



Dow AgroSciences

# Lorsban™ 50W Insecticide

GROUP		INSECTICIDE
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- This product is not to be used in and around homes or other residential areas such as parks, school grounds, playing fields. It is not for use by homeowners or other uncertified users.
- Contains Chlorpyrifos

AGRICULTURAL

READ THE LABEL AND BOOKLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

GUARANTEE: chlorpyrifos                      50%  
wetable powder

REGISTRATION NO. 20944 PEST CONTROL PRODUCTS ACT

**DANGER**  **POISON**

**MAY BE FATAL IF SWALLOWED**  
**HARMFUL IF ABSORBED THROUGH SKIN**  
**MAY CAUSE EYE IRRITATION**

NET CONTENTS: 10 kg (4 over-packs each containing 5 X 500 g water-soluble packets)

INDIVIDUAL SOLUBLE BAGS CANNOT BE SOLD SEPARATELY

**Dow AgroSciences Canada Inc.**  
2400, 215 – 2<sup>nd</sup> Street S.W.  
Calgary, Alberta  
T2P 1M4  
1-800-667-3852

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**PRECAUTIONS**  
**MAY BE FATAL IF SWALLOWED**  
**HARMFUL IF ABSORBED THROUGH SKIN**  
**MAY CAUSE EYE IRRITATION**  
**KEEP OUT OF REACH OF CHILDREN**

Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. The use of a mask or respirator of a type approved by CSA or NIOSH for filtering spray mists and organic vapours, safety glasses, impervious gloves and long-sleeved clothing is recommended when loading the spray tank, handling the powder or if application equipment capable of producing a fine mist (e.g., airblast) is involved. Remove contaminated clothing and wash before reuse. Discard contaminated leather articles. Wash thoroughly with soap and water after handling and before eating or smoking. Do not re-enter treated areas until 24 hours after treatment. If early re-entry into treated areas is required, workers must wear long pants, chemical resistant gloves, work boots and a hat. Workers shall be given oral warning of the re-entry interval. Warning shall consist of:

1. The location and description of the treated area.
2. The time during which entry is restricted.
3. Instructions not to enter the treated area until the re-entry interval has expired.

**PRECAUTIONS FOR MIXERS/LOADERS**

Mixers/loaders must wear:

- a long-sleeved shirt and long pants
- socks and shoes
- chemical-resistant gloves
- chemical-resistant apron

Mixers and loaders using water-soluble packets must have immediately available for use in emergency (such as a broken package, spill or equipment breakdown) additional PPE. These PPE include coveralls and chemical-resistant footwear and a non-powered air purifying respirator equipped with an -R or -P series filter.

**PRECAUTIONS FOR APPLICATORS**

Do not apply with high-pressure handwand equipment.

Applicators using airblast equipment with a closed cab must wear:

- a long-sleeved shirt and long pants
- socks and shoes
- chemical-resistant gloves when leaving cab for clean-up and repair (gloves must be removed and left outside when re-entering the cab)

Applicators using airblast equipment with an open cab must wear:

- a long-sleeved shirt and long pants
- chemical-resistant coveralls and head protection
- socks and shoes
- chemical-resistant gloves
- an air purifying respirator with an -R or -P series filter

Applicators using ground application equipment with a closed cab must wear:

- a long-sleeved shirt and long pants
- chemical-resistant gloves when leaving cab for clean up and repair (gloves must be removed when re-entering the cab)
- socks and shoes

Applicators using ground application equipment with an open cab must wear:

- coveralls over a long-sleeved shirt and long pants
- chemical-resistant gloves
- socks and shoes

Applicators using handheld equipment must wear:

- a long-sleeved shirt and long pants
- chemical-resistant coveralls and head protection (if spray is upwardly directed)
- chemical-resistant footwear and socks
- chemical-resistant gloves
- an air purifying respirator with an -R or -P series filter

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at [www.croplife.ca](http://www.croplife.ca).

### **FIRST AID**

**Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

### **TOXICOLOGICAL INFORMATION**

Chlorpyrifos is an organophosphate that is a cholinesterase inhibitor. Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness, tremors, incoordination, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. In cases of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician.

