

# Lorsban<sup>\*</sup> 50-W

**Insecticide**

## IN WATER SOLUBLE BAGS

For control of various insects on certain fruit, nut and vegetable crops

ACTIVE INGREDIENT:	% By Wt.
Chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate .....	50.0%
OTHER INGREDIENTS .....	50.0%
<b>TOTAL</b>	<b>100.0%</b>

**KEEP OUT OF REACH OF CHILDREN**

**DANGER-POISON**  
**PELIGRO**

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.)

### STATEMENT OF PRACTICAL TREATMENT Organophosphate insecticide/miticide

**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. If person is unconscious, do not give anything by mouth and do not induce vomiting.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if irritation persists.

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**NOTE TO PHYSICIAN:** Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

**FOR EMERGENCY MEDICAL RESPONSE AND HAZARD COMMUNICATION ONLY, CALL 1 (800) 228-5635 EXT. 283.**

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER - POISON

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin or inhaled.

Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing dust or spray mist. Work to windward to stay out of spray drift or mist.

Keep away from food, feedstuffs, and water supplies.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

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.

### 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**NET CONTENTS \_\_\_\_\_ POUNDS**

EPA Reg. No. 62719-221-10163  
EPA Est. No. 67545-AZ-1

**Gowan<sup>®</sup>**

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

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Avoid use when bees are actively foraging or if bees are likely to come in contact with wet or re-wetted treated surfaces. Protective information may be obtained from your Cooperative Extension Service. This product may pose a hazard to certain Federally endangered fish species. Refer to the **ENDANGERED SPECIES RESTRICTIONS** section of this label for any geographic restrictions.

## ENDANGERED SPECIES RESTRICTIONS

The use of Lorsban 50-W insecticide in water-soluble bags may pose a hazard to certain Federally endangered fish species.

This product cannot be used on sour cherry trees in the following counties:

**Colorado:** Delta, Larimer and Mesa

**Ohio:** Washington

**Utah:** Emery, Grand, Utah and Washington

**Wisconsin:** Iowa, Pierce, Richland and Vernon

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all **DIRECTIONS FOR USE** carefully before using.

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 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) 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 24 hours.

Longer restricted entry intervals are required for citrus trees, fruit trees, and tree nuts. See specific use directions.

Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early reentry requirements pursuant to 40 CFR Part 170.

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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

## GENERAL INFORMATION

The outer protective package contains five 1-lb. water-soluble bags. Do not allow bags to become wet prior to adding to the spray tank. Wear gloves when handling water-soluble bags. Do not handle with wet gloves. Do not excessively handle water-soluble bags since this may cause breakage. Reseal outer package to protect remaining bags. Bags may become brittle when stored below 32°F. Handle carefully to avoid breakage.

Lorsban 50-W in water-soluble bags is designed for use as a cover or foliar spray to control various pests. The pests controlled are listed in the accompanying tables. Generally Lorsban 50-W is compatible with insecticides, miticides and fungicides commonly recommended for agricultural crops except for alkaline materials such as Bordeaux mixture and lime. Prepare a small amount of the spray mixture and check for compatibility before mixing a large volume of spray.

Test compatibility of the intended tank mixture before adding Lorsban 50-W to the spray or mix tank. Add proportionate amounts of each ingredient to a pint or quart jar, cap, shake and let set 15 minutes. Formation of precipitates that do not readily redisperse indicates an incompatible mixture that should not be used.

## MIXING DIRECTIONS

Lorsban 50-W mixes readily with water to form a suspension. Do not apply Lorsban 50-W (in water-soluble bags) with liquid fertilizer or oil as a carrier. Fill the spray tank 1/3 full of water. Activate the agitation system. Add the required number of water-soluble bags to the spray tank. Complete filling the spray tank while the bags dissolve and the Lorsban 50-W disperses. For best results, add all Lorsban 50-W in the water-soluble bags to the water before any other tank mix ingredients are added. Before beginning to spray, make sure the Lorsban 50-W has dispersed and the water-soluble bags have dissolved.

**Note:** Depending on the water temperature and degree of agitation, the bags and Lorsban 50-W should completely be dispersed within approximately 5 minutes from the time they were added to the water. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture. Lorsban 50-W contains a wetting agent. Additional wetting agents, spreaders or stickers are not necessary and should only be used if previous experience with the combination indicates that undesirable crop safety effects will not occur under current conditions of use.

