

PM14

264-465

file  
1/12/94



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OCT 13 1994

Patricia L. Kwiatkowski  
Rhone-Poulenc Ag Company  
P.O. Box 12014, 2 T.W. Alexander Dr.  
Research Triangle Park, N.C. 27709

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Deviation for Respirator Selection for Mocap 10

Dear Ms. Kwiatkowski

This letter is to communicate to you a decision on the worker protection standard respirator selection for Mocap-10 (EPA Reg. No. 264-465). The Agency has reviewed the justification you provided in your March 9, 1994, submission to support the adequacy of the dust mist respirator with respect to user safety for Mocap-10.

Based on the Agency's review, the respirator requirement for "applicators and other handlers" in the Personal Protective Equipment Section may be changed from:

A respirator with either an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

to

Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

In addition move the statement "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." from its current position in the Agricultural Use Box to the "Directions for Use section before "For any requirements specific to your State or Tribe ....."

The Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.



Recycled/Recyclable  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

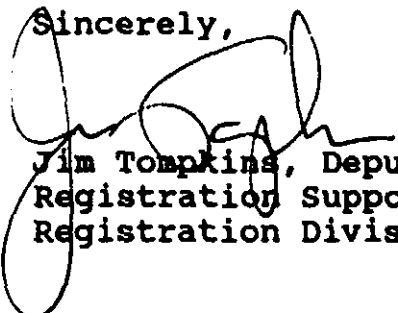
- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.

Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
 Office of Pesticide Programs (7505C)  
 U.S. Environmental Protection Agency  
 401 M Street, SW  
 Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
 Office of Pesticide Programs  
 Room 266A, Crystal Mall 2  
 1921 Jefferson Davis Highway  
 Arlington, VA 22202

Sincerely,  
  
 Jim Tompkins, Deputy Chief  
 Registration Support Branch  
 Registration Division (7505W)

Attachment

3412

ACCEPTED  
with COMMENTS  
by EPA Letter Dated

OCT 13 1994

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

# MOCAP® 10% Granular

## Nematicide Insecticide

NOT FOR DOMESTIC USE

### ACTIVE INGREDIENTS:

Ethoprop: (O-Ethyl S, S-Dipropyl Phosphorodithioate) ..... 10.0%

INERT INGREDIENTS ..... 90.0%

EPA Reg. No. 264-465

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN**

**WARNING AVISO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577

For **PRODUCT USE** Information Call 1-800-334-9745

## STATEMENT OF PRACTICAL TREATMENT

Ethoprop is an organophosphate.

**IF SWALLOWED:** Give 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. Call a physician, Poison Control Center, or hospital emergency room.

If not breathing, give mouth to mouth artificial respiration.

**IF ON SKIN :** Immediately remove all contaminated clothing, and wash skin with soap and water. Get medical attention.

**FOR EYES:** Flush with plenty of water for at least 15 minutes. Call a physician immediately in all cases of suspected poisoning.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration. Get medical attention. Persons providing first aid should prevent contamination of themselves.

### NOTE TO PHYSICIAN

This product is a cholinesterase inhibitor. Severe symptoms and signs include diarrhea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary edema, cyanosis, loss of sphincter control, convulsions, and coma. Support respiration as needed. Measures should include removal of secretions, maintenance of a patent airway, and if necessary, artificial ventilation.

If cyanosis is absent, give ATROPINE 2-4 mg intravenously (0.05 mg/kg for children). Repeat atropine at 5-10 minute intervals until atropinization occurs (dry, flushed skin, tachycardia, pupillary dilatation), and maintain for 48 hours. If cyanotic, give initial atropine intramuscularly and start measures to improve ventilation.

Start 2-PAM (PROTOPAM, Ayerst) at the same time. Give 1-2 grams PROTOPAM (20-40 mg/kg for children) in 100cc saline over 15-30 minutes. If pulmonary edema is present, give intravenously slowly as a 5% solution in water over a period of at least 5 minutes. A second dose may given after one hour if muscle weakness persists. Additional doses may be given cautiously for persistent muscle weakness. May be given by intramuscular or subcutaneous routes if intravenous administration is not feasible.

