

US ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (TS-767)  
WASHINGTON, DC 20460

EPA REGISTRATION  
100-689

DATE OF ISSUANCE  
DEC 01 1988

TERM OF ISSUANCE

Conditional

NAME OF PESTICIDE PRODUCT

Pidoxal 1277 EC Insect

NOTICE OF PESTICIDE:  REGISTRATION  
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Sta-seigy Corporation  
Agricultural Division  
P.O. Box 18300  
Durham, NC 27419

206601  
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160  
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NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment:

- a. Add the phrase "EPA Registration No. 100-689."
- b. Under "Mixing Instructions," add or modify the following statement as appropriate (PR Notice 82-1):

This product can be mixed with \_\_\_\_\_  
(chemical name, including percentage of  
active ingredient and type of formulation,  
or specific product name, or both) for use  
on \_\_\_\_\_ (crops/sites) in accordance  
with the more (most) restrictive of label  
limitations and precautions. No label dosage  
rates should be exceeded. This product  
cannot be mixed with any product containing  
a label prohibition against such mixing.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

Lawrence J. Schaubert

DATE

DEC 01 1988

Variations of these statements may be approved by the Agency. Where a specific product name is recommended for the tank mix, the label statements shall be more explicit, including such information as specific dilution and dosage rates.

- c. Under the "Plant Back Restrictions" section, delete those crops not having an established tolerance for metalaxyl from the list and add the statement "Do not plant any crop which is not registered for use with metalaxyl in metalaxyl treated soil for a period of 12 months." You may however, retain those crops which do not have an established metalaxyl tolerance if you specify 300 days in the right hand column.
  - d. Under "Directions for Use," revise the reentry statement to indicate a 24 hour reentry interval. In addition, you must add language regarding "Worker Safety Rules" and "Personal Protective Equipment" as described.
  - e. Based on the active ingredients, under "Pesticide Disposal," change "wastes...EPA Regional Office" to "WASTES RESULTING FROM THE USE OF THIS PRODUCT MAY BE DISPOSED OF ON SITE OR AT AN APPROVED WASTE DISPOSAL FACILITY" in accordance with PR Notice 83-3.
  - f. Add the following sentence to the precautionary statements "Causes eye irritation."
  - g. Change the Under "Environmental Hazards" statements to read "This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water by cleaning of equipment or disposal of wastes."
  - h. Under onions, add "Do not apply to exposed bulbs."
3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

*Lois A. Rossi*  
for  
Lois A. Rossi  
Product Manager (21)  
Fungicide-Herbicide Branch  
Registration Division (TS-767)

Enclosures

ACCEPTED  
AND COMMENTS  
BY THE U.S. DEPT. OF AGRICULTURE

DEC 11 1988

100-689

Ridomil® MZ77

Fungicide

For control of certain diseases of  
potatoes, tomatoes, onions, cucumbers,  
melons, and squash

Five Lbs.  
Net Weight

Active Ingredients:

Metalaxyl: <u>N</u> -(2,6-dimethylphenyl)- <u>N</u> - (methoxyacetyl) alanine methyl ester .....	7.0%
Zinc ion and manganese ethylene bisdithiocarbamate,* .....	70.0%
a coordination product of	
manganese <sup>++</sup> .....	14.0%
zinc <sup>++</sup> .....	1.7%
ethylene bisdithiocarbamate ion .....	54.3%
<hr/> Inert Ingredients:	23.0%
Total:	100.0%

\*Same as the active ingredient found in Dithane® M-45  
and Manzate® 200.

Ridomil MZ77 is a wettable powder

Keep Out of Reach of Children.

Caution

See additional precautionary statements  
on back of bag.

See directions for use on back of bag.

EPA Reg. No. 100-

EPA Est. 100-AL-1

CIBA-GEIGY

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.

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 CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY 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. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY 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 CIBA-GEIGY.

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DIRECTIONS FOR USE

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

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

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

Do not enter treated areas without protective clothing until sprays have dried.

