATION 1.5 - 3 LBS A.I. / ACRE 36 INCH ROWS BROADCAST 4 - 6 LBS A.I. / ACRE

Crop	Pest	Dosage	REMARKS
ORNAMENTALS	Nematodes	2 1/2 to 4 1/2 LBS / 1000 sq. ft.	Distribute evenly over area to be treated. This is equivalent to 100-200 LBS NEMACUR 10 G / ACRE. Irrigated A.I. / ac
Turf grasses			Treat the area immediately after application with a minimum of 1/2 inches of water
Bermuda			
Centipede			
bluegrass			
bentgrass			

NEMACUR 15 G

15% A.I.

CROP	DOSAGE NEMACUR 15% GRANULAR		REMARKS
	BAND: OZS/ 1,000 Ft. of Row	BROADCAST: LBS./ ACRE	
FIELD CROPS Cotton	13.5 to 27 ounces for any row spacing (or 11 to 22 pounds per acre on 40-inch rows)	(USE ONLY BAND APPLICATION ON COTTON)	LBS A.I. / ACRE BAND APPLICATION 1.65 - 3.3 LBS ON 40 INCH ROWS
PEANUTS	11 to 18.7 ounces for any row spacing (or 10 to 17 pounds per acre on 36-inch rows)	20 to 33.5 pounds	BAND APPLICATION 1.5 - 2.55 LBS ON 36 INCH ROWS BROADCAST 3 - 5 LBS A.I. / ACRE
SOYBEANS	6.7 to 26.7 ounces for any row spacing (or 8 to 24 pounds per acre on 36-inch rows)	20.7 to 40 pounds	BAND APPLICATION 1.5 - 3.6 LBS ON 36 INCH ROWS BROADCAST 4.3 - 6 LBS A.I. / ACRE
VEGETABLES Cabbage (direct seeded and transplanted)	11 to 22 ounces for any row spacing (or 10 to 20 pounds per acre on 36-inch rows)	20.7 to 40 pounds	BAND APPLICATION 1.5 - 3 LBS ON 36 INCH ROWS BROADCAST 4.3 - 6 LBS A.I. / ACRE
BRUSSELS SPROUTS (transplanted)	11 to 22 ounces for any row spacing (or 10 to 20 pounds per acre on 36-inch rows)	20.7 to 40 pounds	BAND APPLICATION 1.5 - 3.6 LBS ON 36 INCH ROWS BROADCAST 4 - 6 LBS A.I. / ACRE

FOR BAND OR BROADCAST APPLICATION

BAND: Apply specified dosage in oz. per 1,000 ft. of row in front of the planter shoe as a 12 to 18 inch band for field crops or as a 12 to 15 inch band for vegetables. Incorporate the granules into the soil to a depth of 2 to 6 inches. Use the high rate in fields with high populations of nematodes or in fields having a history of serious nematode damage. WHEN BAND APPLICATIONS ARE USED ON NARROW ROW CROPS, DO NOT USE BAND WIDTHS THAT WILL ALLOW TREATED AREAS TO OVERLAP.

BROADCAST: Distribute the granules uniformly over the entire area to be treated and immediately incorporate to a depth of 2 to 6 inches by disking or tilling. Use the high rate in fields with high populations of nematodes or in fields having a history of serious nematode damage.

NOTE: For both band and broadcast applications do not feed or graze cotton foliage, soybean vines, green peanut vines or peanut vine hay. Do not hog down treated peanut fields.