In case of skin contact, wash patient with soap and water followed by wash with 95% ethyl alcohol. Keep patient under constant observation for 24-36 hours. Symptoms may persist for one month.

The use of theophylline, morphine, barbiturates, phenothiazines, reserpine, and succinyl choline is contraindicated.

## PRECAUTIONARY STATEMENTS

### HAZARD TO HUMANS AND DOMESTIC ANIMALS

#### WARNING

May be fatal if swallowed, inhaled or absorbed through skin. Rapidly absorbed through skin. Do not breathe fumes or dust. Do not contaminate feed or food.

**SYMPTOMS OF POISONING:** Nausea, vomiting, abdominal cramps, diarrhea, excessive salivation, headache, dizziness, weakness, blurring or dimness of vision, excessive tearing, loss of muscular coordination, slurring of speech, twitching of muscles (especially of tongue and eyelids), mental confusion, disorientation, drowsiness, difficulty in breathing (chest tightness), runny nose.

#### PHYSICAL AND CHEMICAL HAZARDS

Do not store in or around the home.

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## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, chemical-resistant apron when cleaning equipment, mixing, or loading and dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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

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 Recommendations

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

Remove clothing immediately if pesticide gets inside. Then wash body thoroughly and put on clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms (fish and invertebrates), and wildlife. Birds feeding in treated areas may be killed. 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. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Cover, incorporate or clean up granules that are spilled during loading or are visible on soil surface in turn areas. Do not contaminate water when disposing of equipment wash water.

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.  
Read entire label before using this product.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

When treating agricultural crops, granules lying on the soil surface in turn areas at row ends must be incorporated to remove possible hazard to birds and other wildlife.

Do not apply in Long Island, New York.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and expectations pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

The 48 hour REI is increased to 72 hours in outdoor areas where average rainfall is less than 25 inches a year.

**EXCEPTION:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks and chemical-resistant headgear for overhead exposure.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not apply this product in a way that will contact workers or other persons either directly or through drift.

Do not allow unprotected humans or animals into treated areas until grass and soil surface have dried following incorporation with water.

### STORAGE AND DISPOSAL

#### STORAGE

Do not store in or around the home. Do not contaminate water, food, or feed by storage or disposal.

#### PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide granules, 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.

### COMMERCIAL TURFGRASS (Such As: Golf Courses and Sod Farms)

NOT FOR USE ON DOMESTIC TURFGRASS

### GENERAL CAUTIONS AND RESTRICTIONS

#### General Precautions

Avoid contact with granules or breathing dust. Use appropriate equipment during application and handling. Do not apply with equipment carried on the chest or applicators which are likely to grind the granules or scatter granules outside the area intended for treatment.

#### Incorporation Information

MOCAP® brand 10% Granular Nematicide-Insecticide must be incorporated immediately after application with at least 0.1 inch of rainfall or irrigation. Failure to incorporate with water may result in a hazard to animals, poor pest control, injury to turfgrass, and longer persistence of mercaptan odor.

The unpleasant odor associated with MOCAP® brand 10% Granular Nematicide-Insecticide is due to mercaptan, an impurity and breakdown product of ethoprop, the active ingredient. At the extremely low concentrations present following application of MOCAP® brand 10% Granular Nematicide-Insecticide, the odor may be offensive to some persons.

#### General Information

When used in accordance with label directions MOCAP® brand 10% Granular Nematicide-Insecticide will provide control of certain insects and nematodes in turfgrass. MOCAP® brand 10% Granular Nematicide-Insecticide must be incorporated with rainfall or irrigation immediately after application. Residual activity may vary with rate, environmental conditions, and pest being controlled.

The pesticidal activity of MOCAP® brand 10% Granular Nematicide-Insecticide is not affected by normal applications of fertilizers or other pesticides. Its effectiveness may be reduced if applied with highly alkaline materials.

#### Turfgrass Response Information

Avoid application of MOCAP® brand 10% Granular Nematicide-Insecticide to newly seeded areas until grass is well established. Overseeding treated areas soon after application of MOCAP® brand 10% Granular Nematicide-Insecticide may cause injury to young grass seedlings.

To prevent turfgrass injury avoid application to wet foliage. Exceeding recommended rates or overlapping swath widths may result in turfgrass injury.

