



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 25 1990

OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

Donald B. Carlson, PhD  
Senior Registration Specialist  
FMC Corporation  
Agricultural Chemicals Group  
2000 Market Street  
Philadelphia, PA 19103

Dear Dr. Carlson:

This letter is to accept, with comment, the draft labels you have provided to the Agency with respect to your application of May 1, 1990 to amend the registrations of Furadan 10G and 15G Insecticide/Nematicide (EPA Reg #'s 279-2712 and ~~279~~-3023, respectively). These label amendments are a part of FMC's risk reduction proposal. A Federal Register Notice announcing the Agency's intent to accept these amendments was published on October 18, 1990 and became effective on October 19, 1990 (55 FR 42266). The Agency accepts the draft labels provided the following changes are made:

1. Under FIELD CORN - FOLIAR APPLICATION; the rate of application must be expressed as 1.0 lb ai per acre. In the notation area, the reference to an application if Furadan 15G was applied at more than 8 ounces per 1,000 linear feet must be deleted.
2. Throughout the label - all references to T-band application must be changed to read: Apply in a T-band by positioning bander in front of presswheel or furrow closing wheels such that granules are deposited in a band over the open seed furrow and then covered with soil by the presswheel, closing wheels and/or other closing devices. Incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain.

These changes are as per your conversation of 9/28/90 with Karis North, Special Review Manager, Special Review and Reregistration Division. Please submit to the Agency for our

files, five copies of the final printed labeling within 10 days of receipt of this letter. If you have any further questions regarding this matter please contact Ms. North on 703-308-8036 or Dennis Edwards of my staff on 703-557-2386.

Sincerely yours,



Anne E. Lindsay, Director  
Registration Division

WHAT LABEL

3/12

Code 3669

# RESTRICTED USE PESTICIDE

Net Weight

Due To Avian Toxicity

For retail sale to and use only by certified applicators or persons under their direct supervision, and only for those uses covered by the certified applicator's certification.

# Furadan® 15 G Insecticide-Nematicide

For Agricultural or Commercial Use Only

EPA REG. NO. 279-3023

EPA Est., 279-

### ACTIVE INGREDIENT:

\*Carbofuran..... 15.0%

INERT INGREDIENTS:..... 85.0%

100.0%

\*2,3-Dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate  
U.S. Patent No. 3,474,171

## KEEP OUT OF REACH OF CHILDREN WARNING

### PRECAUTIONARY STATEMENTS Hazards to Humans (& Domestic Animals)

#### Warning

Poisonous if swallowed. May be fatal or harmful as a result of skin or eye contact or by breathing dust. Causes cholinesterase inhibition. Warning symptoms of poisoning include weakness, headache, sweating, nausea, vomiting, diarrhea, tightness in chest, blurred vision, pinpoint eye pupils, abnormal flow of saliva, abdominal cramps, and unconsciousness. Atropine sulfate is antidotal.

Wear long-sleeved clothing and protective gloves when handling. Wash hands and face before eating or smoking. Bathe at the end of the work day. Change clothing daily and wash before reuse.

#### Statement of Practical Treatment

If swallowed, drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.

If in eyes, flush with plenty of water for at least 15 minutes. Get medical attention.

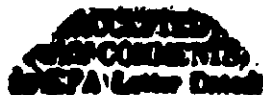
If on skin, wash immediately with soap and water. Remove contaminated clothing and wash before reuse.

#### Antidote

Note to Physician: Carbofuran is a reversible cholinesterase inhibitor. Do not use oximes such as 2-PAM. Start by giving 2 mg. atropine intramuscularly. According to clinical response, continue until signs of atropinization occur (dry mouth or dilated pupils). If in eye, instill one drop of homatropine.

For Emergency Assistance Call 716-735-3765.

See other panels for additional precautionary information.



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Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.



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Agricultural Chemical Group  
Philadelphia PA 19103

### Environmental Hazards

This pesticide is toxic to fish, birds and other wildlife. Birds feeding on treated areas may be killed. Birds killed by carbofuran pose a hazard to hawks and other birds-of-prey; bury or otherwise dispose of dead birds to prevent poisoning of other wildlife. Cover or incorporate granules in spill areas. Runoff from treated areas may be hazardous to fish in neighboring areas. Do not apply directly to water. Do not contaminate wells, wetlands or any body of water by cleaning of equipment or disposal of waste.

Notice: It is a Federal offense to use any pesticide in a manner that results in the death of a member of an endangered species.

The use of Furadan 15 G may pose a hazard to the following Federally designated endangered/threatened species known to be found in certain areas within the named locations

- Attwater's Greater Prairie Chicken**—Texas counties including: Aransas, Austin, Brazoria, Colorado, Galveston, Goliad, Harris, Refugio and Victoria
- Aleutian Canada Goose**—California counties including Colusa, Merced, Stanislaus and Sutter
- Kern Primrose Sphinx Moth**—Walker Basin of Kern County, California.