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. Oral warnings must inform workers of areas or fields that may not be entered without specific protective clothing until sprays have dried, and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on this label. 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: "CAUTION. Area treated with Ridomil MZ77 on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental eye exposure, flush eyes with plenty of water. Get medical attention. In case of contact with skin, wash thoroughly with soap and water. Call physician if irritation occurs. Remove and wash contaminated clothing before reuse."

### General Information

Ridomil MZ77 contains 7% metalaxyl and 70% mancozeb. Metalaxyl is a systemic fungicide that provides control of late blight and downy mildew of potatoes and selected vegetables. Other formulations of metalaxyl are available to control root diseases of many crops. Mancozeb is a broad spectrum protectant fungicide which provides preventative control of many diseases of vegetable crops. Research has demonstrated that the combination of these two products provides excellent control of most vegetable diseases and reduces the chance that crop losses will be incurred due to the development of metalaxyl-resistant strains of fungi. This product is meant to be used where conditions are favorable for development of late blight or downy mildew and where other diseases which are controlled by mancozeb are present.

See specific crop use directions for information on diseases that are controlled by Ridomil MZ77.

Note: Metalaxyl is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, CIBA-GEIGY cannot assume liability for crop damage resulting from resistant strains of fungi. If treatment is not effective following the use of Ridomil MZ77 as recommended, a resistant strain of fungi may be present. If the treatment is ineffective due to the presence of a metalaxyl resistant strain of fungi, neither Ridomil MZ77 nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance in your particular crop and disease control situation. Do not use Ridomil MZ77 for disease control in greenhouse crops.

Do not make applications when weather conditions favor drift from target area. Avoid spray overlap as crop injury may result.

### Mixing Instructions

Add one-half to three-fourths of the required amount of water to the spray tank, add the proper amount of Ridomil MZ77, then add the rest of the water. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

Ridomil MZ77 is usually compatible with Bravo®, Dithane M-22, Dithane M-45, D-z-n®, Manzate, and Manzate 200, Ronilan®, Bayleton® and Benlate®.

To assure the compatibility of Ridomil MZ77 with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

#### IMPORTANT

Do not allow Ridomil MZ77 to become wet or overheated during storage. This may lead to chemical changes which will impair the fungicidal effectiveness of Ridomil MZ77 and may also generate flammable vapors. Keep bag closed when not in use.

#### Application Instructions

Apply Ridomil MZ77 in sufficient water to obtain adequate coverage of foliage. Gallonage needed will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons/A for dilute sprays and 5 to 10 gallons for concentrate sprays and aerial applications.

To minimize the potential of drift from the target area, applications at wind speeds greater than 10 mph are not recommended.

#### Application Through Irrigation Systems

Ridomil MZ77 alone or in combination with other fungicides which are registered for sprinkler irrigation may be applied through irrigation systems.

With the exception of potatoes, Ridomil MZ77 has not been sufficiently tested to assure consistent product performance for all labeled uses when applied through chemigation systems. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

Apply this product only through center pivot, solid set or moving wheel irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public

water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Operating Instructions:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Application Instructions

Ridomil MZ77 must be applied on the schedule specified in the specific crop use recommendations, not according to the irrigation schedule. If irrigation schedules are used, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

Center-Pivot Irrigation Equipment (Use only with drive systems which provide uniform water distribution)



1. Determine the size of the area to be treated.
2. Determine the time required to apply 1/4 inch water over the area to be treated when the system and injection equipment is operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of Ridomil MZ77 required to treat the area covered by the irrigation system.
5. Add the required amount of Ridomil MZ77 and sufficient water to meet the injection time requirements to the solution tank.
6. Maintain constant solution tank agitation during the injection period.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Ridomil MZ77 solution has cleared the sprinkler head.