Do not apply rates greater than 2.3 pounds of MOCAP® brand 10% Granular Nematicide-Insecticide per 1000 square feet of turf (100 lbs/A) to greens, tees, or other turfgrass cut to height of less than 0.375 inch. **Bentgrass and ryegrass are more sensitive to ethoprop than other turfgrass species. Phytotoxicity is likely to occur when using ethoprop on these grass species; however, the turf will normally outgrow this injury. If the risk of injury is unacceptable to not use this product.**

Under certain conditions Chinese Elm has shown sensitivity to ethoprop. When Chinese Elm are present in the landscape do not apply MOCAP® brand 10% Granular Nematicide-Insecticide within the dripline to prevent potential injury.

### APPLICATION PROCEDURES

Application may be made using standard drop spreaders or broadcast spreaders. Calibrate and adjust equipment prior to application to insure proper rate and accurate placement.

Retreatment of new pest infestations with MOCAP® brand 10% Granular Nematicide-Insecticide is allowed as necessary. However, do not apply more than 400 pounds per acre per year (40.0 lbs ai/A/year) in any combination of treatments. Do not exceed the maximum labeled rate of 200 pounds per acre (4.6 lbs/1000 sq ft or 20.0 lbs ai/A) at any single application.

BEST AVAILABLE COPY

**FOR TURFGRASS INSECT CONTROL**

To control White Grubs (such as Japanese beetle, Chafer beetle, and *Phyllophaga spp.* larvae), Black Turfgrass Ataenius adults and larvae, Chinch bugs, Cutworms, Bluegrass Billbug adults and larvae, and Sod Webworm larvae; apply 1.15 pounds of MOCAP® brand 10% Granular Nematicide-Insecticide per 1000 square feet of turf (50 lbs/A).

For Mole Crickets control apply 1.7 to 2.3 pounds of MOCAP® brand 10% Granular Nematicide-Insecticide per 1000 square feet of turf (75 to 100 lbs/A). Use higher rate for heavy infestations and older insects.

**FOR TURFGRASS NEMATODE CONTROL**

MOCAP® brand 10% Granular Nematicide-Insecticide will provide control of the following species of turfgrass nematodes: Lesion, Pin, Ring, Root-Knot, Spiral, Sting, Stubby Root, and Stunt. Suppression of Lance nematodes can be achieved with recommended rates.

Use 4.6 pounds of MOCAP® brand 10% Granular Nematicide-Insecticide per 1000 square feet (200 pounds per acre) of established turf. Apply uniformly with a fertilizer spreader or other suitable equipment. Severe infestations may require retreatment after six months.

Do not apply more than 400 pounds of MOCAP® brand 10% Granular Nematicide-Insecticide per acre per year (40.0 lb ai/A/year) in any combination of insect or nematode control treatments.

Do not cut sod or handle cut sod which has been treated for a period of 21 days after treatment.

**AGRICULTURAL CROPS**

**INCORPORATION INFORMATION FOR AGRICULTURAL CROP USES**

MOCAP® 10% Granular Nematicide-Insecticide can be incorporated with a rotary tiller, rotary hoe, spring-tooth harrow, by double-discing or with other equipment for mixing the chemical with the soil to the depth recommended. Follow any specific incorporating directions given under the crop heading.

If moisture is applied immediately after application to carry the treatment into the soil, only shallow incorporation (1/4 to 1/2 inch) with mechanical equipment such as drag chains is required.

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## NEMATODES CONTROLLED/SUPPRESSED