This product may not be used in areas where adverse impact on the Federally designated endangered/threatened species, noted above, is likely. Prior to making applications, the user of this product must determine that no such species are located in or immediately adjacent to the area to be treated. If the user is in doubt whether or not the above named endangered species may be affected, he should contact either the regional U.S. Fish and Wildlife Service office (Endangered Species Specialist) or personnel of the State Fish and Game office.

Carbofuran is a chemical which can travel (seep or leach) through soil and can contaminate ground water which may be used as drinking water. Carbofuran has been found in ground water as a result of agricultural use. Users are advised not to apply carbofuran where the water table (ground water) is close to the surface and where the soils are very permeable, i.e., well-drained soils such as loamy sands. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

### DIRECTIONS FOR USE

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

Do not use this product on Long Island, N.Y.

### STORAGE AND DISPOSAL

#### Pesticide Storage

Do not store in or around the home

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excessive heat. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC collect. (716) 735-3765.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

#### Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**GENERAL USE INSTRUCTIONS**

If prolonged intimate contact with corn and/or sorghum foliage will result, do not reenter treated fields within 14 days of application without wearing proper protective clothing. For all other situations, do not re-enter fields less than 24 hours following application.

Cover or incorporate granules in spill areas.

Do not plant with any crop for which carbofuran treatment is not registered for at least 10 months.

**SPECIFIC USE INSTRUCTIONS**

**FIELD CORN, POPCORN, SWEET CORN - CONVENTIONAL, MINIMUM & NO TILLAGE**

Insects Controlled	Rate of Application	Method of Application
Corn Rootworms (Northern, Southern & Western) Flea Beetles Wireworms White Grubs (aid in control) 1st generation European Corn Borer (aid in control) Armyworm* Cutworms (suppression) Lesion Nematode (Northeast and Midwest corn states including Colorado and Wyoming) Seed Corn Maggot	8 ounces per 1,000 linear feet of row	Apply at planting by directing the granules to flow into the seed furrow.  OR  Place the delivery tube behind the opening disks and in front of the furrow closure (wheels, disks or knives) so that the granules drop into the furrow and mix with the covering soil.  OR  Apply in a T-band ahead of the planter press wheel and incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain.

\* Control of armyworm for approximately 4 to 6 weeks after planting.

This treatment will reduce the losses due to Stalk Rot by reducing the incidence of insect wounds which permit entry by the Stalk Rot fungi.

**FIELD CORN, POPCORN - POST PLANT**

Insects Controlled	Rate of Application	Method of Application
Corn Rootworm (Northern and Western)	8 ounces per 1,000 linear feet of row	Apply by side dressing both sides of the row and cultivate into the soil.

**FIELD CORN - FOLIAR APPLICATION**

Insects Controlled	Rate of Application	Method of Application
Southwestern Corn Borers European Corn Borers	8 ounces per 1,000 linear feet of row	Apply by aircraft by broadcasting over the corn plants or with ground equipment by directing the granules into the corn whorls. Apply when eggs begin to hatch.
Do not make a foliar application if Furadan 15 G was applied at more than 8 ounces per 1,000 linear feet of row at planting.		
Do not make more than two foliar applications per season.		

**Corn Insecticide Applicator Setting**

This product is a dense, free flowing insecticide requiring accurate equipment calibration to apply the recommended amount per acre. Always calibrate your planter at the speed which you plan to travel during the planting operation. The following are approximate settings for guidance in calibration:

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Applicator Gauge Setting

Application Rate	6.7 pounds/acre		
Planter Speed (MPH)	4	6	8
<b>Equipment:</b>			
Allis Chalmers	3	3	3
Gandy			
901 Series	17	20	23
61 Series (at 6 RPM with 8 outlets)	-	24	-
IHC Cyclo Planter			
Gate	1.6	1.8	2.1
Dial	7	9	2
John Deere Max Emerge			
even number notches - (0-10-20-30-40)	10	14	19
odd number notches - (5-15-25-35)	8	11	13
John Deere Max Emerge II	13	17	20
John Deere			
Range	1	2	2
Notch	18	1	2
Noble			
Round opening	8	12	16
Rectangular opening	5	7	9

Corn Application Rates

When the granular application equipment is set to deliver Furadan 15 G at a rate of 8 ounces per 1,000 linear feet, the total amount applied per acre will vary depending on row spacing. Use the table below to determine your Furadan needs for each acre.

