Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2014-2016 LIC. NO.
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LICENSED
HAWAII
DEPT. OF AGRICULTURE
Period 2005-2007 No. 9794.30

Lorsban® 75WG

For control of various insects infesting certain field, fruit, nut, and vegetable crops.

ACTIVE INGREDIENT:
Chlorpyrifos: *O,O-diethyl O-(3,5,6-trichloro-2 pyridinyl) phosphorothioate*..... 75.0%
OTHER INGREDIENTS..... 25.0%
TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING

May Be Fatal If Swallowed Or Inhaled
Do not breathe dust or spray mist. Wear a mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

FIRST AID
Organophosphate

If swallowed: Call a poison control center 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 the poison control center or doctor. Do no give anything by mouth to an unconscious person.

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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT CALL TOLL FREE: 1-888-478-0798

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category H on a EPA-chemical resistance category selection chart.

Mixers and loaders must wear:
- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical-resistant gloves
- Chemical-resistant apron

Applicators using aerial application equipment must wear:
- Long-sleeved shirt and long pants
- Shoes and socks

See Engineering Controls for additional requirements.

All **other handlers** must wear:
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant apron when mixing or loading
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures

A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number TC-21C or a NIOSH-approved respirator with any N, P, or HE filter.

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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

EPA Reg. No. 62719-301-10163
EPA Est. No. 67545-AZ-1

Gowan

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

ENGINEERING CONTROLS

Water soluble packets, when used correctly, qualify as a closed mixing/loading system under the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4)]. Mixers and loaders using water soluble packets must wear the PPE required above for mixer/loaders, and 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 NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, P or HE filter.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

Use of human flaggers is prohibited. Mechanical flagging equipment must be used.

When applicators use closed cab motorized ground equipment in a manner that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(4-6)], then handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, small mammals and birds. Do not apply directly to water, 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 water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

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 applying.

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). The REI for each crop is listed in the directions for use associated with each crop.

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

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures

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

GENERAL INFORMATION

Lorsban* 75WG insecticide is a water dispersible granule for use in listed crops. Application rates for various crops and pests are provided in the accompanying tables.

GENERAL USE PRECAUTIONS

Handling Precautions for Water Soluble Packets: Do not remove water soluble packet from the overpack except for immediate use. Do not allow water soluble packets to come into contact with water prior to use. Do not handle water soluble packets with wet hands or wet gloves. Do not open water soluble packets. Partial use of packets is not allowed. Carefully reseal package containing unopened water soluble packets and protect package from moisture.

Lorsban 75WG is compatible with commonly recommended insecticides, miticides, and fungicides. Lorsban 75WG is not compatible with alkaline materials such as Bordeaux mixture and lime or with mixtures containing boron. Do not apply with micronutrient solutions containing boron. Spray equipment used to apply any spray mixture containing boron should be thoroughly cleaned before applying this product.

Application with Liquid Fertilizer: Lorsban 75WG may be applied in tank mix combination **only** with 28-0-0 liquid fertilizer. Lorsban 75WG is **not compatible** with other forms of liquid fertilizer. See Mixing with Liquid Fertilizer section of this label.

It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing.

Insect control may be reduced at low spray volumes under high temperature and wind conditions.

Some reduction in insect control may occur under unusually cool conditions.

Flood Irrigation: To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of a soil surface or foliar application of Lorsban 75WG.

SPRAY DRIFT MANAGEMENT

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland sites, woodlands, pastures, rangelands, or animals.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making a decision to apply this product.

Observe the following precautions when spraying Lorsban 75WG adjacent to permanent bodies of water such as rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries, and commercial fish ponds.
The following treatment setbacks or buffer zones must be utilized for applications around the above-listed aquatic areas with the following application equipment:

Application Method	Required Setback (No-Spray Buffer Zone)
ground boom	25 feet
chemigation	25 feet
orchard airblast	50 feet
aerial (fixed wing or helicopter)	150 feet

Making applications when wind is blowing away from sensitive areas is the most effective way to reduce the potential for adverse effects.
The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from applications.
Aerial Application
1. The boom width must not exceed 75% of the wingspan or 90% of the rotor blade.
2. Nozzles must always point backward, parallel with the air stream, and never be pointed downward more than 45 degrees.
3. Nozzles must produce a medium or coarser droplet size (255-340 microns volume median diameter) per ASAE Standard 572 under application conditions. Airspeed, pressure, and nozzle angle can all effect droplet size. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
4. Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
5. Use upwind swath displacement and apply only when wind speed is 3 to 10 mph as measured by an anemometer. Do not apply product when wind speed exceeds 10 mph.
6. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.
7. Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.
Aerial Drift Reduction Advisory
This section is advisory in nature and does not supercede the mandatory label requirements.
Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).
Controlling Droplet Size:
- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
Application Height: Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).
Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.
Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.
Temperature Inversions: Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Ground Boom Application
The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from ground applications.
1. Choose only nozzles and pressures that produce a medium or coarse droplet size (255-400 microns volume median diameter), per ASAE Standard 572. See manufacturer's catalog or USDA/NAAA Applicator's Guide for spray size quality ratings.
2. Apply with nozzle height no more than 4 feet above the ground or crop canopy.
3. Do not apply product when wind speed exceeds 10 mph as measured by an anemometer.

