

100-669

12-7-1998

4/16

December 7, 1998

Robert Wurz
Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, North Carolina 27149

Subject: Profenofos
EPA Reg. No. 100-669
Amendment submitted July 1, 1998

Dear Mr. Wurz:

The labeling amendment referred to above submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (FIFRA), is acceptable provided that you make the following change and submit two copies of your final printed label before you release the product for shipment:

Delete Bolstar from the tank mixtures section as this EPA product has been canceled.

In reference to the crop rotational interval, as explained in the Agency's letter dated August 20, 1997, once the Agency has received and reviewed the confined rotational crop study, the 8-month interval will be reevaluated.

A stamped copy of the label is provided for your records. If you have questions about this letter, please contact Amy Caicedo at (703) 308-9399.

Sincerely,

Marilyn A. Mautz, Biologist
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosure

Label File 2/16

WPS

RESTRICTED USE PESTICIDE

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.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

DEC 07 1998

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
100-669

Curacron® 8E

INSECTICIDE-MITICIDE

For insect and mite control in cotton

Active Ingredient:

Profenofos: (CAS #41198-08-7)	73.0%
Other Ingredients*:	27.0%
<hr/> Total:	<hr/> 100.0%

*Contains petroleum distillates

2.5 GALLONS
U. S. Standard Measure

Curacron 8E contains 8 lbs. active ingredient per gallon.

EPA Reg. No. 100-669

EPA Est. 34704-MS-1

KEEP OUT OF REACH OF CHILDREN.

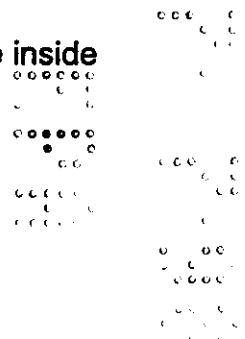
WARNING/AVISO

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.)

See additional precautionary statements and directions for use inside booklet.

NCP 669A-L1B 0698

[QUARK/CURACRON 8E/N-CUR8EWPS-B] - CCG - 6/25/98



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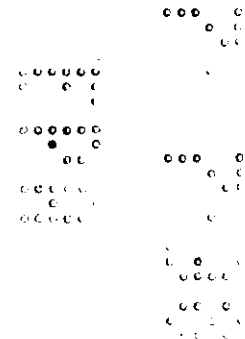
DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS OF SALE AND WARRANTY

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.



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GENERAL INFORMATION

Curacron 8E is an emulsifiable insecticide-miticide which is effective for control of cotton bollworm, tobacco budworm, certain other insects, and mites on cotton.

Best results can be expected from fields under Pest Management/Scouting programs.

When using Curacron 8E as a larvicide, best results will be obtained when application is timed to control first to third instar larvae.

Curacron 8E is an organophosphate insecticide which has a specific mode of action and could be subject to development of resistant strains of insects. Development of resistance cannot be predicted. Therefore, Novartis cannot assume liability for crop damage resulting from resistant strains of insects. If the treatment is ineffective due to the presence of resistant strains, neither Curacron 8E nor any other insecticide with similar action will effectively control those pests. Consideration should then be given to the prompt use of other types of suitable insecticides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and information on resistance management strategies in your area.

Mixing Instructions

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Agitate thoroughly before and during application. Good bypass agitation is sufficient to keep Curacron 8E in emulsion. Do not let spray mixture stand overnight in the spray tank. Rinse spray tank at the end of the day.

Curacron 8E Alone: Add $\frac{2}{3}$ of the required amount of water to the spray tank with the agitator running, then add the desired amount of Curacron 8E. Continue agitation while adding the remainder of the water.

Curacron 8E + Tank Mixtures: Add $\frac{2}{3}$ of the required amount of water to the spray tank. With the agitator running, if possible, add the desired amount of the other products recommended on this label. Then add the desired amount of Curacron 8E. Continue agitation while adding the remainder of water.

Tank mixtures are permitted only in those states where the tank mix partner is registered.