	Bananas & Plantain	Cabbage	Field corn & Sweet corn	Cucumbers	Peanuts (planting)	Peanuts (pegging)	White (Irish) Potato	Sweet Potato	Snap beans & Lima beans	Sugarcane	Tobacco
<b>BURROWING NEMATODES</b>											
(Radopholus similis)	C										
<b>DAGGER NEMATODES</b>											
(Xiphinema spp.)			C								
<b>CYST NEMATODES</b>											
(Heterodera glycines)											
(Heterodera cruciferae)		C									
(Heterodera schactli)		C									
<b>LESION NEMATODES</b>											
(Pratylenchus spp.)	C	C	C	C	C	C	C		C	C	C
<b>ROOT-KNOT NEMATODES</b>											
(Meloidogyne spp.)	C									C	
(Meloidogyne hapla)		C	C	C	C	C	C	C	C		C
(Meloidogyne incognita)		C	C	C			C	C	C		C
(Meloidogyne arenaria)					C	C					
(Meloidogyne javanica)				C							
(Meloidogyne chitwoodi)							S				
<b>LANCE NEMATODES</b>											
(Hoplolaimus spp.)		S	C	S					S		
(Hoplolaimus tylenchiformis)				C							
(Hoplolaimus columbus)											
<b>SPIRAL NEMATODES</b>											
(Helicotylenchus spp.)	C		C	C			C	C	C		
(Rotylenchus spp.)			C								
<b>STING NEMATODES</b>											
(Belonolaimus spp.)			C		C	C					
(Belonolaimus longicaudatus)		C		C			C		C		
<b>RING NEMATODES</b>											
(Criconemella spp.)				C	C	C	C			C	
(Criconemella ornata)			C						C		
<b>RENIFORM NEMATODES</b>											
(Rotylenchulus reniformis)								C			
<b>STUNT NEMATODES</b>											
(Tylenchorhynchus spp.)			C	C	C	C	C	C			C
(Tylenchorhynchus claytoni)									C		
(Tylenchorhynchus martini)										C	
<b>STUBBY-ROOT NEMATODES</b>											
(Paratrichodorus spp.)			C		C	C	C	C			
(Trichodorus christiei)		C		C						C	

C.....Control  
S.....Suppression

**INSECTS CONTROLLED/SUPPRESSED**

	Bananas & Plantain	Field corn & Sweet corn	Peanuts (pegging)	White (Irish) Potato	Sweet Potato	Sugarcane	Tobacco
<b>CORN ROOT WORM</b>							
( <i>Diabrotica virgifera virgifera</i> )		C					
( <i>Diabrotica longicornis barberi</i> )		C					
( <i>Diabrotica undecimpunctata howardi</i> )		C	C				
<b>WIREWORMS</b>							
( <i>Conoderus</i> spp.)							C
( <i>Conoderus vespertinus</i> )		C			C		
( <i>Conoderus falli</i> )		C			C		
( <i>Melanotus</i> spp.)		C			C		
( <i>Malanotus communis</i> )				C		C	
( <i>Limonius dubitan</i> )		C					
( <i>Limonius canus</i> )				C			
( <i>Limonius californicus</i> )				C			
( <i>Aeolus mellius</i> )		C					
( <i>Ctenicera</i> spp.)		C					
( <i>Ctenicera pruinina</i> )		C		C			
( <i>Eleodes</i> spp.)				C			
<b>BLACK CUTWORM</b>							
( <i>Agrotis ipsilon</i> )		C*					
<b>SANDHILL CUTWORM</b>							
( <i>Euxoa detersa</i> )		C*					
<b>WHITE GRUBS</b>							
( <i>Phyllophaga crinita</i> )		S					
( <i>Phyllophaga ephillida</i> )		S			C		
<b>BANDED CUCUMBER BEETLE</b>							
( <i>Diabrotica balteata</i> )					C		
<b>FLEA BEETLE LARVAE</b>							
( <i>Chaetocnema confinis</i> )					C		
( <i>Systema blanda</i> )					C		
<b>LESSER CORNSTALK BORER</b>							
( <i>Elasmopalpus lignosellus</i> )			S				
<b>BANANA ROOT BORER</b>							
( <i>Cosmopolites sordidus</i> )	C						

C-----Control  
S-----Suppression

\*NOTE: Under heavy infestations of cutworms, enough cutworms may survive to cause some crop damage. If this occurs, it may be necessary to apply a rescue treatment with another registered pesticide to control the surviving worm.

**BANANA AND PLANTAIN**

**FOR NEMATODE AND BANANA ROOT BORER (*Cosmopolites sordidus*) CONTROL**

Apply 60 grams of MOCAP® 10% Granular Nematicide-Insecticide in a radius of 3/4 meter around each producing plant or 2 ounces of MOCAP® 10% Granular in a radius of 30 inches. Before application, remove ground litter from area to be treated, and apply granules evenly. For best results, apply just before irrigation or a rainy period. If application is made during a dry period, mix granules into the top inch of soil with a rake. Repeat application in 6 months.