Orchard Airblast Application

The following mandatory spray drift **best management practices** are required to reduce the likelihood of off-target drift movement from airblast applications.

1. Nozzles must be directed so spray is not projected above the canopies.
2. Apply only when wind speed is 3 to 10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.
3. Outward pointing nozzles must be shut off when turning corners at row ends.

The applicator should take into account the following **best management practices** to reduce off-site spray drift. This section is advisory and does not supercede mandatory label requirements.

1. Number of nozzles, nozzle orientation and spray volume, air speed and wind direction are key factors in adjusting airblast spray delivery to match the height and density of the crop canopy. Airblast equipment should be adjusted to provide uniform coverage while minimizing the amount of spray movement over-the-top or completely through the crop canopy.
   - High air volumes deliver spray more efficiently than air at high speed. Reducing forward travel speed decreases the air speed necessary to deliver the spray to the top of the crop canopy.
   - Use air guides along with the number and orientation of spray nozzles to achieve the desired spray coverage and directional control.
2. The following steps should be taken to minimize drift and the amount of non-target spray:
   - Orient nozzles and adjust air speed/volume/direction to minimize spray movement over-the-top and avoid forcing the spray completely through the crop canopy.
   - Shut off spray delivery when passing gaps in crop canopy within rows.
   - Spray the outside rows of orchards from outside in, directing the spray into the orchard and shutting off nozzles on the side of the sprayer away from the orchard.
   - When treating smaller trees, vines or bushes, shut off top nozzles to minimize over-the-top spray movement.

APPLICATION GUIDELINES

Broadcast Foliar Application

Apply with conventional power-operated spray equipment using nozzles and spray pressures recommended for insecticides. Apply Lorsban 75WG in a spray volume of not less than 2 gallons per acre for aerial application equipment (fixed wing or helicopter) or not less than 10 gallons per acre for ground equipment, unless otherwise specified. Increase spray volume to ensure adequate coverage with increased density and height of crop canopy. See Spray Drift Precautions section for recommendations on droplet size.

Ground Application: Orient the boom and nozzles so that uniform coverage is obtained. The swath width should not be wider than the boom. Follow nozzle manufacturer's recommendations for insecticide nozzles with respect to nozzle type, pressure, and spacing.

Broadcast Soil Application

Apply with conventional power-operated spray equipment that will apply the product uniformly to the soil surface. Use nozzles that produce medium or coarse droplets (235-400 microns). Unless otherwise indicated, a spray volume of 10 or more gallons per acre is recommended. For band application, use proportionally less spray volume.

Aerial Application

Use a minimum spray volume of 2 gallons per acre and follow recommendations for **best management practices** for aerial application, above.
Marking of swaths by flagging, permanent markers or use of GPS equipment is recommended.

Chemigation (Sprinkler Irrigation)

Lorsban 75WG may be applied to the following crops through sprinkler irrigation equipment: alfalfa, almond (orchard floors only), citrus (orchard floors only), corn (field and sweet), cotton, cranberries, mint, sorghum, soybeans, sugar beets, orchard floors (almond, pecan and walnut), walnut (orchard floors only), or other crops as specified in Dow AgroSciences supplemental labeling. Do not apply this product by chemigation unless specified in crop-specific directions in this label or Dow AgroSciences supplemental labeling. Do not apply to labeled crops through any other type of irrigation system.
Note: Unless otherwise indicated in specific use directions, the application rates for chemigation are the same as those recommended for broadcast application.

Special Use Directions for Sprinkler Irrigation

These use directions must be followed when Lorsban 75WG is applied through sprinkler irrigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues, and dispose of the residues according to state and federal laws. Flush the injector with soap and water. Determine the amount of Lorsban 75WG required in relation to application rate and acreage to be treated. Mix according to instructions in the Mixing Directions section and bring mixture to desired volume. Do not add crop oil when Lorsban 75WG is applied by chemigation. Maintain continuous agitation during mixing and throughout the application period. Set the sprinkler system to deliver the desired inches of water per acre. Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injector system according to Calibration instructions in the following Special Use Precautions section. The mixture containing Lorsban 75WG must be injected continuously and uniformly into the irrigation water line as the irrigation system is moving to ensure uniform application at the correct rate. Maintain vigorous agitation during both mixing and throughout application to ensure uniform suspension. When the application is finished, flush and clean the entire irrigation and injector system prior to shutting down the system.

Special Use Precautions for Sprinkler Irrigation

The following use precautions will result in a safe and successful application of mixtures containing Lorsban 75WG.