Curacron 8E + Foliar Nutrients: Some foliar fertilizers can increase

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AGRICULTURAL USE REQUIREMENTS

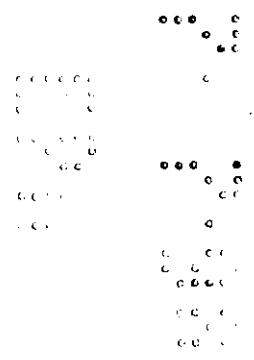
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. Each 48-hour REI is increased to 72 hours in outdoor areas where average rainfall is less than 25 inches per year.

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
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or viton
- Chemical-resistant footwear plus socks
- Protective eyewear

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



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FAILURE TO FOLLOW ALL DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR CONTROL, AND/OR ILLEGAL RESIDUES.

COTTON

Curacron 8E Alone

Apply Curacron 8E at the specified rates below in a minimum of 5 gals. of water per acre with ground equipment, or in a minimum of 1 gal. of water per acre by air. In late season, under heavy infestations and high temperatures, apply Curacron 8E in a minimum of 3 gals. of water per acre to ensure maximum coverage. To avoid spray drift, do not apply under windy conditions. Avoid spray overlap because crop injury may result.

If the need to control boll weevil becomes apparent while using Curacron 8E, Guthion® or methyl parathion may be tank mixed with Curacron 8E. Refer to the Guthion or methyl parathion labels for directions, limitations, and precautions.

Aphids (All cotton growing states): Apply 1/2 pt. of Curacron 8E per acre at 5 to 7-day intervals as needed, starting when economic thresholds are reached. Economic thresholds will vary by locality. Consult your pest control advisor or cotton consultant to determine economic thresholds in your area.

Plant bugs/lygus bugs* (All cotton growing states): Apply 1/4-1/2 pt. of Curacron 8E per acre at 5 to 7-day intervals as needed, starting when economic thresholds are reached. Economic thresholds will vary by locality. Consult your pest control advisor or cotton consultant to determine economic thresholds in your area.

*In AZ and CA, Curacron 8E offers suppression of lygus bugs.

Cotton bollworm, tobacco budworm: (All cotton growing states except AZ and CA)

Contact Ovicide Activity: For contact ovicidal activity of bollworms, apply 1/8-1/4 pt. of Curacron 8E per acre, for budworms, apply 1/4 pt./A. The higher rate should be used if plant bugs are also present. Continue at 5 to 7-day intervals as needed.

Larvae Control Only: Apply 3/4-1 pt. of Curacron 8E per acre on small larvae. Apply 1 pt./A on large larvae and under heavy infestation. Scout fields thoroughly and repeat application at 5 to 7-day intervals. Spray intervals of 5 to 6 days may be necessary when heavy infestations are present.

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Cotton bollworm, tobacco budworm (AZ and CA): Apply Curacron 8E at 5 to 7-day intervals as needed, beginning when infestations first appear. Use 1/2-3/4 pt./A for light to moderate infestations and 3/4-1 pt./A for moderate to heavy infestations.

Cotton leafperforator, beet armyworm (All cotton growing states): Apply Curacron 8E at 5 to 7-day intervals as needed, starting when egg masses and larvae first appear. Use 1 pt./A and scout fields thoroughly to determine need for repeat application. Spray intervals of 5 to 6 days may be necessary when heavy infestations are present.

Fall armyworm (All cotton growing states): Apply 3/4-1 pt. of Curacron 8E per acre at 5 to 7-day intervals as needed, starting when larvae first appear. For best results, application should be made to young larvae still feeding on leaf surfaces, and before migration to blooms and bolls has occurred.

Mites (All cotton growing states): Apply 1/2-1 pt. of Curacron 8E per acre at 5 to 7-day intervals as needed, starting when mites first appear.

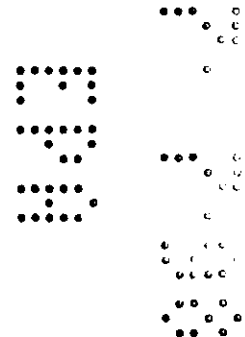
Whitefly suppression (All cotton growing states): To aid in the reduction of whitefly populations, apply 3/4-1 pt. of Curacron 8E at 5 to 7-day intervals as needed, starting when whiteflies first appear.