### **AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

## **ENVIRONMENTAL HAZARDS**

- TOXIC to birds. Any spilled or exposed granules must be incorporated into the soil or otherwise cleaned-up from the soil surface.
- TOXIC to wild mammals. Any spilled or exposed granules must be incorporated into the soil or otherwise cleaned-up from the soil surface.
- Highly TOXIC to bees exposed to direct treatment, drift, or residues on blooming plants. Do not use on flowering crops or weeds.
- TOXIC to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland
- DO NOT apply this product or allow it to drift to flowering crops or weeds if bees are visiting the treatment area. Applicators should inform local bee keepers prior to application if hives are in adjacent fields. Minimize spray drift to reduce harmful effects on bees in habitats close to the application site.

Lorsban 50W Insecticide is also toxic to fish, crustaceans and other aquatic organisms. Do not apply directly to water. Drift and run-off from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Cover or incorporate spills. Keep out of lakes, streams, ponds and other waterways. Do not apply where run-off is likely to occur. Do not apply when weather conditions favour drift from treated areas. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning of equipment.

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g., soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip (buffer zone) between the treated area and the edge of the water body.”

## **STORAGE**

Do not contaminate water, food or feed by storage, by cleaning of equipment or disposal of wastes.

## **DISPOSAL**

1. When all the water-soluble bags are used, make the empty outer package unsuitable for further use.
2. Dispose of the outer package in accordance with provincial requirements.
3. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

## **GENERAL INFORMATION**

Use Lorsban 50W Insecticide for the control of subterranean cutworms in green peppers, cucumbers, potatoes, Chinese cabbage, cabbage, broccoli, Brussels sprouts, cauliflower, rutabagas, onions (excluding bunching onions), celery, carrots, field and sweet corn, root maggots in tobacco and cabbage, strawberry cutworm (crown borer) in strawberries, potato flea beetle and tarnished plant bug in potatoes.

## **GENERAL USE PRECAUTIONS**

- **DO NOT APPLY BY AIR**

## DIRECTIONS FOR USE

Best results will be obtained when application of Lorsban 50W Insecticide is made during the afternoon or early evening. Apply as a broadcast application unless otherwise directed, over the crop in sufficient water to give thorough coverage of the soil surfaces. See preharvest interval table.

**DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty.

**For airblast applications:** Airblast applications are only permitted on peaches and nectarines. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

## Buffer Zones

The buffer zones specified in the following tables are required between the point of direct application and the closest downwind edge of sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), estuarine habitats and marine habitats.

### Field Sprayer Applications <sup>1</sup>

Rate of Application (g a.i./ha)	Buffer Zones (metres) Required for the Protection of Aquatic Habitats With Water Depths Of:		
	< 1 metre	1–3 metre	> 3 metre
Up to 576	50	40	30
Greater than 576, and less than or equal to 1152	55	45	35
Greater than 1152 and up to 2304	60	50	40

<sup>1</sup> Buffer zones are not required for treatments applied as a drench (i.e., drench applications for control of cabbage maggot, onion maggot and seedcorn maggot).

**NOTE:** Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

### Airblast Applications

Rate of Application (g a.i./ha)	Buffer Zones (metres) Required for the Protection of Aquatic Habitats With Water Depths Of:		
	< 1 metre	1–3 metre	> 3 metre
Up to 1725	80	70	55

- **DO NOT** apply this product directly to aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries habitats or marine habitats.
- **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- Application by aircraft is permitted only where specified in the directions for use.
- A plantback interval of 30 days must be observed between application and planting of rotational crops, with the exception of radish, Chinese cabbage, pak choi and cole crops for which no plantback restriction is required.

**PRE-HARVEST INTERVAL: Time between last application and harvest.**

#### **Preharvest Intervals**

<b>Crop</b>	<b>Interval (Days) Between Last Application And Harvest</b>
potato	7
strawberry	20
peaches, nectarines	21
rutabaga	30
cabbage, Chinese cabbage, cauliflower, broccoli, Brussel sprouts	32
green pepper	40
carrot, cucumber, onion	60
celery, corn (field and sweet)	70

#### **Restricted Entry Intervals**

The worker restricted entry level (REI) is 24 hours for all crops except cauliflower (10 days) and peaches and nectarines (4 days).