1. Apply this product only through the following sprinkler irrigation systems: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, micro sprinkler, or hand move. Do not apply this product through any other type of irrigation system. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.
5. 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.
6. 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 back flow. Refer to the American Society of Agricultural Engineer's Engineering Practice 409 for more information.
7. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

8. 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.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
10. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. 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. The metering pump must provide a greater pressure than that of the irrigation system at the point of injection. The pump must meet Section 675 for "Electrically Driven or Controlled Irrigation Machines" NEC 70 requirements.
12. To ensure uniform mixing of the insecticide into the water line, inject the mixture through a nozzle placed in the fertilizer injection port or by way of a dip tube into the center of the line ahead of an elbow or tee so turbulence will assist in mixing. It is suggested that the injection point be higher than the insecticide tank to prevent siphoning.
13. The tank holding the insecticide mixture should be large enough to allow the system to complete the application with 1 filling. It must be free of rust, fertilizer, sediment, and foreign material, and equipped with an in-line strainer situated between the tank and the injector pump.
14. **Calibration:** In order to calibrate the irrigation system and injector to apply the mixture of Lorsban 75WG, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of insecticide mixture needed to cover the desired acreage. Divide the total gallons of insecticide mixture needed by the number of minutes to cover the treatment area. This value equals the gallons per minute output that the injector must deliver. Convert the gallons per minute to milliliters or ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the timed output of the injector pump be checked at least twice before operation, and the system monitored during operation.
15. Do not apply when wind speed favors drift beyond the area intended for treatment. End guns must be turned off during the application, if they spray nontarget areas.
16. Do not allow irrigation water to collect or runoff and pose a hazard to livestock, wells, or adjoining crops.
17. Reentry: Follow requirements in the Agricultural Use Requirements section or crop-specific sections of this label.
18. Do not apply through sprinkler systems that deliver a low coefficient of uniformity such as certain water drive units.

MIXING DIRECTIONS

Packet Factors (Acres per Packet) for Various Application Rates of Lorsban 75WG.

Lorsban 75WG Application Rate (lb/acre)	Acres Treated per Water Soluble Packet (1.33 lb/Packet)
0.25	5.32
0.33	4.00
0.50	2.66
0.67	2.00
0.75	1.77
1.00	1.33
1.25	1.06
1.33	1.00
1.50	0.87
1.67	0.80
1.75	0.75
2.00	0.67

Lorsban 75WG Application Rate (lb/acre)	Acres Treated per Water Soluble Packet (1.33 lb/Packet)
2.25	0.60
2.33	0.57
2.50	0.53
2.67	0.50
2.75	0.48
3.00	0.44
4.00	0.33
5.00	0.27
6.00	0.22
7.00	0.19
8.00	0.17

To calculate the number of water soluble packets for your spray mix:

1. Determine the number of acres to be treated.
2. Locate proper application rate in the crop-specific rate table.
3. Divide the total number of acres to be treated by the acres treated per water soluble packet corresponding to the desired rate. (See table above for broadcast application rates and corresponding acres per packet.)

   Sample Calculations:

   - If the desired application rate is 0.5 lb/acre, then acres treated/packet = 2.66.
   - Assuming 17 acres to be treated, 17 acres divided by 2.66 acres/packet = 6.39 packets.

   Note: If the resulting number of packets is not a whole packet, round up or down to the nearest whole number of packets and check to make sure that the resulting number of acres/packet falls within the desired rate range for the application.

Mixing – Lorsban 75WG Alone

Lorsban 75WG is a water dispersible granule formulation and may be mixed with water or 28-0-0 liquid fertilizer. Thorough mixing is required. To prepare the spray mixture:

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load. (For use with liquid fertilizer, follow Liquid Fertilizer Mixing Instructions below.)
2. Start agitation. **Maintain agitation throughout mixing and application.**
3. Add the required number of water soluble packets (product in transparent film) directly into the spray tank. **(See special pre-mixing instructions below for Mixing of Lorsban 75WG in liquid fertilizer solutions)**. Water soluble packets will float on the surface until the water soluble film dissolves and releases the product. Handling packets with hands should be minimized. **Important: Do not open water soluble packets.**
4. Continue agitation and complete filling the tank.
5. Before spraying, make sure packets have completely disintegrated and product is thoroughly and uniformly mixed. Depending on the water temperature and the degree of agitation, the packet and product should be completely dispersed within 10 minutes from the time they were added to the water.

To ensure a uniform spray mixture, continuous agitation is required during mixing and spraying. Apply the same day as mixing, especially at high concentrations (low carrier rates). If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying.

Lorsban 75WG in Tank Mix

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Apply within the same day of mixing. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying, especially if held overnight. Settled materials may be more difficult to resuspend than when originally mixed.

In liquid sprays, this product is **not compatible with mixtures containing boron**. Spray equipment used to apply any spray mixture containing boron should be thoroughly cleaned before applying this product.

Note: When tank mixing Lorsban 75WG with other products, a compatibility test (jar test) using relative proportions of tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. When tank mixing, always **mix Lorsban 75WG first,** allowing time for complete dispersion and uniform mixing, before adding other products.

Mixing Order for Tank Mixes: Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water or liquid fertilizer solution. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products. **Add different formulation types in the following order:** First, add Lorsban 75WG or other dry flowables. If mixing with liquid fertilizer, pre-mix or slurry first (see Liquid Fertilizer Mixing Instructions below). Then add in succession other dry flowables, wettable powders, aqueous suspensions, flowables and liquids. Maintain agitation and fill spray tank to 3/4 of total spray volume. Finally, add emulsifiable concentrates and any solutions and finish filling the spray tank.

