

SEP 18 1996

Mr. Robert E. Hawk  
Gowan  
P.O. Box 5569  
Yuma, AZ 85366-5569

Dear Mr. Hawk:

Subject: Addition of Leafy Vegetables  
Prefar 4-E  
EPA Reg. No. 10163-200  
Your submission dated Sept. 8, 1995

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable and a stamped copy is enclosed for your records.

Sincerely yours,

Robert J. Taylor  
Product Manager 25  
Fungicide-Herbicide Branch  
Registration Division (7505C)

Enclosure

2/4

# Prefar<sup>®</sup> 4-E

Selective Herbicide

emulsifiable liquid for control of annual grasses and broadleaf weeds

ACTIVE INGREDIENT: Bensulide

S-(O,O-diisopropyl phosphorodithioate) ester of N-(2-mercaptoethyl) benzenesulfonamide ..... 46.0%

INERT INGREDIENTS ..... 54.0%

TOTAL 100.0%

Contains 4 pounds of active ingredient per gallon

## KEEP OUT OF REACH OF CHILDREN CAUTION

### STATEMENT OF PRACTICAL TREATMENT

#### Organophosphate Pesticide

**FIRST AID:** If a known exposure occurs or is suspected, immediately start the procedures given below and simultaneously contact a Poison Center, a physician, or the nearest hospital.

**NOTE:** Be sure to advise the person contacted that the active ingredient in this compound is a cholinesterase inhibitor. Describe the type of exposure, the victim's symptoms, and follow the advice given.

**NOTE TO MEDICAL PERSONNEL:** Should cholinesterase inhibition occur, the antidote by injection is antidotal. 2-PAM (Protopam Chloride) is also antidotal when administered early and in conjunction with atropine.

**IF SWALLOWED,** immediately give several glasses of water but do not induce vomiting. If vomiting does occur, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

**FOR SKIN CONTACT,** flush all affected areas with plenty of water for several minutes. Remove and clean contaminated clothing and shoes. Seek medical attention if irritation occurs.

**FOR EYE CONTACT,** flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get medical attention immediately.

**IF INHALED,** remove to fresh air. Seek medical attention if respiratory irritation occurs or if breathing becomes difficult.

**FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK, OR FIRE),  
CALL CHEMTREC (800) 424-9300.**

For other product information, contact Gowan Company  
or see Material Safety Data Sheet.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION-** Harmful if swallowed or absorbed through the skin. Avoid breathing spray mist. Causes moderate eye irritation. Do not get in eyes, on skin, or on clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate or Viton  $\geq$  14mils
- Shoes plus socks

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.

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

SEP 18 1996

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

**Gowan**

12163-200

EPA Reg. No. 10163-200  
EPA Est. No. 34704-MS-1

Gowan Company  
P.O. Box 5569  
Yuma, AZ 85366-5569

### 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

This product is toxic to fish. 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 contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from area treated.

### PHYSICAL HAZARDS

Combustible. Do not use, store, pour, or spill near heat or open flame. Keep container closed when not in use.

### GENERAL USE PRECAUTIONS

- READ ALL DIRECTIONS BEFORE USING.
- MIX WELL BEFORE DILUTING WITH WATER.
- Prefar 4-E should be used only for recommended purposes and at recommended rates. (DO NOT OVERDOSE.)
- Do not apply in combination with fluid fertilizers.
- Use on mineral soils only.
- Do not plant rotational crops within 120 days after application of Prefar. If replanting to a crop not on the label, soil should be tilled to a minimum depth of 4 inches prior to replanting.

### WEEDS CONTROLLED

#### Annual Grasses

Crabgrass (*Digitaria spp.*)  
Fall Panicum (*Panicum dichotomiflorum*)  
Foxtail (*Setaria spp.*)  
Goosegrass (*Eleusine indica*)  
Jungle Rice (*Echinochloa colonum*)  
Sprangletop (*Leptochloa spp.*)  
Watergrass (*Echinochloa crusgalli*)

#### Annual Broadleaf Weeds

(AZ, NM, TX and ten southern-most CA counties only)  
Lambsquarters (*Chenopodium album*)  
Purslane (*Portulaca oleracea*)  
Redroot Pigweed (*Amaranthus retroflexus*)

### NOTICE ON CONDITIONS OF SALE

Our recommendations for use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility including injury or damage, resulting from its misuse as such, or in combination with other materials.