Solid Set and Moving Wheel Irrigation Equipment:

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30 minute interval.
3. Determine the amount of Ridomil MZ77 required to treat the area covered by the irrigation system.
4. Add the required amount of Ridomil MZ77 into the same quantity of water used to calibrate the injection period.
5. Operate system at the same pressure and time interval established during the calibration.
6. Inject Ridomil MZ77 at the end of the irrigation cycle or as a separate application to maximize retention of the fungicide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system under the Ridomil MZ77 solution has cleared the last sprinkler head.

### Cucumbers, Melons, and Squash

Ridomil MZ77 will provide control of downy mildew, arthracnose, alternaria leaf spot, cercospora leaf spot, gummy stem blight and scab when used in a regularly scheduled preventative disease control program. This product will not provide adequate curative control of cucurbit diseases.

Apply 2 1/4 - 2 3/4 lbs. of Ridomil MZ77/A in sufficient water to obtain thorough coverage. Begin applications at the 2-leaf stage of development or when conditions are favorable for disease development and continue at 7-day intervals until the threat of disease is over. When pressure from diseases other than downy mildew is severe, use other effective EPA-registered fungicides between Ridomil MZ77 sprays.

Notes: (1) Do not make an application within 5 days of harvest, and (2) Do not apply more than 28 lbs. of Ridomil MZ77 per season or illegal residues may result.

### Onions (Dry Bulb and Seed Onions)

Ridomil MZ77 will provide control of downy mildew, botrytis leaf blight, neck rot, and purple blotch when used in a regularly scheduled preventative disease control program. This product will not provide adequate curative control of onion diseases.

Apply 2 1/4 - 2 3/4 lbs. of Ridomil MZ77/A in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease development and continue at 7-day intervals until the threat of disease is over. When pressure from diseases other than downy mildew is severe, use other effective EPA-registered fungicides between the Ridomil MZ77 sprays.

Notes: (1) Do not make an application within 7 days of harvest, and (2) Do not apply more than 18 lbs. of Ridomil MZ77 per season or illegal residues may result.

### Potatoes

Ridomil MZ77 will provide control of early blight and late blight when used in a regularly scheduled preventative disease control program. This product will not provide adequate curative control of early or late blight.

Apply 1 1/4 - 2 1/4 lbs. of Ridomil MZ77/A in sufficient water to obtain thorough coverage. Begin applications when the plants are 4-6 inches high or when conditions are favorable for disease development and continue at 7-10 day intervals until the threat of disease is over. Under severe early blight pressure, use other effective EPA registered fungicides between the Ridomil MZ77 sprays.

Notes: (1) Do not make an application within 7 days of harvest, and (2) Do not apply more than 32 lbs. of Ridomil MZ77 per season or illegal residues may result, and (3) Do not tank mix with amobam or Polyram<sup>®</sup>.

Tomatoes

Ridomil MZ77 will provide control of late blight, early blight, gray leaf spot, gray leaf mold and anthracnose when use in a regularly scheduled preventative disease control program. This product will not provide adequate curative control of tomato diseases.

Apply 1 3/4 - 2 3/4 lbs. of Ridomil MZ77/A in sufficient water to obtain thorough coverage. Begin applications when conditions are favorable for disease development and continue at 7-day intervals until the threat of disease is over. When pressure from diseases other than late blight is severe, use other effective EPA-registered fungicides between the Ridomil MZ77 sprays.

Notes: (1) Do not make an application within 5 days of harvest, and (2) Do not apply more than 32 lbs. of Ridomil MZ77 per season or illegal residues may result, and (3) Do not tank mix with amobam, Polyram, nabam, thiram, zineb, or ziram.