Mixing Instructions for Liquid Fertilizer

Lorsban 75WG may be mixed only with 28-0-0 liquid fertilizer. Lorsban 75WG is not compatible with other forms of liquid fertilizer. Prepare a slurry mixture of Lorsban 75WG prior to adding to liquid fertilizer (see premixing/slurry instructions below). Continuous agitation is required. If needed, use a compatibility agent to ensure that Lorsban 75WG mixes properly. The use of an appropriate compatibility agent is especially important when tank mixing Lorsban 75WG and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizer. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are difficult to disperse. **A jar test, utilizing relative proportions of the tank mix ingredients, is recommended prior to mixing with liquid fertilizer.**

Pre-mixing (Slurry) Prior to Tank Mixing or Mixing with Liquid Fertilizer: Pre-mixing with water is **required** when Lorsban 75WG is applied with liquid fertilizer as carrier. For best results, use a minimum of 5 gallons of water per 1.3 pounds of Lorsban 75WG. Stir gently to disperse granules and create a uniform mixture. Continue stirring until a uniform mixture is obtained and then add to the liquid fertilizer through a screen of 20-35 mesh. This procedure is needed to assure good initial dispersion of these products in liquid fertilizer or water.

CROP USES

ALFALFA

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a broadcast foliar spray using aircraft or ground spray equipment. Use a higher rate in the rate range when there is increased pest pressure. Use a minimum spray volume of 2 gallons per acre (gpa) for aerial application (fixed wing or helicopter) or 10 gpa for ground equipment. Use a spray volume of 5 gpa or more by air or up to 20 gpa by ground when foliage is dense and/or pest population is high and/or under high temperature and wind conditions. Some reduction in insect control may occur under unusually cool conditions.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems to control listed foliar pests. Use recommended broadcast application rates. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
corn rootworm adults (spotted cucumber beetle) grasshoppers leafhoppers (1)	0.33 - 0.67
alfalfa blotch leafminer alfalfa caterpillar alfalfa weevil (larvae and adults) armyworms blue alfalfa aphid cutworms Egyptian alfalfa weevil (larvae and adults) (2) pea aphid plant bugs spittlebugs spotted alfalfa aphid (suppression) (3) (not for use in California)	0.67 - 1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. A stubble spray may be applied to control **leafhopper** when present.
2. **In California:** For Egyptian alfalfa weevil control, apply the specified dosage in a minimum of 5 gallons of water per acre when larvae are actively feeding.
3. Use a higher rate in the rate range to control spotted alfalfa aphid in Nevada.

Specific Use Precautions:

- Lorsban 75WG should not be tank mixed with other pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination to be non-injurious to alfalfa under current conditions of use. Some phytotoxic symptoms may be observed on young, tender, rapidly growing alfalfa treated with Lorsban 75WG. Alfalfa will outgrow these symptoms and no yield loss should be expected.
- This product is highly toxic to bees exposed to direct treatment on alfalfa. Do not apply if nearby bees are clustered outside of hives and bees are foraging. Protective information may be obtained from your Agricultural Extension Service.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 75WG.

Specific Use Restrictions:

- **Preharvest Interval:** Do not cut or graze alfalfa within 7 days after application of 0.33 lb per acre of Lorsban 75WG, within 14 days after application of 0.67 lb per acre, or within 21 days after application of rates above 0.67 lb per acre.
- Do not make more than 4 applications per season of Lorsban 75 WG or other product containing chlorpyrifos or apply any product containing chlorpyrifos more than once per alfalfa cutting.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.

ASPARAGUS

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a ground broadcast foliar spray. Use sufficient spray volume to ensure thorough coverage of crop foliage.

Target Pests	Lorsban 75WG (lb/acre)
asparagus aphids (1) asparagus beetles (1) cutworms (2)	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. For **asparagus beetles** and **asparagus aphids**, apply during the fern stage when field counts or crop injury indicates that damaging pest populations are developing or present.
2. For **cutworms**, it is preferable to apply when the soil is moist and worms are active on or near the soil surface.

Specific Use Restrictions:

- Do not make more than 1 preharvest application per season or apply within 1 day of harvest.
- Do not make more than 2 postharvest applications during the fern stage.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- For use only in the midwest and Pacific northwest states.

CHRISTMAS TREES (NURSERIES AND PLANTATIONS)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Unless otherwise indicated, apply as a foliar spray using power-operated ground equipment. Thorough coverage of foliage is essential. Use a minimum 10 gpa of finished spray with ground equipment. Use higher volume of finished spray, 20 gpa or more, when foliage is dense and/or pest density is high and/or under high temperature and wind conditions.

Target Pests		Lorsban 75WG
adelgids	pales weevil (adult)	1.33 lb/acre
(cooley)	pine needle midge	
(eastern spruce gall)	pine spittlebug	
ants	plant bugs	
aphids	scale (2)	
Douglas fir needle midge	(pine needle)	
European pine sawfly	(pine tortoise)	
European pine shoot moth	(spruce bud)	
grasshoppers	(black pine)	
gypsy moth	(striped pine)	
mites (1)	spittlebugs	
(European red spider)	spruce budworm	
(two spotted spider)	spruce needleminer	
pales weevil (3)		4.0 lb/100 gal

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. When large numbers of **spider mite** eggs are present at the first application, a second application after 7 to 10 days may be required to control newly hatched nymphs and maintain effective control. **Not for control of mites in Washington and Oregon.**
2. For **scale control**, apply when scale crawlers are active.
3. Apply as a cut stump drench. Do not exceed 1.33 lb of Lorsban 75WG (1.0 lb ai chlorpyrifos) per acre per application.