This product is sold only for uses stated on its label. No expressed or implied license is granted to use or sell this product under any patent in any country except as specified: Country: United States of America.

# Prefar 4-E

Selective Herbicide

**Gowan**

P.O. Box 5569  
Yuma, AZ 85366-5569

EPA Reg. No. 10163-200  
EPA Est. No. 34704-MS-1

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

### 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 provisions 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) 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 12 hours. 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
- Chemical-resistant gloves, such as Barrier Laminate or Viton  $\geq$ 14mils
- Shoes plus socks

### RECOMMENDATIONS

Prefar 4-E is a selective herbicide which is applied pre-plant and mixed (incorporated) into the soil. On certain crops which are irrigated up, Prefar 4-E may be applied to the soil surface after planting. Prefar 4-E controls weeds as their seeds germinate by interfering with normal germination and seedling development.

**Soil Preparation:** Prepare the soil according to good agricultural practice. Prefar 4-E does not control emerged weeds and all weed growth and crop stubble must be thoroughly worked into the soil prior to application.

**Application and Soil Incorporation:** Spray equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern. Apply uniformly the recommended rate of Prefar 4-E in 10 to 50 gallons of water per acre.

**Pre-plant Application:** Apply to well-worked soil that is dry enough to permit thorough incorporation. Incorporate to a depth of 1 to 2 inches before planting. Use power driven rotary cultivators or other equipment which will result in satisfactory incorporation.

**Pre-emergence Application:** (For use only on crops that will be irrigated up.) After planting apply Prefar 4-E as a surface application, follow immediately with irrigation (sprinkler or furrow). For sprinkler irrigation apply 1 inch of water, wetting the soil at least 2 to 4 inches deep. For furrow irrigation thoroughly saturate the entire bed top (completely black out bed top).

### CHEMIGATION USE INSTRUCTIONS

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move; or drip (trickle), including surface and subsurface drip 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.

**For chemigation systems connected to public water systems:** Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

**In addition, all directions and requirements specified for Sprinkler and Drip (trickle) Chemigation must be followed.**

**Sprinkler and Drip (Trickle) Chemigation:** 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.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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.

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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

For best results and to avoid crop injury, application should be made at the beginning of the irrigation cycle, injecting over a 60-90 minute period after all lines and sprinklers have been cleared and are operating with correct pressure. Shut off injection equipment at the end of the application and continue to irrigate until a minimum of 1/2-1 inch of water has been applied to the treatment area.

**NOTE:** All rates are given on a broadcast basis. Reduce rate proportionately for band treatment.

### CROP RECOMMENDATIONS

Crop	Broadcast Rate qts./acre	Recommendations
CUCURBITS [cantaloupe, crenshaw melons, cucumber, muskmelons, Persian melons, pumpkins, summer squash, winter squash, watermelons]	5 - 6	Apply pre-plant or pre-emergence to flat-planted or bedded crops. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on crops to be irrigated up.