**BEAN (SNAP AND LIMA)**

**FOR NEMATODE AND GARDEN SYMPHYLAN (Scutigerella Immaculata) CONTROL**

**Row Treatment:** Apply 20 to 30 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 1.4 to 2 pounds per 1,000 linear feet of row in band 12 to 15 inches wide on the row at-planting. Mix with the top 2 to 4 inches of soil. Use the higher rates in fields where nematode infestations have been especially severe. Do not use as a seed furrow treatment or allow granules to contact the seed.

**FOR NEMATODE AND GARDEN SYMPHYLAN (Scutigerella Immaculata) CONTROL**

**Broadcast Treatment:** Apply 60 to 80 pounds per acre from 3 days before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application. Use the higher rates in fields where nematode infestations have been especially severe.

**NOTE:** Beans grown in treated soil may remain green longer than other beans and mature 1 to 2 weeks later.

**CABBAGE**

**FOR NEMATODE AND GARDEN SYMPHYLAN (Scutigerella Immaculata) CONTROL**

**Row Treatment:** Apply 20 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 1.4 pounds per 1,000 linear feet of row in a band 15 inches wide on the row at-planting. Do not use as a seed furrow treatment or allow granules to contact the seed.

**FOR NEMATODE AND GARDEN SYMPHYLAN (Scutigerella Immaculata) CONTROL**

**Broadcast Treatment:** Apply 50 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre from 1 week before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application.

**CORN (FIELD AND SWEET)**

**FOR CONTROL OF CORN ROOTWORMS, WIREWORMS, CUTWORMS, GARDEN SYMPHYLAN (Scutigerella Immaculata), NEMATODES AND SUPPRESSION OF WHITE GRUBS:**

**Row Treatment:** Use 12 ounces of MOCAP® 10% Granular Nematicide-Insecticide per 1,000 feet of row. Rate per acre depends on row spacing as shown below:

Row Spacing	40	38	36	30	20
	Inches	Inches	Inches	Inches	Inches
<b>Lbs. Per Acre</b>	10	10.5	11.1	13.3	20

Apply the granules in a 6 to 7 inch band on the row over a closed seed furrow at-planting. Mix the granules with the top 1/2 inch of soil with drag chains, spring-tooth incorporators, or similar equipment.

**FOR COMMONLY USED APPLICATORS, SEE CALIBRATIONS CHART BELOW**

Suggested gauge settings for 12 ounces per 1,000 feet of row. (Do not change with row width). Be sure to calibrate your applicator under your operating conditions.

**FOR APPLICATION RATE OF 12 OUNCES/1000 FEET OF ROW**

Brand Of Applicator	SPEED IN MILES PER HOUR								
	2	3	4	5	6	7	8	9	10
Allis Chalmers	At all Speeds: GA9 = 11.35 Ounces . . . GA10 = 12.7 Ounces								
Gandy	19.1	23.5	26.7	29.5	32.1	34.5	36.6	38.7	40.8
International Harvester*	1/8.0	2/2.7	2/8.5	3/4.0	3/8.7	4/5.0	5/1.3	5/6.0	6/1.5
International Harvester (Cyclo)	1/5.7	1/9.3	2/4.7	3/0.5	3/5.1	4/0.6	4/5.8	5/1.5	5/7.0
John Deere**	1/29	2/6	2/13	2/19	2/27	3/1	3/6	3/11	3/15
John Deere (Max. Emerge.)	13	19	24	29	32	33	35	36	37
Noble	13	19	24	28	31	34	36	38	39
Noble (new)	9	11	14	17	20	22	25	27	29

\*1/2.0 means Gate 1. Dial 8.0

\*\*1/29 means Range 1. Notch 29

**FOR CORN ROOTWORM CONTROL**

**Row Treatment:** Use at the rates shown above for at-planting application. Apply at cultivation after plant emergence until layby. On small corn, apply in a 6 to 7 inch band over the row. On taller corn, apply in bands 3 to 4 inches wide on each side of the corn, directing the granules toward the base of the plants. Cover the granules with soil by making application immediately ahead of cultivation equipment.