#### **GENERAL INFORMATION FOR WATER-SOLUBLE PACKETS**

The over-pack contains five 500 g water-soluble packets. Do not allow water-soluble packets to become wet prior to adding to the spray tank. Wear gloves when handling water-soluble packets. Do not handle water-soluble packets with wet gloves. Do not excessively handle water-soluble packets since this may cause breakage. Reseal over-pack to protect remaining water-soluble packets. Water-soluble packets may become brittle when stored below 0° C. Handle carefully to avoid breakage.

#### **MIXING INSTRUCTIONS**

Lorsban 50W Insecticide mixes readily with water to form a suspension. Do not apply Lorsban 50W Insecticide with liquid fertilizer or oil as a carrier. Fill the spray tank one-third full of water. Activate the agitation system. Add the required number of water-soluble packets to the spray tank. Complete filling the spray tank while the water-soluble packets dissolve and the Lorsban 50W Insecticide disperses. Before beginning to spray, make sure the Lorsban 50W Insecticide has dispersed and the water-soluble packets have dissolved. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture. **Note:** Depending on the water temperature and degree of agitation, the water-soluble packets and Lorsban 50W Insecticide should completely be dispersed within approximately 5 minutes from the time they were added to the water. Lorsban 50W Insecticide contains a wetting agent. Do not use additional wetting agents, spreaders or stickers

## DIRECTIONS FOR USE – SITES, PESTS, RATES AND DIRECTIONS

Sites and Pests	Rates and Directions
CORN (FIELD, SWEET)	Do not apply more than 1 application per season. Do not apply within 70 days of harvest. Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 1 day after application.
Black cutworm, darksided cutworm, redbacked cutworm	SEEDLING TREATMENT Apply 1.125-2.25 kg product in 200–400 L/ha. Apply once as a broadcast spray at the 2- to 5-leaf stage of the crop.
STRAWBERRY	Do not apply more than once per season. Ground application only (DO NOT APPLY BY AIRCRAFT). Do not apply within 20 days of harvest. Do not enter treated fields until 1 day after application.
Strawberry cutworm (crown borer)	Apply 1.125 kg product in 2000 L/ha. Apply once as a foliar spray between June 1 and June 15. Large volumes of water are desirable to ensure full wetting of the crown area of the plants.
CELERY, CUCUMBER, PEPPER (GREEN)	Do not apply more than once per season. Do not apply within 70 days of harvest for celery, 40 days of harvest for pepper, or 60 days of harvest for cucumber. Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 1 day after application.
Black cutworm, darksided cutworm, redbacked cutworm	SEEDLING TREATMENT Apply 1.125-2.25 kg product in 200–400 L/ha. Apply once as a broadcast spray at the 2- to 5-leaf stage of the crop.
PAK CHOI, BROCCOLI, BRUSSELS SPROUT, CABBAGE, CAULIFLOWER, CHINESE CABBAGE	Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 1 day after application for pak choi and Chinese cabbages. Do not enter treated fields until 10 days after application for cauliflower, 1 day after application for all other crops. [See also below.]  Do not apply more than once per season. Do not apply within 32 days of harvest to cabbages
Cabbage maggot (CABBAGE only)	Apply 32.5 grams product/100 L. TRANSPLANT WATER TREATMENT: Apply 200 mL of solution with each plant. Do not use starter fertilizers with this product.
Black cutworm, darksided cutworm, redbacked cutworm (for BROCCOLI, BRUSSEL SPROUTS, CABBAGE, CAULIFLOWER, CHINESE CABBAGE)	SEEDLING TREATMENT Apply 1.125-2.25 kg product in 200-400 L/ha. Apply once as a broadcast spray at the 2- to 5-leaf stage of the crop.