Specific Use Precautions:

Phytotoxicity: Do not apply under conditions of extreme heat or drought stress. Environmental factors and varietal differences significantly influence potential phytotoxic expression. **Testing has shown that Lorsban 75WG may be used at recommended rates on the following conifer species without serious phytotoxicity: balsam fir, concolor fir, Douglas fir, eastern white pine, Fraser fir, grand fir, noble fir, Scotch pine, white spruce.** Before treating large numbers of other conifer species, it is recommended that a small block of plants be treated and observed 7 to 10 days for symptoms of phytotoxicity. **Note:** The user assumes responsibility for determining if it is safe to treat other conifer species with Lorsban 75WG under commercial growing conditions.

Specific Use Restrictions:

- Do not make more than 3 applications of Lorsban 75WG or other product containing chlorpyrifos per season.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 7 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

CITRUS FRUITS

Worker Restricted Entry Interval: 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.

Apply as a concentrate or dilute spray using conventional, power-operated spray equipment. Use a higher rate in the rate range when there is increased pest pressure. Use sufficient water to ensure thorough and complete coverage of the foliage and fruit. For dilute sprays (greater than 200 gpa), use a spray concentration of at least 0.33 lb of Lorsban 75WG per 100 gallons of finished spray. Treat when pests become a problem or in

accordance with the local spray schedule as recommended by your State Agricultural Experiment Station, certified Pest Control Advisor, or Extension Service Specialist. To avoid excessive ridging, do not apply Lorsban 75WG to citrus from December up to the initiation of bloom (10% bloom).

Use of Spray Oils: To improve control of aphids, mealybugs, scale insects, and thrips, a petroleum spray oil recommended for use on citrus trees may be added to spray mixtures at up to 1.8 gallons per 100 gallons of spray.

Target Pests	Lorsban 75WG (lb/acre)
aphids (including brown citrus aphid), grasshoppers (1) katydids Lepidopterous larvae, such as: avocado leafroller cutworms fruittree leafroller orange dogs orange tortrix western tussock moth mealybugs (except California and Arizona) scale insects, including, but not limited to: black scale brown soft scale California red scale (except California and Arizona) chaff scale Florida red scale long scale purple scale snow scale thrips (except California and Arizona)	1.33 - 4.67
citrus rust mites (2) (Florida and Texas only)	2.67 - 4.67
mealybugs (California and Arizona only) thrips (suppression) (California and Arizona only)	4.0 - 8.0
black scale (California and Arizona only) brown soft scale (California and Arizona only) California red scale (California and Arizona only)	5.33 - 8.0

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Lubber grasshoppers:** Effective control requires direct contact with spray when grasshoppers are small (less than 1 inch in length).
2. For control of **citrus rust mites**, use a spray concentration of at least 0.67 lb per 100 gallons.

Specific Use Precautions:

- Observe local recommendations for tank mix combinations especially with regard to use of Lorsban 75WG with spray oil. Consult with a county farm advisor, county agency, extension service personnel, agricultural commissioner, pest control advisor, or local Dow AgroSciences representative for local recommendations.
- Do not apply when trees are under stress from drought or high temperatures.
- Lorsban 75WG 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, apply from 1 hour after sunset until 2 hours before sunrise.
- **Additional Precautions for California and Arizona:** Lorsban 75WG should not be used in combination with spray oil when temperatures are expected to exceed 95°F the day of application or for several consecutive days thereafter. Do not apply during the months of December, January, or February.

Specific Use Restrictions:

- **Preharvest Interval:** Do not treat within 21 days of harvest for applications of up to 4.67 lb per acre of Lorsban 75WG or within 35 days for application of rates above 4.67 lb per acre.
- The use of application rates greater than 5.33 lb of Lorsban 75 WG (4 lb ai chlorpyrifos) per acre are allowed only in the following counties in California: Fresno, Tulare, Kern, Kings, and Madera.
- Do not apply more than 10 lb of Lorsban 75WG (7.5 lb ai chlorpyrifos) per acre per year.
- Do not make more than 2 applications of Lorsban 75WG or other products containing chlorpyrifos per year (does not include citrus orchard floors).
- Do not make a second foliar application of Lorsban 75WG or other product containing chlorpyrifos within 30 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

CITRUS ORCHARD FLOORS (CONTROL OF FIRE ANTS AND OTHER ANT SPECIES)

Worker Restricted Entry Interval: 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.

Apply as a ground broadcast spray directed to the orchard floor to control foraging ants and suppress mounds. Do not allow spray to contact foliage or fruit. Apply in a total spray volume of 25 gpa or more using equipment that will apply the spray uniformly to the soil surface. Use a higher rate in the rate range for increased pest pressure. For best results, remove weed growth or other obstructions that might prevent the spray from reaching the soil surface. Foliar applications of Lorsban 75WG or other products containing chlorpyrifos may be made in addition to the orchard floor treatments but must comply with the 10 day re-treatment interval (see Specific Use Restrictions).

