

Reg # 241-233

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Mr. Zareen Ahmed
American Cyanamid Company
Agricultural Research Division
P. O. Box 400
Princeton, NJ 08543-0400

Dear Mr. Ahmed:

Subject: Cygon 400 Systemic Insecticide-Miticide
EPA Registration No. 241-233
Your Submission Dated June 30, 1993 in Response to the
Agency Letter of February 25 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable provided that the following changes are made to the label:

1. In accordance with the March 1983 "DIMETHOATE Pesticide Registration Standard (035001)" and PR Notice 93-3 the first paragraph of the ENVIRONMENTAL HAZARDS Section must be rewritten so that it reads:

"This pesticide is toxic to wildlife and aquatic invertebrates. 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. Do not contaminate water by cleaning equipment or disposal of wastes."

2. In accordance with PR Notice 82-1 under the directions for use for tank mixing the following statements must be added:

"Tank mixing must be done in accordance with the more (most) restrictive of label limitations and precautions for all products to be mixed. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing."

3. Under the DIRECTIONS FOR APPLICATION, Field Corn, remove the statement "if bees are actively foraging in the treated area" so

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CYANAMID AGRICENTER™
CYGON® 400
systemic insecticide-miticide

Active Ingredient:

Dimethoate (0,0-dimethyl S-[N-(methylcarbamoyl)methyl]
phosphorodithioate).....43.5%

Inert Ingredients.....55.5%

Total.....100.0%

(1 Gallon contains 4.0 pounds of Dimethoate)

EPA Reg. No. 241-233-ZA

EPA Est. No. 5905-AR-01

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

FIRST AID

If in eyes: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

If on skin: Wash immediately with plenty of soap and water. Get medical attention.

If swallowed: Get medical attention.

NOTE TO PHYSICIANS: This product may cause cholinesterase inhibition. Atropine is antidotal. Pralidoxime chloride (2-PAM; PROTOPAM chloride) may be effective as an adjunct to atropine. Use according to label directions.

See Next Page For Additional Precautionary Statements.

In case of an emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3100.

Net Contents: 2.5 Gallons

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® Registered Trademark of American Cyanamid Company

ACCEPTED
with COMMENTS
in EPA Letter Dated:

JUL 19 1993

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

241-233

6/93

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

WARNING

Harmful or fatal if swallowed.
Vapor harmful - concentrated material
Causes eye irritation.
Avoid breathing vapor or spray mist.
Use only with adequate ventilation.
Keep container closed.
Avoid contact with skin and eyes.
Wash thoroughly after handling.
Do not contaminate food or feed products.

Required Clothing and Equipment for Application:

All applicators, including homeowners, flaggers and all personnel involved with the mixing, loading, and transferring operations must wear the protective clothing and equipment enumerated below. Pilots are exempt from this requirement. The protective clothing and equipment to be worn is as follows:

- a. Impermeable gloves (for example, rubber or plastic covered reinforced gloves.)
- b. Boots or boot covers.
- c. Long-sleeved shirt and long pants.
- d. Wide-brimmed hat.
- e. Respirators must be worn by flaggers and mixer/loaders.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and aquatic invertebrates. 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. Do not contaminate water when disposing of equipment washwaters.

This pesticide 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. Protective information may be obtained from your Agricultural Extension Service.

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PHYSICAL/CHEMICAL HAZARDS

Combustible liquid and vapor.

Do not use, pour, spill or store near heat or open flame.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Do not apply this product through any type of irrigation system.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

STORAGE AND DISPOSAL

DO NOT STORE BELOW 45°F

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

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL WORKER PROTECTION

Do not enter or allow entry into treated areas without protective clothing until sprays have dried. Do not enter treated Citrus for 4 days without protective clothing.

Protective clothing means, at least, a hat or other suitable head covering, a long sleeved shirt and long legged trousers or a coverall type garments (all of closely woven fabric covering the body, including the arms and legs), shoes and socks.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure. An example of such information is given under written warnings. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

WARNING

Area treated with CYGON® 400 Spray (insert date). Do not enter without appropriate protective clothing until sprays have dried (insert State Department of Agriculture's re-entry interval, if more restrictive: insert 4 days for Citrus).

In case of accidental exposure to pesticide spray, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

DIRECTIONS FOR APPLICATION

This product is intended for use in conventional hydraulic sprayers, ground applicators or aerial sprayers. Do not apply when weather conditions favor drift of spray from treated areas. Repeat applications as necessary unless otherwise specified. Consult your state experiment station or state extension service for proper timing of applications.

CYGON 400 has systemic and contact activity against a broad spectrum of piercing, sucking and chewing insects; however, it may not control certain organophosphate resistant species.