## APPROVED USES

Use Lorsban 50-W at the dosages indicated by application as a foliar spray to control pests listed in the following tables. Where a rate range is listed in the use directions, use the higher rate for more severe infestations. Mix the required dosage in sufficient water to ensure adequate coverage and apply as a concentrate or dilute spray using conventional, power-operated ground spray equipment or by aircraft (fixed-wing or helicopter). For dilute sprays applied to tree fruits and nuts, mix the required dosage in sufficient water to allow for spray to run off. For concentrate sprays, apply an equivalent amount of Lorsban 50-W per acre. Treat when pests appear or in accordance with local conditions. Mow or beat down orchard blooming weed cover tops before applying spray to tree fruit crops to reduce hazard to bees. This step is especially important in relation to early spring cover sprays when morning conditions may be wet from dew. Lorsban 50-W will perform best in an almond or walnut pest control program that includes winter sanitation (removal of mummy nuts) and regular monitoring of target pests. To suppress pecan leaf scorch mite on pecans, use in a preventative program. For best pecan *Phylloxera* control, use two applications 7 to 10 days apart starting at bud swell and ending by early leaf expansion. For ant control on pecans, do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor. Consult your state agricultural experiment station, certified pest control advisor, or extension service specialist for specific use information in your area.

## APPLES

Use Lorsban 50-W to control the pests listed in the following table at the rates indicated.

### Use And Dosage Recommendations

Crop and Geographic Location	Pests Controlled†	Dosage Recommendations	Remarks
<b>Apples (All Areas)</b>	Climbing Cutworm, Dogwood Borer (trunk spray), Obliquebanded Leafroller, Pandemis Leafroller, Rosy Apple Aphid, San Jose Scale,	3 lbs./acre (three 1 lb. bags)	Apply only as a dormant or delayed dormant spray or foliar application through bloom stage. Additional wetting agents, spreaders or stickers are not necessary and should only be used if previous experience with the combination indicates that undesirable fruit finish effects will not occur under current conditions of use.
	<b>Restrictions for Apples (All Use Areas)</b> <ul style="list-style-type: none"> <li>• Make no more than 8 applications per season.</li> <li>• Do not foliar apply to apples post-bloom.</li> <li>• Do not allow livestock to graze in treated orchards.</li> <li>• Do not break individual bags. If the tank mix rate of 1½ lbs./acre is to be used, mix the total spray in 2 acre increments to avoid the need for dividing individual bags.</li> </ul> <b>Additional Restrictions (By Geographic Location) Worker Restricted Entry Interval:</b> <ul style="list-style-type: none"> <li>• Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days unless PPE required for early entry is worn.</li> <li>• In California: Do not do work involving contact with trees within 2 days after treatment.</li> </ul>		

## CITRUS CROPS

Use Lorsban 50-W at the rates indicated for specific pests according to directions for designated geographic areas. Use the lower rates for light infestations and increase the dosage for heavier infestations.

Where recommended, a petroleum spray oil approved for use on citrus trees may be added to dilute spray mixtures at a rate of up to 1.8 gal. per 100 gal. of finished spray to improve control of aphids, mealybugs, scale insects and thrips (see **MIXING DIRECTIONS**). Treat when insects become a problem or in accordance with the local spray schedule recommended by your state extension service specialist.

Lorsban 50-W may be applied in tank mixtures with ethion†, dicofol, Agri-Mek® †, or Vendex® (†Not registered in California). See **MIXING DIRECTIONS** for further instructions. Read and carefully follow all applicable directions, restrictions and precautions on labeling of products used in combination with Lorsban 50-W.

### Precautions

Observe local use recommendations for tank mix combinations especially in regard to application of Lorsban 50-W plus spray oil. Consult with a county farm advisor, county agency, extension service personnel, agricultural commissioner, pest control advisor or local Gowan representative for information applicable to your local area.

Lorsban 50-W is highly toxic to bees exposed to direct treatment and should not be applied when bees are actively visiting the area. During the bloom period in California and Arizona, apply from one hour after sunset until two hours before sunrise.

### Use and Dosage Recommendations

Crop	Geographic Location	Pest	Dosage of Lorsban 50-W (lbs./acre)	Dilute Spray Volume (gals./acre) ground:	Remarks	
<b>Grapefruit, Lemon, Orange and other citrus fruit</b>	California and Arizona	Aphids, Katydid, Lepidopterous Larvae, Avocado Leafroller, Cutworms, Fruittree Leafroller, Orange Tortrix, Western Tussock Moth	2-4 (two to four 1 lbs. bags)	100-750	Do not use a spray concentration of Lorsban 50-W of less than ½ lb. per 100 gals. of finished spray.  <b>Additional Precautions for California and Arizona:</b> Lorsban 50-W should not be used in combination with spray oil when temperatures are expected to exceed 95°F for several consecutive days after treatment. Do not apply during the months of December, January and February.	
		Scale Insects: (Black, Brown Soft, California Red)	8-12 (eight to twelve 1 lbs. bags)	100-2400		
		Thrips (suppression), Mealybugs	6-12 (six to twelve 1 lb. bags)	100-750		
	Florida	Aphids, Grasshoppers <sup>1</sup> , Orange Dogs, Mealybugs, Scale Insects: (Snow, Florida Red, Purple, Long, Chaff, Black, Brown Soft)	2-7 (two to seven 1 lb. bags)	100-1400		Do not use a spray concentration of Lorsban 50-W of less than ½ lb. per 100 gals. of water per acre.
		Citrus Rust Mites	4-7 (four to seven 1 lb. bags)	100-700		Do not use a spray concentration of Lorsban 50-W of less than 1 lb. per 100 gals. of water per acre.
<sup>1</sup> Lubber Grasshoppers must be controlled when they are small (less than 1 inch in length) by direct contact with the spray.						