Chemigation: Lorsban 75WG may be applied to citrus orchard floors through sprinkler irrigation systems only if the system uniformly covers the soil surface at the base of the tree. Apply at recommended broadcast application rates to control listed pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Note: Do not apply in tank mixture with Evik herbicide.

Target Pests	Lorsban 75WG (lb/acre)
imported fire ant other ant species	1 - 1.33

Application with Dry Bulk Fertilizer: Most dry fertilizers can be used for impregnation with Lorsban 75WG. Apply Lorsban 75WG at the equivalent broadcast rate using a minimum of 200 lb per acre of dry bulk fertilizer.

Impregnation of Dry Bulk Fertilizer: Use a closed rotary drum mixer suitable for blending of dry bulk fertilizer equipped with an internal spray nozzle. Add the dry fertilizer to the mixer followed by the appropriate amount of Lorsban 75WG. Open the water soluble packets and empty Lorsban 75WG directly into fertilizer mixture. After mixing the dry ingredients to ensure uniformity, add water through the spray nozzle in an amount sufficient to just dampen the mixture (4 to 8 pints of water per ton of fertilizer). The spray nozzle should be positioned within the mixer to provide uniform coverage of the tumbling mixture of fertilizer and Lorsban 75WG. Addition of water will cause Lorsban 75WG to uniformly adhere to the dry bulk fertilizer. Bulk fertilizers impregnated with Lorsban 75WG should be applied immediately, **not stored**. Foliar applications of Lorsban 75WG may be made in addition to orchard floor treatments.

Compliance with any and all federal and state laws and regulations relating to the Lorsban 75WG and fertilizer mixture is the responsibility of the person offering such mixture for sale or distribution.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply last treatment within 28 days before harvest.
- Do not apply more than 4 lb of Lorsban 75WG (3 lb ai chlorpyrifos) per acre per year.
- Do not make more than 3 applications of Lorsban 75WG or other products containing chlorpyrifos per year (does not include foliar applications to citrus trees).
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

CORN (FIELD CORN AND SWEET CORN, INCLUDING CORN GROWN FOR SEED)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Preplant Incorporated Application

Apply as a broadcast spray to the soil surface using power-operated ground spray equipment. Use a total spray volume of 10 gpa or more. Use a higher rate in the rate range when there is increased pest pressure. On the day of treatment, incorporate Lorsban 75WG into the top 2 to 4 inches of soil using a disc, field cultivator, or equivalent equipment.

Tank Mixing and Mixing with Liquid Fertilizer: Lorsban 75WG may be applied in tank mixture with herbicides and/or with **28-0-0** liquid fertilizer only (Lorsban 75WG is not compatible with other liquid fertilizer solutions). See Mixing Directions section for tank mixing instructions. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for each product used in combination with Lorsban 75WG.

Target Pests	Lorsban 75WG (lb/acre)
cutworms symphylans	1.33 - 2.67
billbugs flea beetle larvae grubs seed corn beetle seed corn maggots wireworms	2.67
corn rootworm larvae lesser cornstalk borer	4.0

Conservation Tillage: Preplant, At-Plant, or Preemergence Applications
Apply as a broadcast spray to surface trash and exposed soil using power-operated ground spray equipment. Use a total spray volume of 20 gpa or more. Use a higher rate in the rate range to extend residual control.

Tank Mixing: Lorsban 75WG may also be applied in tank mixtures with paraquat or Roundup herbicide and/or **28-0-0** liquid fertilizer only (Lorsban 75WG is not compatible with other liquid fertilizer solutions). See Mixing Directions section for tank mixing instructions. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for each product used in combination with Lorsban 75WG.

Target Pests	Lorsban 75WG (lb/acre)
armyworms cutworms	0.67 - 1.33

At-Plant T-Band Application
Apply as a liquid T-Band in fields with no more than 30% cover of crop residue remaining on the soil surface. Apply Lorsban 75WG at a rate of 1.6 oz per 1000 linear feet of row in a minimum spray volume of 5 gpa . Position a flat fan nozzle over the open seed furrow immediately behind the planter shoe, in front of the press wheel, and adjust to provide a 5 to 6 inch band width centered over the row. Incorporate into the top 1 inch of soil using tines, chains or other suitable equipment.

The following table provides equivalent application rates for various row spacings when Lorsban 75WG is applied at 1.6 oz per 1000 ft of row at the indicated row spacing.

	Amount of Lorsban 75WG Required	
Target Pests	Row Spacing (inches)	(lb/acre)
corn rootworm larvae	20	2.61
cutworms	30	1.74
grubs	32	1.63
seed corn beetle	36	1.45
seed corn maggot	38	1.38
	40	1.33

Spray Calibration Information for Band Application:

Fluid Ounces of Spray Required Per 100 Feet of Row for Various Row Spacings and Spray Volumes						
Volume of Spray Per Acre	20"	30"	32"	36"	38"	40"
5 gallons	2.45	3.67	3.92	4.41	4.65	4.90
10 gallons	4.90	7.34	7.84	8.82	9.30	9.80
15 gallons	7.35	11.00	11.76	13.23	13.95	14.70
20 gallons	9.80	14.68	15.68	17.64	18.60	19.69

Postemergence Treatment
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 15 gpa for ground spray equipment or 2 to 5 gpa for aircraft equipment. Control may be reduced at low spray volumes under high temperature and wind conditions.