Plant Back Restrictions

<u>Crop</u>	<u>Planting Time From Last Application of of Ridomil MZ77 (in days)</u>
Apples	-0-
Asparagus	-0-
Avocados	-0-
Broccoli	-0-
Cabbage	-0-
Cauliflower	-0-
Chinese Broccoli (gai lan, white flowering broccoli)	-0-
Chinese Cabbage (Bok choy and napa)	-0-
Citrus	-0-
Cotton	-0-
*Cucurbit Vegetables	-0-
Deciduous Fruits and Nuts	-0-
Eggplant	-0-
Hops	-0-
Head Lettuce	-0-
Spinach	-0-
**Legume Vegetables	-0-
Onions	-0-
Peanuts	-0-
Peppers	-0-
Pineapples	-0-
Potatoes	-0-
Raspberries	-0-
Soybeans	-0-
Tobacco	-0-
Tomatoes	-0-
Wheat	14
Corn	330
Root Crops	365
Crops <u>Not Intended</u> for Food or Feed	-0-
Other Crops <u>Intended</u> for Food or Feed	540

\*Cucurbit Vegetables: Includes balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds, cantalope, casaba, crenshaw, honeydew melon, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer squash, winter squash, watermelon, and cucurbit hybrids.

\*\*Legume Vegetables (Succulent or Dried): Includes field beans, French beans, kidney beans, lima beans, mung beans, navy beans, pinto beans, runner beans, snap beans, wax beans, broad beans (fava beans), chickpeas (garbanzo beans), lentils, garden peas, field peas, sugar peas, southern peas (blackeyed peas, crowder peas, cowpeas, catjang) and edible soybeans.

## Storage and Disposal

### Pesticide and Storage Disposal

Store in a dry place. Do not contaminate water, food or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

### Container Disposal

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call (919) 292-7100 day or night.

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### Statement of Practical Treatment

If swallowed: Call a physician or poison control center. 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.

If in eyes: Flush eyes with plenty of water. Call a physician if irritation persists.

Continued ... 12

If inhaled: Remove victim to fresh air.

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

Note to Physician

If Ridomil MZ77 is ingested, induce vomiting or lavage stomach.

Environmental Hazards

This product is toxic to fish. Do not apply directly to water. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

Ridomil® trademark of CIBA-GEIGY for metalaxyl  
U.S. Patent No. 4,151,299

Bayleton® trademark of Mobay Chemical Corporation for  
triadimefon

Benlate® trademark of E. I. duPont de Nemours & Company for  
benomyl

Bravo® trademark of Fermenta Plant Protection Company for  
chlorothalonil

Dithane® trademark of Rohm and Haas Company for maneb/mancozeb

D·z·n® trademark of CIBA-GEIGY for diazinon

Manzate® trademark of E. I. duPont de Nemours & Company for  
maneb/mancozeb

Polyram® trademark of BASF Corporation for metiram

Ronilan® trademark of BASF Corporation for vinclozolin

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Agricultural Division  
CIBA-GEIGY Corporation  
Greensboro, North Carolina 27419

CGA

October 15, 1987

"After (sprays) have dried/dusts have settled (vapors have dispersed, as applicable) do not enter or allow entry into treated areas until the 24-hour reentry interval has expired unless wearing the personal protective equipment listed on the label.

#### "WORKER SAFETY RULES

"Keep all unprotected persons, children, livestock, and pets away from treated area or where there is danger of drift.

"Do not rub eyes or mouth with hands. See First Aid (Practical Treatment Section).

#### "PERSONAL PROTECTIVE EQUIPMENT - For Mixers, Loaders, Applicators and Early Reentry Workers.

"HANDLE THIS PRODUCT ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT: a long-sleeve shirt and long pants or a coverall that covers all parts of the body except the head, hands, and feet; chemical resistant gloves; shoes, socks, and goggles or a face shield. During mixing and loading, a chemical resistant apron must also be worn.

"During application from a tractor with a completely enclosed cab with positive pressure filtration, or aerially with an enclosed cockpit, a long-sleeve shirt and long pants may be worn in place of the above protective clothing. Chemical resistant gloves must be available in the cab or cockpit and worn while exiting.

"IMPORTANT! Before removing gloves, wash them with soap and water. Always wash hands, face, and arms with soap and water before eating, smoking or drinking. Always wash hands and arms with soap and water before using the toilet.

"After work take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with mancozeb must be destroyed according to state and local regulations.

"HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.

"During aerial application, human flaggers are prohibited unless in totally enclosed vehicles."