**FOR CUTWORM CONTROL**

**Broadcast Treatment:** Apply 30 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre. Apply 3 days before planting to at-planting time. Mix with the top 2 inches of soil right after application.

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**FOR NEMATODE CONTROL**

**Row Treatment:** Apply 1 1/8 to 1 1/2 pound of MOCAP® 10% Granular Nematicide-Insecticide per 1000 feet of row in a band 12 to 15 inches wide on the row at-planting. Mix treatment with the top 2 to 4 inches of soil right after application. Rate per acre depends on row spacing as shown below:

Row Spacing	40 Inches	38 Inches	36 Inches	30 Inches	20 Inches
Lbs. Per Acre	15-20	15.5-21	16.3-22.2	19.6-26.6	30-40

**FOR NEMATODE CONTROL**

**Broadcast Treatment:** Apply 60 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre from 3 days before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application.

The treatments for nematode control will also control rootworms, wireworms, cutworms, garden symphylan (*Scutigereilla immaculata*) and suppress white grubs.

**CUCUMBER**

**FOR NEMATODE CONTROL**

**Row Treatment:** Apply 20 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (7- foot row spacing) or 3.2 pounds per 1000 linear feet of row in a band 12 to 15 inches wide on the row at or just before planting. Prepare bed and knock off top to provide a level area for treatment. Mix with the top 2 to 4 inches of soil right after application. Do not use as a seed furrow treatment or allow granules to contact the seed.

**PEANUT**

**FOR NEMATODE CONTROL**

**Row Treatment:** Use 20 to 40 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36-inch row spacing) or 1.4 to 2.8 pounds per 1000 linear feet of row. Apply in a band 12 inches wide on the row at planting and mix with the top 2 to 4 inches of soil. Use the higher rates of MOCAP® 10% Granular for control of peanut root-knot nematode (*M. arenaria*), and in fields where nematode infestations have been especially severe. Do not use as a seed furrow treatment or allow granules to contact the seed.

**Broadcast Treatment:** Apply 40 to 60 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre. Make application from 1 week before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application. Use the higher rates of MOCAP® 10% Granular for control of peanut root-knot nematode (*M. arenaria*), and in fields where nematode infestations have been especially severe.

**FOR NEMATODE AND CORN ROOTWORM CONTROL AND SUPPRESSION OF LESSER CORNSTALK BORER AND WHITE MOLD (*Sclerotium rolfsii*)**

**Row Treatment:** Apply 30 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 2.1 pounds per 1000 linear feet of row in a band 15 to 18 inches wide on the row at pegging.

**FOR CORN ROOTWORM CONTROL**

**Row Treatment:** Apply 25 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 1.7 pounds per 1000 linear feet of row in a band 18 inches wide on the row at pegging.

**NOTE:** Pegging treatment should be incorporated lightly into the soil.

**POTATOES**

**FOR CONTROL OF WIREWORMS AND GARDEN SYMPHYLAN (*Scutigereilla immaculata*)**

**Row Treatment:** Apply 30 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 2.1 pounds per 1000 linear feet of row in a band 12 inches wide on the row at-planting. Mix with the top 2 to 4 inches of soil.

The following broadcast treatment is recommended for fields where wireworm injury has been (or is suspected to be) especially severe (i.e., potatoes planted following sod, pasture or new ground).

**FOR CONTROL OF WIREWORMS AND GARDEN SYMPHYLAN (*Scutigereilla immaculata*)**

**Broadcast Treatment:** Apply 40 to 60 pounds of MOCAP® 10% Granular Nematicide-Insecticide anytime from 2 weeks before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application.

**FOR CONTROL OF GARDEN SYMPHYLAN (*Scutigereilla immaculata*) AND LESION, SPIRAL, STING, RING, STUNT, AND STUBBY-ROOT NEMATODES AND SUPPRESSION OF NORTHERN ROOT-KNOT AND SOUTHERN ROOT-KNOT NEMATODES**

**Row Treatment:** Apply 30 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (36 inch row spacing) or 2.1 pounds per 1000 linear feet of row in a band 12 inches wide on the row at-planting. Mix with the top 2 to 4 inches of soil.