Chemigation: Lorsban 75WG may be broadcast applied postemergence through sprinkler irrigation systems at recommended application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
grasshoppers	0.33 - 0.67
aphids armyworms chinch bugs (1) corn rootworm adults (2) cutworms (3) webworms (4) western bean cutworm European corn borer (5)	0.67 - 1.33
corn earworm southwestern corn borer (6)	1.0 - 1.33
billbugs (1) corn rootworm larvae (7), (8) flea beetle adults (1) lesser cornstalk borer common stalk borer (9)	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. For best **billbug, chinch bug**, or **flea beetle** control, ground apply in a minimum spray volume of 20 to 40 gpa at 40 psi. If corn is less than 6 inches tall, apply in a 9- to 12-inch wide band over the row. For corn greater than 6 inches tall, apply using drop nozzles directed to the base of the plant. Do not reduce the application rate for banded or directed applications. Concentrate the full-labeled dosage rate in the treated zone. When chinch bugs continue to immigrate to corn over a prolonged period or under extreme pest pressure, a second application may be needed.
2. The recommended dosage will control silk clipping by **corn rootworm adults**.

3. For **cutworms**, it is preferable to apply Lorsban 75WG when soil is moist and worms are active on or near the soil surface. If ground is dry, cloddy, or crusted at time of treatment, worms may be protected from the spray and effectiveness will be reduced. Shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment may improve control. A second application may be required if damage or density levels exceed economic thresholds established for your area.
4. For **webworm** control, shallow incorporation using a rotary hoe or other suitable equipment immediately before or soon after treatment is necessary.
5. For **European corn borer** control, use 1 to 1.33 lb per acre when application is made with power-operated ground or aerial equipment or 0.67 to 1.33 lb per acre when application is made through a sprinkler irrigation system. University research indicates that achieving greater than 50% control of first-generation European borer with a single liquid insecticide treatment is highly dependent on timing, insecticide placement, and weather conditions.
6. For **southwestern corn borer**, a second application may be applied 21 days later if needed due to reinfestation.
7. For postemergence control of **corn rootworm larvae** apply **at cultivation.** Direct the spray to both sides of the row at the base of the plants just ahead of the cultivator shovels. Cover the insecticide with soil around the brace roots. A cultivation application of Lorsban 75WG may be made in addition to an at-planting application of Lorsban 15G insecticide.
8. Lorsban 75WG may also be applied through **sprinkler irrigation** systems at the rate of 1.33 lb per acre to **control corn rootworm larvae**. Time application to coincide with the appearance of the second instar larvae. Apply with enough water to wet the root zone to the depth control needed. If soils are wet, allow enough soil drying to occur such that an application using a minimum amount of water will not produce surface runoff. See Chemigation (Sprinkler Irrigation) section for application instructions.
9. Do not use Lorsban 75WG in combination with a burndown herbicide for control of common stalk borer. For **common stalk borer** control, treat approximately 11 days after application of Roundup herbicide or after burndown with paraquat herbicide is complete (3 to 5 days).

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 35 days before harvest of grain. Do not feed treated corn fodder to meat or dairy animals within 35 days after last treatment.
- Do not make more than 2 applications of Lorsban 75WG per season or apply more than 2 lb of Lorsban 75WG per acre per season.
- Do not make more than 3 applications of Lorsban 75WG or other products containing chlorpyrifos per season and do not apply more than 3 lb ai chlorpyrifos per acre per season.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas nor harvest treated corn silage as feed for meat or dairy animals within 14 days after last treatment.

COTTON

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a broadcast foliar spray using aircraft or ground spray equipment in all states except Arizona and California. Use a higher rate in the rate range when there is increased pest pressure. Use sufficient spray volume to ensure thorough coverage of treated plants, but no less than 10 gpa for ground spray equipment or 2 gpa for aircraft equipment. Increase spray volume when foliage is dense and/or pest population is high and/or under high temperature and wind conditions. Treat when field counts indicate damaging insect populations are developing or present.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Proper application methods are necessary to ensure thorough spray coverage and correct rate, and minimize off-target drift. Follow Application Guidelines for ground and aerial application and Spray Drift Management recommendations in General Information section of this label.

All States Except Arizona and California

Target Pests	Lorsban 75WG (lb/acre)
cotton fleahopper (1) plant bugs (1) (*Lygus, Mirids*)	0.25 - 0.67
grasshoppers thrips	0.33 - 0.67
cotton aphid fall armyworm yellowstriped armyworm	0.33 - 1.33
spider mites (2)	0.67
beet armyworm cotton bollworm (3) cutworms pink bollworm saltmarsh caterpillar tobacco budworm (3)	1.0 - 1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. The 0.25 lb per acre rate will not provide a high degree of control but, compared to the 0.67 lb per acre rate, will minimize the damage from **plant bugs** and **cotton fleahoppers** and allow increased survival and build-up of **beneficial insects** to aid in the control of **bollworms** infesting cotton.
2. **Spider mites:** When large numbers of eggs are present, scout the treated area in 3 to 5 days. If newly hatched nymphs are present, make a follow-up application of a non-chlorpyrifos product that is effective against mites.
3. **Bollworms and budworms:** For best results, it is suggested that fields be scouted twice per week and applications made when worms are 1/4-inch or less in length.