Important: To avoid illegal residues: (1) Do not apply more than 3 qts. of Curacron 8E per acre per season. (2) Do not apply Curacron 8E within 14 days of harvest. (3) Do not allow livestock to graze treated cotton. (4) Do not feed foliage from treated cotton plants to livestock. (5) Do not rotate to crops other than cotton within 8 months after application.

Curacron 8E + Tank Mixtures (All cotton growing states)

To broaden the spectrum of insect control, if multiple pests, including boll weevil occur, it may be useful to tank mix Curacron 8E with other EPA-registered pesticides.

Curacron 8E has been found compatible in tank mixtures with the products listed below. When using Curacron 8E in tank mixtures, observe all limitations, precautions, and rate recommendations which appear on the labels for these products:



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Ammo® 2.5EC
Asana® XL
Baythroid 2®
Bolstar® 6
Capture® 2EC
Condor®
Cymbush®
Danitol® 2.4EC
Design®
Dibrom® 8
Dipel® ES
Dipel® 2X
Fury® 1.5EC
Guthion® 2L
Javelin® WG
Karate®
Lannate®
Larvin® 3.2
Lock-On®

Lorsban® 4E
Malathion
Meta-Systox R®
Monitor® 4 Spray
Mustang™
MVP®
Orthene® 75S
Ova syn®
Parathion
Phaser® 3EC
Pounce® 3.2EC
Provado™
Scout X-TRA®
Supracide®
Thiodan® 3EC
Tracer®
Vydate® L

Note: Applications to cotton may cause spotting or reddening of leaves, especially when applied as a tank mix with other organophosphate insecticides or oil.

Curacron 8E + Oil (All cotton growing states)

Apply Curacron 8E following use directions above, selecting rates and timings according to pest problem.

Curacron 8E may be diluted with once-refined vegetable oil for ULV application. Make application using 1-2 qts. of finished spray per acre.

Curacron 8E may be applied in water with the addition of 1-2 pts. of emulsified vegetable oil as an additive. Make application using a minimum of 1 gal. total mix per acre.

Important: When applying Curacron 8E in oil: (1) Make no more than 3 applications of Curacron 8E in oil per season. (2) Do not apply within 30 days of harvest.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of

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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 puncture container and dispose of in a sanitary landfill, or incinerate. The container may be disposed of by open burning if allowed by state and local authorities. Stay out of smoke from burning container.

Emergency Response

In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

May be fatal if absorbed through skin. Causes eye irritation. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or spray mist. Harmful if swallowed or inhaled.

Statement of Practical Treatment

This product is an organophosphate.

If swallowed: Call a physician or Poison Control Center. May present aspiration hazard. DO NOT induce vomiting. Drink large quantities of water. Get medical attention immediately.

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

If in eyes: Hold eyelids open and flush with plenty of water. Call a physician if irritation persists.

If inhaled: Remove victim to fresh air.

Note to Physician: If symptoms of cholinergic poisoning occur, atropine plus 2-PAM may be helpful. If swallowed, lavage stomach, taking care to avoid aspiration of stomach contents into the lungs.

Personal Protective Equipment

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Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant apron when cleaning equipment, mixing, or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

Engineering Control Statements

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 thoroughly and put on clean clothing.

Environmental Hazards

Due to the hazard to endangered fish, the application of this product is prohibited in Reeves County, TX and within one mile of the Dexter National Fish Hatchery in NM. This pesticide is toxic to fish and wildlife. Use with care when applying to areas frequented by wildlife or adjacent to

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any body of water. 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. Do not apply with aircraft within 300 ft. upwind of impounded water. Do not apply when weather conditions favor drift from treated areas. Do not apply with aircraft when wind speed is greater than 10 mph. Apply this pesticide only as specified on this label. Do not contaminate water by cleaning of equipment or disposal of wastes.