**Use and Dosage Recommendations – Citrus Crops (continued)**

Crop	Geographic Location	Pest	Dosage of Lorsban 50-W (lbs./acre)	Dilute Spray Volume (gals./acre) ground:	Remarks
Grapefruit, Lemon, Orange and other citrus fruit	Texas	Aphids, Cutworms, Katydid, Mealybugs, Scale Insects: (Brown Soft, California Red, Chaff), Citrus Red Mite (suppression)	4-7 (four to seven 1 lb. bags)	200-700	Do not use less than 1 lb. of Lorsban 50-W per 100 gals. of finished spray in dilute applications.
Small transplanted Grapefruit, Lemon, Orange and other citrus fruit trees	Texas	Aphids, Cutworms, Katydid, Mealybugs, Scale Insects: (Brown Soft, California Red, Chaff)	maximum of 7 (no more than seven 1 lb. bags)	(see Remarks)	Apply Lorsban 50-W at a rate of 1 oz./1 gal. of water with a backpack sprayer. Apply to runoff.
<p><b>Restrictions for Citrus Crops (All Use Areas)</b></p> <ul style="list-style-type: none"> <li>Do not apply more than 2 applications or more than 15 lbs. of Lorsban 50-W per acre per year.</li> <li>Do not make a second foliar application within 30 days after the first application.</li> <li>Do not treat within 21 days of harvest for applications up to 7 lbs. of Lorsban 50-W per acre or within 35 days of application of rates above 7 lbs. per acre.</li> <li>Do not allow livestock to graze in treated areas.</li> <li>Do not apply with liquid fertilizer or oil as a carrier.</li> <li>Do not apply when trees are stressed by drought or high temperatures.</li> </ul> <p><b>Additional Restrictions (Worker Restricted Entry Interval)</b></p> <ul style="list-style-type: none"> <li>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 5 days unless PPE required for early entry is worn.</li> </ul>					

**BRASSICA (COLE) CROPS**

Use Lorsban 50-W to control the pests listed in the following table at the rates indicated.

**Use and Dosage Recommendations**

Crop	Insects Controlled	Dosage Lorsban 50-W	Remarks
Brassica (cole) Broccoli Brussels sprouts Cabbage Cauliflower Collards Kale Kohlrabi	Cabbage Aphid, Cutworms, Imported Cabbageworm, Striped Flea Beetle (adult), Armyworms (including Beet Armyworm), Diamondback Moth <sup>1</sup>	2 lbs./acre (two 1 lb. bags)	For aerial applications, apply in a minimum of 5 gals. of water per acre. Control may be reduced at low spray volumes. Tank mixing is recommended only if previous experience indicates that the combination will not result in phytotoxicity under the current conditions of use and the other pesticides and spray adjuvants are registered for this use <sup>2</sup> . Read and carefully follow all applicable directions, restrictions and precautions on labeling for other products used in combination with Lorsban 50-W.
<p><b>Restrictions for Brassica (cole) Crops (All Use Areas)</b></p> <ul style="list-style-type: none"> <li>Do not apply within 21 days before harvest.</li> <li>Make no more than 6 applications per season.</li> <li>To avoid phytotoxicity in brassica crops, do not treat plants that are under stress from extreme heat and/or lack of moisture.</li> </ul>			

<sup>1</sup>Significant organophosphate insecticide resistance has been reported for diamondback moth populations in Texas. Lorsban 50-W will not control organophosphate-resistant populations of diamondback moth. Consult your local extension service for resistance management information.

<sup>2</sup>For regional information regarding a specific tank mix, contact your local Gowan representative. Tank mixes with Thiodan 3EC, Thiodan 50WP or cottonseed oil are not recommended. Refer to the **GENERAL INFORMATION** section of this label for directions on testing tank mix compatibility.