RECOMMENDED APPLICATIONS—TURF GRASSES

FOR USE ONLY ON GOLF COURSES, CEMETARIES, SOO FARMS, INDUSTRIAL GROUNDS, PARKWAYS AND ROADWAYS

CROP	PEST	DOSAGE NEMACUR 15% Gran.	REMARKS
ORNAMENTALS Turf Grasses (Bermuda, Centipede, Blugrass & Bentgrass) NOTE—Do not use on residential lawns or public recreational areas other than golf courses.	Itamalodes	1 1/2 to 3 pounds per 1000 square feet	Distribute specified dosage of NEMACUR 15% Granular evenly over area to be treated. This dosage is equivalent to approximately 68 to 134 pounds of NEMACUR 15% Granules per acre. Irrigate treated area immediately using a minimum of 1/2 inch of water. Do not treat newly seeded areas. Do not apply more than twice per year. THIS IS 10-20 LBS/A.I. /ACRE

101.0 Chemical and Physical Properties

101.1. Chemical Name

Ethyl 3-methyl-4-(methyl thio) phenyl
(1-methyl ethyl) phosphoramidate

102.0 Behavior in the Environment

See related Review on Nemacur (Citrus;
3125-283, 236, 237) NOV 25, 1977, O'Brien.

103.0 Toxicological properties

See related review on Nemacur (Citrus;
3125-283-236-237) NOV. 25, 1977 O'Brien

104.0. Hazard Assessment

104.1 Discussion

For additional information see Nemacur (Citrus
3125-283, 236, 237) Registration review in files
OBrien NOV 25, 1977.

This particular submission deals with the
addition of a pest species to ~~an~~ ^{an} existing
label. The product is at present registered for
the crops use listed on the Nemacur 3, 10G and 15G

Labels

Expected Residues for the various crops and methods of Application methods are given below

Nemacur 3:

<u>Crop</u>	<u>Rate</u>	<u>Residue</u>
Cotton	<u>Band application</u> is equivalent to 11 LBS A.I. where applied maximum	Approximately 26 ppm as the band application is considered as a hot spot,
Peanuts	<u>Band application</u> is equivalent to 7.4 7 LBS A.I. where applied maximum	Approximately 170 170 ppm as the band application is considered as a hot spot
<u>Broad cast Application</u>		
Soybeans	<u>Band application</u> is equivalent to 11.2 LBS A.I. where applied maximum	110 ppm Approximately 26 ppm as the band application is considered as a hot spot
None	<u>Broad cast application</u>	132.3 ppm

Nemacur 10 G:

<u>Crop</u>	<u>Rate</u>	<u>Residue</u>
Cotton	<u>Band application</u> is equivalent to approx 11 LBS A.I. maximum.	Soil incorporation 2-6 inches = 2.2 lbs exposed on surface = 2.6 mg/ft ² or 5.5 ppm

Crop

Rate

Residue

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Cotton

Broadcast application
Does not apply

Peanuts

BAND Application is
equivalent to approx.
7.6 LBS A.I. Maximum

Soil incorporation
2-6 inches = 1.5L
exposed on surface
is equivalent to
1.5 mg/ft² or
3.3 ppm

Broadcast is 5 LBS A.I.
MAXIMUM

Soil incorporation
2-6 inches = 1.04
mg/ft² = 2.2 ppm

Soybeans

Band application is
equivalent to approx.
11 LBS A.I. MAXIMUM

Soil incorporation
2-6 inches = 2.6
mg/ft² or 5.5 ppm

Broadcast is 6 LBS A.I.
Maximum

Soil incorporation
2-6 inches = 1.1
mg/ft² = 2.0 ppm

Vegetables

Band application is
equivalent to approx.
9 LBS A.I. maximum

Soil incorporation
2-6 inches =
2 mg/ft² = 4.4
PPM

Broadcast application

is 6 LB A.I. maximum

Soil incorporation
2-6 inches =
1.1 mg/ft² = 3.0 ppm

CROP

Rate

Residue ⁶

ORNAmentALS

20 LBS A.I. ~~15~~/acre

208.2 mg/ft²

NEMACUR 15 G.

Crop

Rate

Residue

Cotton :

Band application is

SOIL INCORPORATION

equivalent to approx

2-6 inches =

11 LBS A.I. maximum

2.6 mg/ft²

or 5.5 ppm

Peanuts :

Band application is

SOIL INCORP-

equivalent to approx.

ORATION 2-6

7.6 LBS A.I. maximum

inches =

1.5 mg/ft² or

3.3 ppm.