COMPATIBILITY*: CYGON 400 is compatible in spray tank mixes with most insecticides, miticides, and fungicides, provided they are not alkaline in reaction. Field experience indicates that CYGON has been satisfactorily mixed with Sevin¹, Diazinon², Pydrin³, Guthion⁴, CYTHION® 'THE PREMIUM GRADE MALATHION', parathion, Kelthane⁵, CYPREX® Fruit Fungicide, captan, zineb, and thiram. Because uniform dispersibility and sprayability may be influenced by pesticide combinations used, it is recommended that compatibility be determined before adding pesticides to the spray tank. The addition of X-77 Spreader⁶ at recommended rates will usually eliminate any incompatibility noted.

FOR PROPER MIXING SPRAY TANK SHOULD BE AT LEAST THREE-QUARTERS FILLED WITH WATER BEFORE ADDING CYGON 400. MECHANICAL AGITATION OR RECIRCULATION THROUGH PUMP BYPASS TO TANK IS USUALLY SUFFICIENT FOR MAINTAINING A GOOD DISPERSION.

Spray tank mixtures of CYGON with alkaline insecticides and fungicides should be applied promptly.

ODOR: CYGON formulations may produce a distinctive odor during the spray operation, but under normal conditions this odor does not persist.

Aerial Applications: Apply at least one gallon of finished spray per acre. Apply at least 5 gallons finished spray per acre in California.

Automatic flagging devices should be used whenever feasible.

If human flaggers are employed, they must wear the protective clothing and respirator specified on this label.

Ground Applications: Use water for dilution and apply at least 5 gallons of finished spray per acre.

¹ Sevin is a registered trademark of Rhone Poulenc.

² Diazinon is a registered trademark of Ciba-Geigy Corporation .

³ Pydrin is a registered trademark of E.I. duPont de Nemours and Company.

⁴ Guthion is a registered trademark of the parent company of Farbenfabriken Bayer GmbH Leverkusen.

⁵ Kelthane is a trademark of Rohm and Haas Company.

⁶ X-77 Spreader is a registered trademark of Chevron Chemical Company.

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* Tank mixes not registered in California

FIELD CROPS

Crop	Pests Controlled	Rate	Interval (Days) Last Application
Alfalfa	Aphids, grasshoppers, leaf-hoppers, plant bugs including Lygus, reduction of alfalfa weevil larvae	1/2 to 1 pt./acre	10 This pesticide is highly toxic if bees are visiting the area. Do not apply if crop or weeds are in bloom. Apply 10 days of harvest or past. One application per cutting. Effective to which applied.
Field Corn	Banks grass mites (excluding Trans-Pecos area of Texas), aphids, bean beetle, corn rootworm adult	2/3 to 1 pt./acre	14 Apply as necessary. Make multiple applications per year. Do not apply 14 days of last application.
	Grasshoppers	1 pt./acre	during the pollen-shed period. Avoid foraging in the treated area.
Cotton (grown in California and Arizona)	Leafhoppers, fleahoppers, plant bugs including Lygus	1/2 to 1 pt./acre	14 Repeat applications should be made closer than 14 days. Make applications during the season at the higher rate. Avoid forage or graze livestock on treated areas.

FIELD CROPS - cont'd.

Crops	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Cotton (except Arizona and California)	Aphids, mites, thrips, fleahoppers	1/4 to 1/2 pt./acre	14
	Plant bugs including Lygus	1/2 pt./acre	<p><i>When water is used for dilution:</i> Repeat applications should not be made at intervals closer than 14 days. Do not feed treated forage or graze livestock on treated fields.</p> <p><i>When once refined vegetable oil is used for dilution:</i> Repeat applications should not be made at intervals closer than 40 days. Make only 2 applications per season at the higher rate. Apply at least one quart of finished spray/acre. Do not feed treated forage or graze livestock on treated fields.</p>
Safflower (grown in California and Arizona)	Aphids, leafhoppers, plant bugs including Lygus, thrips	1/2 to 1 pt./acres	
Sorghum (milo)	Aphids	1/2 to 1 pt./acre	Do not feed or graze within 28 days of last application. Make no more than 3 applications as needed per season. Do not apply after heading.
	Banks grass mites (excluding Trans-Pecos area of Texas), spider mites	1 pt./acre	
	Grasshoppers	1 pt./acre	

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FIELD CROPS - cont'd.

Crops	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Soybeans	Mexican bean beetle, spider mites, bean leaf beetle, leafhoppers, three-cornered alfalfa hopper*	1 pt./acre	21 Do not feed or graze within 5 days of last application.
	Grasshoppers		
Wheat	Aphids	1/2 to 3/4 pt./acre	Do not apply within 14 days of grazing immature plant. Do not harvest grain within 35 days of last application. Do not make more than 2 applications per season.
	Brown wheat mite	1/3 to 1/2 pt./acre	
	Grasshoppers	3/4 pt./acre	

* Not registered in California.