**NUT CROPS**

Lorsban 50-W may also be used on almonds and walnuts as a dormant/delayed dormant treatment applied at the dosages indicated in a dilute or concentrate spray. Proper equipment must be used to obtain complete coverage of the entire bark area. If scale infestations are severe, dilute sprays should be used to ensure complete coverage. Do not use oil with Lorsban 50-W on walnuts. Because dry or cold conditions may cause Lorsban 50-W plus oil sprays to infuse trees resulting in bud damage or drop, do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.

**Use and Dosage Recommendations – Nut Crops**

Crop	Insects Controlled	Dosage Lorsban 50-W	Remarks
Almonds	Navel Orangeworm, Peach Twig Borer, San Jose Scale	4 lbs./acre (four 1 lb. bags)	Make only one dormant/delayed dormant spray application and no more than three foliar spray applications on almonds per season, one dormant/delayed dormant spray application and no more than two foliar spray applications on walnuts per season, and no more than three foliar spray applications on filberts per season.
Walnuts	Codling Moth, Walnut Scale, Walnut Husk Fly	4 lbs./acre (four 1 lb. bags)	
Filberts	Eyespotted Bud Moth, Filbert Aphid, Filbert Leafroller, Filbertworm, Obliquebanded Leafroller, Omnivorous Leaf-tier, Winter Moth	3 or 4 lbs./acre (three or four 1 lb. bags)	
<p><b>Restrictions for Almonds, Walnuts and Filberts (All Use Areas)</b></p> <ul style="list-style-type: none"> <li>Do not apply within 14 days of harvest.</li> <li>Do not allow livestock to graze in treated orchards.</li> <li>Do not apply as a dormant spray application on almonds in the following counties in California: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo and Yuba.</li> </ul> <p><b>Additional Restrictions (Worker Restricted Entry Interval)</b></p> <ul style="list-style-type: none"> <li>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 2 days unless PPE required for early entry is worn.</li> </ul>			
Pecans	Black Pecan Aphid, Hickory Shuckworm, Pecan Leaf Scorch Mite (suppression)	2 lbs./100 gals. (two 1 lb. bags)	
	Pecan Nut Casebearer, <i>Phylloxera</i> spp., Fall Webworm, Spittlebug	1 lb./100 gals. (one 1 lb. bag)	
	Fire Ants and other ant species (orchard floor)	2 lbs./acre (two 1 lb. bags)	
<p><b>Restrictions for Pecans (All Use Areas)</b></p> <ul style="list-style-type: none"> <li>Make no more than 5 applications per season.</li> <li>Do not apply within 28 days of harvest.</li> <li>Do not allow livestock to graze in treated orchards.</li> </ul> <p><b>Additional Restrictions (Worker Restricted Entry Interval)</b></p> <ul style="list-style-type: none"> <li>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 2 days unless PPE required for early entry is worn.</li> </ul>			

**SOUR CHERRIES**

Use Lorsban 50-W to control the pests listed in the following table at the rates indicated.

**Use and Dosage Recommendations**

Crop	Insects Controlled	Dosage Lorsban 50-W	Remarks
Sour Cherries	Borers: (American Plum, Lesser Peachtree, Pacific Flatheaded, Peach Twig, Peachtree, Shothole), Climbing Cutworm, Green Fruitworm, Leafrollers: (Fruittree, Obliquebanded, Pandemis, Redbanded), Lesser Appleworm, Tarnished Plant Bug, Moth: (Eyespotted Bud, Mineola), Scale: (European Fruit Lecanium, San Jose), Stink Bug	2 or 3 lbs./acre (two or three 1 lb. bags)	Refer to the <b>ENDANGERED SPECIES RESTRICTIONS</b> section of this label for geographic restrictions on the use of Lorsban 50-W on sour cherries.
	Black Cherry Aphid, Cherry Fruit Fly, Plum Curculio, Rose Chafer	3 lbs./acre (three 1 lb. bags)	
<p><b>Restrictions for Sour Cherries (All Use Areas)</b></p> <ul style="list-style-type: none"> <li>Make no more than 8 applications per season.</li> <li>Do not apply within 14 days of harvest.</li> <li>Do not allow livestock to graze in treated orchards.</li> <li>In California, do not do work involving contact with trees within 2 days after treatment.</li> <li>Do not use on sweet cherries.</li> </ul> <p><b>Additional Restrictions (Worker Restricted Entry Interval)</b></p> <ul style="list-style-type: none"> <li>Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days unless PPE required for early entry is worn.</li> </ul>			

#### **STORAGE AND DISPOSAL**

**DO NOT** contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**STORAGE:** Store in original container in secured dry storage area. Bags may become brittle when stored below 32°F. Handle carefully to avoid breakage. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 100°F for extended periods of time. If container is damaged or spill occurs, use product immediately or dispose of product and damaged container as indicated below.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** When all bags are used, dispose of empty package in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**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.**

#### **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.

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