Broadcast application is

SOIL INCORPORATION

5 LBS A.I. MAXIMUM

2-6 inches =

1.04 mg/ft² =

2.2 ppm

Soybeans :

Band application is

SOIL INCORPORATION

equivalent to approx

2-6 INCHES = 2.6

11 LBS A.I. maximum

mg/ft² or 5.5 ppm

Broadcast is 6 LBS A.I.

SOIL INCORPORATION

MAXIMUM

= 1.1 mg/ft² = 3.0 ppm

CropRate~~XXXXXXXXXX~~Residue

Vegetable

Band application is
 equivalent to approx.
 9 LBS A.I. maximum

SOIL incorporat
 2-6 = 2 mg/ft²
 = 4.4 ppm

Broadcast Application

15 G LB A.I. maximum

SOIL INCORPORAT

2-6 inches =
 1.1 mg/ft² =
 3.0 ppm

ORNAMENTALS

20 LBS A.I./ACRE

208.2 mg/ft²

104.1.1. Likelihood of Exposure to Non-Target Organisms

In addition to the following comments see Nemacur (Citrus 3125-283, 236, 237) NOV 25, 1977, O'Brien in Files.

Nemacur is an organophosphate compound which is registered for extensive crop use on cotton, peanuts, soybeans, vegetable crops and ornamentals. The use pattern, while not specific implies pre emergence treatment of fallow ground prior to planting. The crops mentioned on the

label are all major crops, ~~which~~ ~~wide~~ ~~geographic~~ range in the U.S. The lands can vary with regional locations and the previous years crop as to the amount of wild life use that could occur. In many instances waterfowl ~~and~~ ~~birds~~ have been noted to make heavy use of this type land in the springtime when seasonal ponds occur. Other avian species also use these fallow fields to look for exposed seeds or soil invertebrates. Because of the toxic nature of this chemical it could easily be ^{is} anticipated that adverse ecological effects could occur. The following table is extracted from the citrus review and adjusted to compensate for the use rates and residues possible from these applications.

The residues are based upon the maximum applica^{and} rates but also on the maximum soil incorporation rates. Therefore it is not anticipated that the comparisons given below ~~are~~ ^{are} weighted ~~in~~ ^{for} ~~or~~ ^{against} ~~Nemacur~~ ^{Nemacur}.

Nemacur 3

Species	Applic.	Exposure (mg)	Crop	mg / ANIMAL
Bobwhite	BAND	3.97	Cotton	> 0.152
	BAND	2.58	Peanuts	> 0.152
	Broadcast	1.67	Peanuts	> 11
	BAND	4.01	Soybeans	> 11
	Broadcast	2.01	Soybeans	> 11
MALLARD	ALL APPLICATIONS		cannot broadcast	> 2.016
White Footed mouse	ALL APPLICATIONS			> 0.1425
Meadow vole	"	"	"	> 0.1425 _g

NEMACUR 10 G

SPECIES	APPL.	EXPOSURE (mg)	CROP	mg/ANIMAL
BOBWHITE	BAND	2.6 mg/ft ²	cotton	> 0.152
	BAND	1.5 mg/ft ²	peanuts	> 0.152
	Broadcast	1.04 mg/ft ²	peanuts	> 0.152
	BAND	2.6 mg/ft ²	soy bean	> 0.152
	BROADCAST	1.1 mg/ft ²	"	> "
	BAND	2 mg/ft ²	vegetable	> 0.152
	BROADCAST	1.1 mg/ft ²	"	> "
	BROADCAST	208.2 mg/ft ²	ORNAMENTAL	> 0.152
MALLARD	BAND	cotton, soybean, vegetable		> 0.152
	Broadcast	ORNAMENTAL		> 0.152
WHITE footed MOUSE	}	BAND AND Broadcast all USES		> 0.1425 0.3325
MEADOW VOLE				

NEMACUR 15 G : ALL APPLICATION RATES and
 subsequent comparisons are the same
 for all the above species.