This product is highly toxic to bees exposed to direct treatment or residues on crops or weeds. Do not apply this product or allow it to drift to crops or weeds on which bees are foraging. Additional information may be obtained from your Cooperative Agricultural Extension Service.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

Curacron® and Supracide® trademarks of Novartis
U.S. Patent No. 3,992,533

Ambush®, Cymbush®, and Karate® trademarks of Zeneca Ag Products

Ammo®, Capture®, Fury®, Mustang™, Pounce®, and Thiodan® trademarks of FMC Corporation

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Condor® trademark of Ecogen, Inc.

Danitol®, Dibrom®, Monitor®, and Orthene® trademarks of Valent USA Corporation

Design® and Javelin® trademarks of Thermo Trilogy

Dipel® trademark of Abbott Laboratory

Larvin® trademark of Rhône-Poulenc Ag Company

Lock-On®, Lorsban®, and Tracer® trademarks of Dow AgroSciences

Meta-Systox R® trademark of Gowan Company

MVP® trademark of Mycogen Corporation

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Pay-Off® trademark of American Cyanamid Company

Ova syn®, Phaser®, and Scout X-TRA® trademarks of AgrEvo, USA

Solubor® trademark of United States Borax and Chemical Corporation

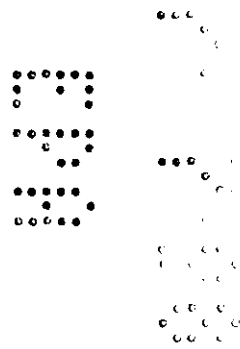
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Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 669A-L1B 0698

Product ID: 55910

[QUARK/CURACRON 8E/N-CUR8EWPS-B] - CCG - 6/25/98



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RESTRICTED USE PESTICIDE

FOR RETAIL SALE TO AND USE ONLY BY
CERTIFIED APPLICATORS OR PERSONS
UNDER THEIR DIRECT SUPERVISION, AND ONLY
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Curacron® 8E

INSECTICIDE-MITICIDE

For insect and mite control in cotton

Active Ingredient:

Profenofos: (CAS #41198-08-7)	73.0%
Other Ingredients*:	27.0%
Total:	100.0%

*Contains petroleum distillates

Curacron 8E contains 8 lbs. active ingredient per gallon.

2.5 GALLONS
U. S. Standard Measure

EPA Reg. No. 100-669
EPA Est. 34704-MS-1

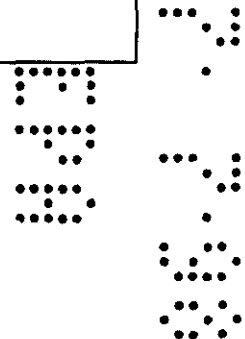
See directions for use in attached booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with
the Worker Protection Standard, 40 CFR part 170. Refer to sup-
plemental labeling under "Agricultural Use Requirements" in the
Directions for Use section for information about this standard.

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO



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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.)

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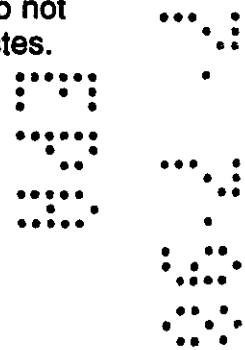
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Environmental Hazards

Due to the hazard to endangered fish, the application of this product is prohibited in Reeves County, TX and within one mile of the Dexter National Fish Hatchery in NM. This pesticide is toxic to fish and wildlife. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. 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. Do not apply with aircraft within 300 ft. upwind of impounded water. Do not apply when weather conditions favor drift from treated areas. Do not apply with aircraft when wind speed is greater than 10 mph. Apply this pesticide only as specified on this label. Do not contaminate water by cleaning of equipment or disposal of wastes.



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This product is highly toxic to bees exposed to direct treatment or residues on crops or weeds. Do not apply this product or allow it to drift to crops or weeds on which bees are foraging. Additional information may be obtained from your Cooperative Agricultural Extension Service.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

Chemigation

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

Curacron® trademark of Novartis

U.S. Patent No. 3,992,533

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Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419

NCP 669A-L1B 0698

Product ID: 55910

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