**FOR CONTROL OF GARDEN SYMPHYLAN (*Scutigereilla immaculata*) AND NORTHERN ROOT-KNOT, SOUTHERN ROOT-KNOT, LESION, SPIRAL, STING, RING, STUNT, NEMATODES, AND SUPPRESSION OF COLUMBIA ROOT-KNOT NEMATODE**

**Broadcast Treatment:** Apply 60 to 120 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre. Apply by ground or aerial application as close to planting as possible, but no earlier than 2 weeks before planting, or apply before potato emergence. Mix with the top 2 to 4 inches of soil right after application if applied before planting. If applied after planting, apply 1/4 to 1/2 inch of water to incorporate in soil. Uniformity of application is important for best results.

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**NOTE:** For best suppression of Columbia Root-knot Nematodes, it is recommended that MOCAP® 10% Granular be applied following fall or spring application of a registered fumigant nematicide. Do not exceed a maximum of 12 lbs. active ingredient per acre per season on potatoes.

**SUGARCANE**

**FOR NEMATODE AND WIREWORM CONTROL**

**Furrow Treatment:** Apply 20 to 40 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (6 foot row spacing) or 2 3/4 to 5 1/2 pounds per 1,000 linear feet of row at-planting. Apply evenly in a band 12 to 15 inches wide, centered over the seed pieces in the opened furrow immediately before closing. Mix with the soil with a disc hiller or other suitable equipment as the cane is covered. Use the higher rates in fields where nematode and/or wireworm infestations have been especially severe.

**SWEET POTATO**

**FOR NEMATODE, WIREWORM, WHITE GRUB, BANDED CUCUMBER BEETLE AND FLEA BEETLE LARVAE (Palestriped and Sweet Potato Flea Beetle) CONTROL**

**Row Treatment:** Use 30 to 40 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre or 2.4 to 3.2 pounds per 1,000 linear feet of row (minimum 42 inch row spacing). Apply in a band 12 to 15 inches wide on the row 2 to 3 weeks before planting. Mix with the top 2 to 4 inches of soil right after application. Use the higher rates in fields where nematode and/or insect infestations have been especially severe.

Good results have been obtained by opening the row, applying MOCAP® 10% Granular in a 12 to 15 inch band on the row, bedding over and dragging.

**FOR NEMATODE, WIREWORM, WHITE GRUB, BANDED CUCUMBER BEETLE AND FLEA BEETLE LARVAE (Palestriped and Sweet Potato Flea Beetle) CONTROL**

**Broadcast Treatment:** Apply 60 to 80 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre 2 to 3 weeks before planting. Mix with the top 2 to 4 inches of soil right after application. Use double gang disc harrow or other equipment which will do a good job of mixing the MOCAP® 10% Granular with the soil. Use the higher rates in fields where nematode and/or insect infestations have been especially severe.

**TOBACCO**

**FOR NEMATODE AND WIREWORM CONTROL**

**Row Treatment:** Use 60 to 120 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre (42 inch row spacing) or 4.8 to 9.6 pounds per 1,000 linear feet of row. Apply after fertilizer has been listed or bedded in a band 18 to 24 inches wide on the row from 1 week before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application.

Use the higher rates in fields in where nematode injury to tobacco has been especially severe, or where soil is sandy.

**FOR NEMATODE AND WIREWORM CONTROL**

**Broadcast Treatment:** Apply 60 to 120 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre from 1 week before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application. Use a double gang disc harrow or other cultivating equipment that will do a good job of mixing MOCAP® 10% Granular with the soil. After mixing, apply fertilizer and, for best results, shape a wide bed with a tractor equipped with 4 disc hillers and wide sweeps for running out the middles. Be sure that only the treated soil (top 2 to 4 inches) is used to make beds.

Use the higher rates in fields where nematode injury to tobacco has been especially severe, or where the soil is sandy.

**FOR WIREWORM CONTROL**

**Broadcast Treatment:** Apply 20 pounds of MOCAP® 10% Granular Nematicide-Insecticide per acre from 2 weeks before planting to at-planting time. Mix with the top 2 to 4 inches of soil right after application. Use a disc harrow or other cultivating equipment that will do a good job of mixing MOCAP® 10% Granular with the soil.

Rhône-Poulenc does not recommend the use of MOCAP® on tobacco in Florida.

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## LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE.

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