Based upon the above calculations it would appear that the continued registration of this product for the above crop uses poses a serious threat to many species of wild life. It is very likely that even with the best overall methods of soil incorporation serious adverse ecological effects could result.

It should be noted here that the section does not have at its disposal dietary bird studies that could be used to make additional assessment of hazard. In field studies that were conducted by Chemagro field mortality occurred even under conditions where soil incorporation was utilized. This reviewer feels that these field studies were conducted in such a manner that minimum hazard was associated with caged species. It is anticipated that applicators or farmers are not likely to ~~go~~ go to the expensive trouble of thoroughly incorporating Nemacur and then irrigating to further water in nemacur. It is the opinion of this reviewer that without the very ~~thorough~~ thorough incorporation and watering in, Nemacur is now, and will be causing field mortality. It is not known by the section how much nemacur is being used nation wide so the actual hazard can not be predicted. Nemacur does exceed RPAR criteria on an acute basis for birds and mammals. It is also likely that its ability to bind to soil particles

would give it an avenue for aquatic exposure. Because of the past history of pesticide applications to crops representative of cotton and the toxic nature of Nemacur to fish it could also be anticipated that aquatic damage is likely.

The Environmental Safety Section should request that the Registrant supply ~~the~~ data that would answer questions concerning nemacur's subacute effects to species exposed. When this data becomes available the Environmental Safety section should give consideration to the possibility of Nemacur being a possible RPAR candidate. This section should not proceed with any additional registrations for this product until the issues have been resolved.

104.1.2 Endangered Species Considerations

~~Based upon~~ BASED upon the highly toxic nature of Nemacur, and its ~~total~~ lack of species ~~specificity~~ specification, the registrant and continued use of Nemacur on the crops listed presents a high likelihood of exposure to endangered species nationwide. This likelihood of exposure and the

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possibility of adverse ecological effects to endangered species should prompt a general ~~label~~ restriction against any use of Nemacur in areas and at ~~times~~ times when endangered species are likely to be present in ~~geographic areas~~ these areas. This restriction might read that the application can not proceed unless first contacting the regional EPA office and local fish and wildlife agencies.

104.1.3 ADEQUACY of Toxicity DATA

See Review Nemacur (Citrus 3125-283-236-237) ~~Nov.~~ NOV. 25, 1977, O'BRIEN

104.1.4 ADDITIONAL DATA REQUIRED

See CONCLUSIONS SECTION 107.5

~~105.0~~ 105.0. Classification

This product lacks basic data upon which classification criteria are made, however it is the opinion of this reviewer that future consideration should be given to classifying the use restricted, based upon available information

107.0 Conclusions:

107.1. Environmental Fate and Toxicology

The Environmental safety section has not been supplied with a current review of either Environmental Chemistry Data or Human Toxicology data.

107.2. Classification

IT is not applicable at this time to evaluate the classification

107.3 Labeling

The Nemacur 3, 10 + 15 labels need the addition of the following statements to the environmental safety portion "Do not contaminate water by cleaning of equipment or disposal of waste"

"This pesticide is toxic to bees exposed to direct application or the residues remaining on the treated areas."

"This pesticide should not be applied in areas associated with use by endangered species of fish and wildlife. For guidance contact your Regional Office of the Environmental Protection Agency."

107.4 Data Adequacy

The following data have been found acceptable to support the continued registration of this product.

- A. The Fish Acute 96 hr LC_{50} cold water fish species. Technical grade nemacur.
- B. The Fish Acute 96 hour LC_{50} warm water fish species. Technical grade Nemacur.

107.5. Data Requests.

The following data will be required by the Environmental Safety Section to facilitate an Environmental Hazard Assessment. These data requests are to fill data gaps where previous studies have been submitted and found unacceptable, or data has not been referenced or submitted, and a need is felt to exist for the studies. These studies ~~should~~ ^{must} be supplied by the registrant prior to consideration of re registration of this product for these uses. The registrant should also be informed that the dietary studies on birds are considered to be crucial to future classification of this chemical and should be provided at the earliest possible date.