Crop	Broadcast Rate qts./acre	Recommendations
<b>COLE CROPS</b> (including broccolo, Chinese broccolo, broccolo raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy) cauliflower, cavalo broccolo, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens)	5 - 6	Apply pre-plant or pre-emergence. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on crops to be irrigated up.
<b>FRUITING VEGETABLES</b> [seeded bell peppers, chili peppers]	5 - 6	Apply pre-plant or pre-emergence. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on crops to be irrigated up.
<b>LEAFY VEGETABLES</b> (including amaranth (leafy, amaranth, Chinese spinach, tampala), arugula (roquette), cardoon, celery, Chinese y, celtuce, chervil, chrysanthemum (edible leaved, garland), corn salad, cress (garden, upland), dandelion, dock (sorrel), endive (escarole), Florence fennel, lettuce (head, leaf), orach, parsley, purslane (garden, winter), radicchio (red chicory), rhubarb, spinach (common, New Zealand, vine), swiss chard)	5 - 6	Apply pre-plant or pre-emergence. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on lettuce to be irrigated up.
<b>CARROTS</b> -Texas only	5 - 6	Apply pre-plant or pre-emergence. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on carrots to be irrigated up. Do not feed treated carrots to livestock.
<b>BULB VEGETABLES</b> - New Mexico and Texas only	5 - 6	Apply pre-plant or pre-emergence. Follow directions for application and soil incorporation given on this label. Use pre-emergence only on onions to be irrigated up.
<b>BULB VEGETABLES</b> - Idaho and Oregon only	3	For control of watergrass, redroot pigweed and common lambsquarters, prepare a good, flat seed bed by standard cultural practices. Apply Prefar in the fall in 10-50 galls. of water in a 10-12 inch band and bed-up, throwing soil from the furrows over the sprayed band of Prefar. Allow to remain undistributed until spring. Prior to planting in spring, drag-off the bed tops with a spike-tooth harrow being careful not to drag off soil below the level of Prefar application. Plant in the center of the beds.

**PREFAR 4-E/ALANAP® TANK MIX DIRECTIONS**

A tank mix combination of Prefar 4-E and Alanap can be mixed (incorporated) into the soil before planting for weed control in cantaloupes, cucumbers, muskmelons and watermelons. This combination will control a broader spectrum of weeds than will either material used alone.  
**IMPORTANT:** Follow all general directions for use and use precautions that appear on the Alanap label and elsewhere on this label.  
**Weeds controlled by Prefar 4-E/Alanap combinations:**  
**Annual Grasses:** Watergrass (Barnyardgrass), Crabgrass, Fall Panicum, Foxtails, Goosegrass, Sprangletop.  
**Annual Broadleaf Weeds:** Bindweed, Carpetweed, Chickweed, Cocklebur, Galinsoga, Groundcherry, Lambsquarters, Mustards, Pigweed, Purslane, Ragweed, Shepherdspurse, Velvetleaf.  
**Soil Preparation:** Prepare the soil according to good agricultural practice. All weed growth and crop stubble must be thoroughly worked into the soil.  
**Tank Mixing Directions:** Combine Prefar 4-E and Alanap in the spray tank in the recommended dosage proportions using 10 to 40 gallons of water per acre of area to be treated.  
 Spray equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern.

Crop	Broadcast Rate qts./acre	Recommendations
<b>CANTALOUPEs, CUCUMBERS, MUSKMELONS, WATERMELONS</b>	4 - 6 qts. Prefar plus 4 - 8 qts. Alanap	Apply pre-plant in sufficient water (10-40 gals.) to provide thorough coverage. Incorporate lightly (1/2-1 inch) into the soil using suitable equipment just prior to planting. Use lower rates on light (sandy) soils and higher rates on heavier (clay) soils. Reduce rate proportionately for band applications. Incorporation is not necessary if application is followed by immediate irrigation.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.  
**STORAGE:** Protect from temperatures below 42° F. At temperatures below 42° F, product may crystallize. Dissolve crystals with quiet storage at warm temperatures (75° F). Redissolution rate: 40 - 48° F (10-60 days); 60° F (1-3 weeks); 70 - 80° F (1-3 days). Roll container and agitate contents to provide a uniform product prior to use.  
**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.  
**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.  
**SPILL OR LEAK:** Small spills can be handled routinely. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation. Wear suitable protective clothing to prevent skin and eye contact. Use the following procedures:  
 1. Spread a suitable absorbent such as clay, sawdust or kitty litter on the spilled material.  
 2. Place sweepings in an appropriate chemical waste container.  
 3. Generously cover the contaminated areas with a common household detergent. Using a stiff brush and small amounts of water, work the detergent into the spill material forming a slurry. Do not splatter on one's self or bystanders and completely avoid skin or eye contact with this material. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes.  
 4. Spread absorbents on the slurred liquid and shovel the absorbed material into the container.  
 5. Repeat if necessary.  
 6. Flush the area with water while observing proper environmental considerations.  
 7. Seal container and dispose of in approved pesticide landfill.  
 Large spills should be handled according to a predetermined plan. For assistance in developing a plan, contact Gowan Company.