Row Spacing (inches)	40"	38"	36"	30"	28"
Furadan 15 G (lbs./A)	6.7	7.0	7.3	8.7	9.3

**COTTON**

Insects Controlled	Rate of Application	Method of Application
Thrips	8 ounces per 1,000 linear feet of row	Apply directly into the seed furrow at planting.
Do not feed cotton forage.		

**CRANBERRIES - Washington only**

Insects Controlled	Rate of Application	Method of Application
Black Vine Weevil	13.3 pounds per acre	Spread granules uniformly over the soil surface using a rotary spreader. Make one application about June 15 to 25 and repeat one month later. Incorporate granules by following each application with sprinkler irrigation.
For use only on cranberry bogs that are sprinkler irrigated and are not flooded for purposes of irrigation or harvest.		
Do not apply within 60 days of harvest.		

**CUCURBITS (CUCUMBER, MELONS, SQUASH, PUMPKINS) - Southeastern States Only**

Insects Controlled	Rate of Application	Method of Application
Nematodes (Dagger, Lesion and Root-Knot)	1 1/2 pounds per 1,000 linear feet of row	Apply in a 12 to 15 inch band and incorporate into the top 3 inches of soil.

**PEANUTS**

Insects Controlled	Rate of Application	Method of Application
Thrips Potato Leafhopper Southern Corn Rootworm (aid in control - Southeastern states only)	3.5 to 6.7 ounces per 1,000 linear feet of row	Apply directly into the seed furrow at planting.
Do not feed treated peanut forage to dairy animals or animals being finished for slaughter.		

**SORGHUM**

Insects Controlled	Rate of Application	Method of Application
Corn Leaf Aphid Greenbug Yellow Sugarcane Aphid	6 to 8 ozs. per 1,000 feet of row	Apply at planting by directing the granules to flow into the seed furrow.  OR  Place the delivery tube behind the opening disks and in front of the furrow closure (wheels, disks or knives) so that the granules drop into the furrow and mix with the covering soil.
Chinch Bug Flea Beetle Southern Corn Rootworm Lesion Nematode Seed Corn Maggot Wireworm White Grubs (aid in control) Cutworms (aid in control)	8 ounces per 1,000 linear feet of row	OR  Apply in a T-band ahead of the planter press wheel and incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain.



## Sorghum (Cont'd.)

Use only on grain sorghum or sorghum grown for forage.

Do not graze or harvest sorghum grown for forage within 75 days of application.

Where a rate range is indicated, use the higher rate when heavier pest infestations are anticipated.

## SOYBEANS

Insects Controlled	Rate of Application	Method Application
Lesion Nematode Mexican Bean Beetle (larvae)	8 ounces per 1,000 linear feet of row	<p>Apply at planting by directing the granules to flow into the seed furrow.</p> <p style="text-align: center;">OR</p> <p>Place the delivery tube behind the opening disks and in front of the furrow closure (wheels, disks or knives) so that the granules drop into the furrow and mix with the covering soil.</p> <p style="text-align: center;">OR</p> <p>Apply in a T-band ahead of the planter press wheel and incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain.</p>

## SUGAR BEET

Insects Controlled	Rate of Application	Method of Application
Sugar Beet Root Maggot	4.5 ounces per 1,000 linear feet of row	Apply granules in a "modified in-furrow" application. (Drop granules from a tube in a narrow band of 1 to 2 inches in front of the planter disks and allow some granules to fall into the seed furrow with seed).

## SUNFLOWERS (CONFECTIONERY AND OIL)

Insects Controlled	Rate of Application	Method of Application
Sunflower Stem Weevil Grasshoppers Sunflower Beetle	8 ounces per 1,000 linear feet of row	<p>Apply at planting by directing the granules to flow into the seed furrow.</p> <p>OR</p> <p>Place the delivery tube behind the opening disks and in front of the furrow closure (wheels, disks or knives) so that the granules drop into the furrow and mix with the covering soil.</p> <p>OR</p> <p>Apply in a T-band ahead of the planter press wheel and incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain.</p>

**PINE SEEDLINGS IN PINE PLANTATIONS**

<b>Insects Controlled</b>	<b>Rate of Application</b>	<b>Method of Application</b>
Pales Weevil Pitch-Eating Weevil Nantucket Pine Tip Moth Pitch Pine Tip Moth	7 grams (3/4 teaspoon) per seedling	Apply at transplanting. Distribute the granules in a 6 inch radius on the soil around each seedling. Cover granules with soil.
Do not use at transplanting if seedlings were treated with Furadan 4F slurry root dip.		

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**Dealers Should Sell in Original Packages Only.**

**Terms of Sale or Use:** On purchase of this product buyer and user agree to the following conditions:

**Warranty:** FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

**Directions and Recommendations:** Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

**Use of Product:** FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

**Damages:** Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.