A. ~~THE~~ ^{THE} Avian Acute oral LD₅₀ for one species of waterfowl (Mallard duck, preferably) or one species of upland game bird (ring-necked pheasant or bobwhite quail). The studies submitted are not acceptable because they were not conducted using the technical grade material as is required.

B. The Dietary LC₅₀ for one species of waterfowl (Mallard Duck) and one species of upland game bird (Bob White Quail or ring-necked pheasant). This study must be conducted ~~on~~ on the technical grade material.

C. The ~~48~~ Acute 48 hour LC₅₀ for an aquatic invertebrate (Daphnia sp., preferably). Study must be conducted on the technical grade material.

D. An Avian Reproduction Study is required on Bob White Quail and Mallard Duck. This study is required for the technical grade material. Levels that should be tested will depend upon dietary LC₅₀ values for these species and residue levels ~~that~~ that will be expected under field conditions. The registrant should consult the Environmental Safety Section for guidance.

E. A ~~NO~~ MAMMAL ACUTE ~~SO~~ ON a Representative species of wild mammal will be required due to the toxic nature of the chemical, the likelihood of exposure and the possibility of exposure to endangered species.

F. Small pen simulated field studies utilizing birds and mammals will be required. These studies should be conducted under field conditions that most closely represent the use pattern, ~~and~~ rates of application and label directions. The registrant should contact the Environmental Safety Section for guidance.

G. The registrant should also be informed that the Environmental Safety Section is concerned about the impurities in Technical ~~10-mecus~~. Pending receipt of information from Environmental Chemistry, additional toxicity data may be required for the impurities and their degradates. The registrant should address this problem and the relative persistence of these impurities and their degradates.

H. The registrant should also be informed that the Environmental Safety Section is concerned about the toxic nature of their chemical as it relates to beneficial insects. The registrant should address means of identifying if exposure problems will occur. ~~The~~ ^{THE} registrant should also stay informed ~~of~~ ^{of} possible data requirements that may come into existence in the future for beneficial insects.

INFORMATION ON IMPURITIES (MANUFACTURING INFORMATION) IS NOT INCLUDED

107.7. Recommendations:

The Environmental Safety section does not feel that adding the claim, that Nemacur controls thrips to the label for the pre-existing registration on cotton, peanuts, soybeans, vegetables and ornamentals poses any additional environmental hazard. The Environmental Safety section does feel ~~that~~ however that this registration for these major crops presents a possible environmental hazard. This hazard cannot be properly identified until the registrant supplies the basic data for subacute dietary studies on wild species of birds and the acute toxicity studies for aquatic invertebrates. The registrant should be informed that these studies are essential to justify the continued registration of this product.

THOMAS F. O'BRIEN NOV 28, 1977

ENVIRONMENTAL SAFETY SECTION

EEEB RD WH 567

HTC

10G
15G This product is toxic to fish and wildlife. Keep out of lakes, streams, or ponds. Birds feeding on treated areas may be killed.

3 This product is toxic to fish, birds, and other wildlife. Keep out..... Birds feeding..... In cleaning of equipment or disposal of wastes, do not contaminate water.

AMENDED 9/27/78

100.0 Pesticidal Use

Nemacur 3, 10G, and 15G are currently registered for control of nematodes in cotton, peanuts, and other crops. The purpose of this submission is to add claims for early season reduction of thrips infesting cotton and peanuts.

100.1 Application methods / rates / directions

1. Nemacur 3

- a. Cotton: Apply in a 12-18 inch band at the rate of 5.3 - 10.7 fluid ounces (1-2 pounds a.i.) per 1000 feet of row. This is equivalent to 2.2 - 4.3 quarts per acre on 40 inch rows. Use only band application on cotton.
- b. Peanuts: Apply in a 12-18 inch band or as a broadcast. For band application apply 4.5 - 7.3 fluid ounces (.84 - 1.37 pounds a.i.) per 1000 feet of row. This is equivalent to 2 - 3.3 quarts per acre on 36 inch rows. For broadcast application, apply 1 - 1.7 gallons (3- 5.1 pounds a.i.) per acre.