RUTABAGA	Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 1 day after application. Do not apply within 30 days of harvest. [See also below.]  Do not apply more than once per season.
Black cutworm, darksided cutworm, rebacked cutworm	SEEDLING TREATMENT Apply 1.125-2.25 kg product in 200–400 L/ha. Apply once as a broadcast spray at the 2- to 5-leaf stage of the crop.
CARROT	Ground application only (DO NOT APPLY BY AIRCRAFT). Do not apply more than once per season. Do not apply within 60 days of harvest. Do not enter treated fields until 1 day after application.
Black cutworm, darksided cutworm, rebacked cutworm	SEEDLING TREATMENT Apply 2.25-4.5 kg product in 200–400 L/ha. Apply as a broadcast spray at the 2- to 5-leaf stage. Use the low rate except under conditions of low soil moisture. Use the high rate if the top 1 cm of soil is dry.
POTATO	Ground application only (DO NOT APPLY BY AIRCRAFT). Do not apply more than once per season. Do not apply within 7 days of harvest. Do not enter treated fields to conduct scouting, hand weeding or irrigation activities until 1 day after application.
Colorado potato beetle (larvae), potato flea beetle, tarnished plant bug	Apply 960 g product in 400–800 L/ha as a foliar spray.
Black cutworm, darksided cutworm, rebacked cutworm	SEEDLING TREATMENT Apply 1.125-2.25 kg product in 200–400 L/ha. Apply once as a broadcast spray when damage first appears.
ONION (bulb, pickling)	Ground application only (DO NOT APPLY BY AIRCRAFT). Do not apply more than once per season. Do not enter treated fields until 1 day after application. Do not apply to bunching onions. [See also below.]  Do not apply within 60 days of harvest.
Black cutworm, darksided cutworm, rebacked cutworm	SEEDLING TREATMENT Apply 2.25-4.5 kg product in 200–400 L/ha. Apply as a broadcast spray at the 2- to 5-leaf stage. Use the low rate except under conditions of low soil moisture. Use the high rate if the top 1 cm of soil is dry.
TOBACCO	Do not apply more than once per season. Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 1 day after application.
Seedcorn maggot	TRANSPLANT WATER TREATMENT Apply 137.5 g product/1000 L. Apply 200 mL of solution with each plant. Keep mixture well agitated. Do not use starter fertilizers with this product.



**Peaches and Nectarines for Control of Oriental Fruit Moth**

**NOTE TO USER:** READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS: The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Dow AgroSciences Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Dow AgroSciences Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Dow AgroSciences Canada Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use(s) described below.

PEACH, NECTARINE	Do not apply more than twice per season. Do not apply within 21 days of harvest. Ground application only (DO NOT APPLY BY AIRCRAFT). Do not enter treated fields until 4 days after application to conduct scouting activities.
Oriental fruit moth	<p><b>Restricted use</b>  <b>NATURE OF RESTRICTION:</b> To be used only in the Oriental Fruit Moth Resistance Management Program in the Regional Municipality of Niagara and Essex County coordinated by the Ontario Ministry of Agriculture and Food and Rural Affairs (OMAFRA). OMAFRA will provide growers with information/training; application training and pest management program advice.</p> <p><b>RESISTANCE MANAGEMENT:</b> Best results will be obtained when application of this insecticide is timed for egg hatch or first instar larvae of first generation Oriental fruit moth, usually around shuck to shuck-split. Growers should consult a local OMAFRA pest management specialist for exact timing of applications. Make 1–2 applications as needed. Apply as ground application only using an airblast sprayer. Direct nozzles of air blast sprayer into the targeted peach or nectarine tree orchard when spraying border rows.</p>

**RESTRICTED USE:** Best results will be obtained when application of Lorsban 50W Insecticide is timed for egg hatch or first instar larvae of first generation Oriental Fruit Moth usually around shuck to shuck-split. Growers should consult a local OMAFRA pest management specialist for exact timing of applications. Make 1-2 applications as needed. Apply as ground application only using an airblast sprayer. Apply 3.5 kg product in 1000-2000 L water per ha (amount of water will vary depending on tree size). One water-soluble packet contains 500 g of Lorsban 50W Insecticide; seven (7) water-soluble packets will treat 1 hectare. Direct nozzles of air blast sprayer into the targeted Peach/Nectarine tree orchard when spraying border rows. Do not apply when the prevailing wind direction will cause drift from treated areas into lakes, ponds or other waterways. The pre-harvest interval for peaches and nectarines is 21 days. Follow the re-entry instructions.

## RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Lorsban 50W Insecticide contains a Group 1B<sup>1</sup> insecticide. Any insect population may contain individuals naturally resistant to Lorsban 50W Insecticide and other Group 1B<sup>1</sup> insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but are specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Lorsban 50W Insecticide or other Group 1B<sup>1</sup> insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Dow AgroSciences Canada Inc. at 1-800-667-3852 or at [www.dowagro.ca](http://www.dowagro.ca).

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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Label Code: CN-20944-008-E  
Replaces: CN-20944-007-E

Specimen Label notes  
Address update