SEED CROPS

Crop	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Alfalfa	Aphids, leafhoppers, lygus bugs, grasshoppers, reduction of alfalfa weevil larvae	1/2 to 1 pt./acre	This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom. Do not feed or graze livestock in treated crops, hay, threshings or stubble within 10 days of application.

ATTENTION

DO NOT USE ON SEED ONIONS, SEED CARROTS, OR SEED BERMUDA GRASS.

VEGETABLE CROPS

Crop	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Beans (green, lima, snap, dry)	Aphids, grasshoppers, leaf hoppers, leaf miners, lygus bugs, mites, bean leaf beetle, Mexican bean beetle	1/2 to 1 pt./acre	Beans may be harvested on day of application. Do not feed treated vines. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.
Broccoli Cauliflower	Aphids	1/2 to 1 pt./acre	7
Cabbage	Aphids	1/2 to 1 pt./acre	3
Celery (Florida)	Leaf miners	1 pt./acre	7
Head Lettuce	Aphids, leafhoppers, leaf miners	1/2 pt./acre	7
Leaf Lettuce Spinach Collards Kale Turnip (greens and roots) Mustard Greens Swiss Chard Endive (Escarole)	Aphids, leafhoppers, leaf miners	1/2 pt./acre	14
Melons (except watermelons)	Aphids, leafhoppers, leaf miners.	1 pt./acre	3

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VEGETABLE CROPS - cont'd.

Crop	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Watermelons	Aphids, leaf miners, leafhoppers	1/2 to 1 pt./acre	3
Lupine	Aphids, lygus bugs	1/2 to 1 pt./acre	Apply when aphids first appear. Make only 2 applications per season. Lupine may be harvested on day of application. Do not feed or graze forage or hay. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.
Peas Lentils	Aphids	1/3 pt./acre	Peas or lentils may be harvested on day of application. Do not feed or graze hay within 21 days after last application. Do not make more than one application per season. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.
Peppers	Aphids, leaf miners, maggots	1/2 to 2/3 pt./acre	Peppers may be harvested on day of application.
Potatoes	Aphids, grasshoppers, leafminers, leafhoppers	1/2 to 1 pt./acre	Potatoes may be harvested on day of application.
Tomatoes	Aphids, leaf miners, leafhoppers	1/2 to 1 pt./acre	7

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FRUIT AND NUT CROPS

Crop	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Apples	Apple maggot, Codling moth*	1 pt./100 gals. water	28 Do not apply when trees or substantial numbers off weeds in the orchard are in bloom. Apply at petal-fall and every 10 to 14 days thereafter until control is achieved. Under heavy infestations, some sting injury may occur. *Midwest and eastern states only. Do not graze livestock in treated orchards.
Apples Pears	Aphids, leafhoppers, mites (except rust mites)	1/2 to 1 pt./100 gals. water	28 Do not apply when trees or substantial numbers off weeds in the orchard are in bloom. Do not graze livestock in treated orchards.

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FRUIT AND NUT CROPS - cont'd.

Crops	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
Grapefruit Lemons Oranges Tangerines	Aphids	1/2 to 1 pt./100 gals. water	15
		Aerial: 1 to 2 qts./acre in 5 to 10 gals. water	
	Mites (except rust mites)	1/2 to 1 pt./100 gals. water	15
	Scales (except black or snow)	1 to 1 1/2 pts./100 gals. water	45
		Apply as a thorough coverage spray.	
	Thrips	1/2 to 1 pt./100 gals. water	15
		Aerial: 1 to 2 qts./acre in 5 to 10 gals. water.	
	Whiteflies	1 pt./100 gals. water	15
	Do not apply when trees or substantial number of weeds in the grove are in bloom. Do not use on citrus seedlings. Make no more than 2 applications to mature fruit. Do not enter treated groves within 4 Days of last application without protective clothing. Do not graze livestock in treated orchards.		

FRUIT AND NUT CROPS - cont'd.

Crops	Pests Controlled	Rate	Interval (Days) Between Last Application and Harvest
CITRUS: (California, Arizona) Non-bearing and nursery stock	Aphids, thrips	Foliar Spray: 1 pt./100 gals. water	Repeat applications as necessary. May be applied in the year grapefruit, lemon, orange and tangerine trees begin to bear fruit. Do not enter treated groves within 4 days of last application without protective clothing. Do not graze livestock in treated groves.
		Soil Drench (trees 1 to 3 years old): 2 qts./acre	Apply in the furrow or basin around the base of tree. Apply when insect injury to new growth appears. Do not apply to trees that will bear fruit within one year. Do not graze livestock in treated groves.
NUTS Pecans	Aphids, mites, leafhoppers	2/3 pt./acre	21 Do not graze livestock in treated groves.

or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF CYGON 400. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.



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