NOTE: For band application apply as a water emulsion spray over the row in front of the planter shoe. For both band and broadcast, use sufficient water and thorough incorporation to insure uniform distribution.

2. Nemacur 10 G

- a. Cotton: Apply in a 12-18 inch band at a rate of 20-40 ounces (.125-.250 pounds a.i.) per 1000 feet of row. This is equivalent to 16.5 - 33 pounds (1.65 - 3.3 pounds a.i.) per acre for 40 inch rows. Use only band application for cotton.
- b. Peanuts: Apply in a 12-18 inch band or as a broadcast. For band application apply 16.5 - 28 ounces (.103 - .175 pounds a.i.) for any row spacing. This is equivalent to 15-25.5 pounds (1.5 - 2.55 pounds a.i.) per acre for 36 inch row spacing.

9/27/77

3. Nematicur 15 G (directions and pounds a.i. identical to 10 G)

a. Cotton: Apply in a band at a rate of 13.5 -27 ounces formulation per 1000 foot of row.

b. Peanuts: Apply in a band at 11 - 18.7 ounces formulation per 1000 foot of row. Or apply at a broadcast rate of 20 - 33.5 pounds formulation per acre.

NOTE: For both crops and both granular formulations, incorporate granules to a depth of 2-6 inches.

101.3 Precautionary Labeling

Nematicur 10 G and 15 G: "This product is toxic to fish and wildlife. Keep out of lakes, streams, or ponds. Birds feeding on treated areas may be killed."

Nematicur 3: "This product is toxic to fish, birds, and other wildlife. Keep out of lakes, streams, or ponds. Birds feeding on treated areas may be killed. In cleaning of equipment or disposal of wastes, do not contaminate water."

101.0 Chemical and Physical Properties

101.1 Chemical Name

Ethyl 3-methyl-4-(methylthio) phenyl (1-methylethyl) phosphoramidate.

101.2 Common Name

Nematicur

101.3 See related reviews by T.F. O'Brien, amended by through L. Turner for Nematicur on citrus (11/25/77) and non- 103 bearing fruit trees (11/29/77).

104.0 Hazard Assessment


This submission deals with the addition of a pest species to an existing label. Since there is no additional site, increased application rate, or altered application method, there will be no increase in hazard to non-target species. This reviewer does note that the residues of Nemacur from this use are quite high relative to the toxicity to non-target animals, and are likely to exceed RPAR risk criteria for acute effects.

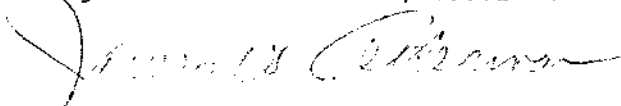
For further details on the general hazards of Nemacur, see related reviews by T.F. O'Brien, amended by L. Turner for Nemacur on citrus (11/25/77) and on non-bearing fruit trees (11/19/77).

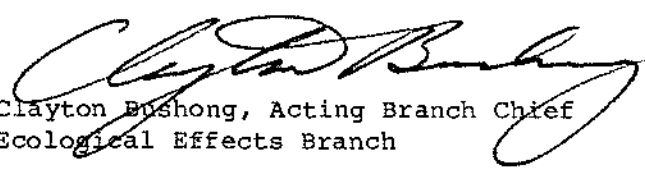
107.0 Conclusions

107.7 Recommendations

Because this submission proposes only the addition of a new species at the old site and application rate, no additional hazard is expected. It is recommended that this submission be handled in accordance with the Johnson Memo of May 12, 1977.


Larry W. Turner
September 27, 1978
Ecological Effects Branch, Section 1


James W. Akerman, Section Head
Ecological Effects Branch, Section 1


Clayton Bushong, Acting Branch Chief
Ecological Effects Branch