Arizona and California

Target Pests	Lorsban 75WG (lb/acre)
armyworms cotton aphid cotton fleahopper *Lygus* saltmarsh caterpillar silverleaf whitefly (1) thrips	0.67 - 1.33
boll weevil cotton bollworm (2) cotton leaf perforator (suppression) cutworms pink bollworm spider mites (suppression) tobacco budworm (2)	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Silverleaf whitefly:** Apply in tank mix combination with the recommended rate of a pyrethroid insecticide labeled for control or suppression.
2. **Bollworms and budworms:** For best results, it is suggested that fields be scouted twice per week and applications made when worms are 1/4 inch or less in length.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 14 days before harvest.
- Do not apply more than 4 lb of Lorsban 75WG (3 lb ai chlorpyrifos) per acre per season.
- Do not make more than 3 applications of Lorsban 75WG or other products containing chlorpyrifos per crop season
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.
- Do not feed gin trash or treated forage to meat or dairy animals.

CRANBERRY

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a broadcast foliar spray. Use sufficient spray volume to ensure thorough coverage, but no less than 15 gpa. Except for control of cranberry weevil, treat when field counts indicate damaging insect populations are developing or present.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems to control listed pests. Apply at recommended broadcast application rates. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
brown spanworm cranberry fruitworm cranberry weevil (1) cutworms, fireworms Sparganothis fruitworms	2.0

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. For **weevil** control, apply once at flower bud development (late May, early June) and, if weevils are present, once after 100% bloom (early to mid July).

Specific Use Precautions:

Apply only after the winter flood water has been removed. To avoid pesticide contamination of flood waters, do not apply when bogs are flooded.

Specific Use Restrictions

- **Preharvest Interval:** Do not apply within 60 days before harvest.
- Do not make more than 2 applications of Lorsban 75WG or other products containing chlorpyrifos per season.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.

Fig (California Only)

Worker Restricted Entry Interval: 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.

Apply Lorsban 75WG as a dormant application in late winter prior to beetle emergence and prior to leaf formation. Use a spray volume of 10 gpa or more and apply as a broadcast spray to the soil surface using power-operated ground spray equipment. On the day of treatment, incorporate Lorsban 75WG into the top 3 inches of soil using suitable equipment.

Target Pests	Lorsban 75WG (lb/acre)
dried fruit beetle	2.67

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 7 months of harvest.
- Make only 1 application per year of Lorsban 75WG or other products containing chlorpyrifos.

GRAPE (AREAS EAST OF THE CONTINENTAL DIVIDE ONLY)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply Lorsban 75WG just before the pest emerges from the soil. Apply 1.5 quarts of the diluted spray mixture to the soil surface in an 11-square foot area (3.75 ft circle) around the base of each vine.

Target Pests	Lorsban 75WG (lb/100 gal)
grape root borer	3.0

Specific Use Precautions:

- Do not allow spray to contact fruit or foliage.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 35 days before harvest.
- Do not make more than 1 application per season of Lorsban 75WG or other product containing chlorpyrifos.
- Based upon available residue data, the use of Lorsban 75WG in grapes is restricted to areas east of Continental Divide only.
- Do not exceed 8 lb of Lorsban 75WG (6 lb ai chlorpyrifos) per acre per crop season.

MINT

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a broadcast foliar spray using a total spray volume of 10 gpa or more using ground equipment.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
cutworm (1)	1.33 - 2.67
mint root borer (2)	2.67

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Cutworms:** Apply during May and June when field counts indicate damaging insect populations are developing or present. When larvae are less than 3/4 inch in length, use the 1.33 lb rate; otherwise, use the higher rate.
2. **Mint borer:** Apply postharvest when field counts indicate damaging insect populations are developing or present. If ground applied, follow with approximately 1 acre inch of sprinkler irrigation immediately after application to incorporate the insecticide into the soil or apply by chemigation.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 90 days before harvest.
- Make only 1 application of Lorsban 75WG or other product containing chlorpyrifos during the growing season.
- Make only 1 postharvest application per season of Lorsban 75WG or products containing chlorpyrifos.

ONION (DRY BULB)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as an at-plant in-furrow drench. Use a minimum of 40 gpa of total drench. Incorporate to a depth of 1 to 2 inches.

Target Pest	Lorsban 75WG (oz/1000 ft of row)
onion maggot	0.73 †

† Equivalent to 1.33 lb of Lorsban 75WG based on 18-inch row spacing.

Sprayer Calibration

The minimum recommended spray volume for this application is 17.6 fl oz per 100 ft of row and is based on a spray volume of 40 gpa and an 18 inch row spacing. This minimum spray volume per 100 ft of row should be used, regardless of row width. To determine the required spray volume per 1000 ft of row, multiply the actual spray volume collected per 100 ft of row by a factor or 10.

Calibration Example (16-inch Row Spacing):

The number of 1000 ft row segments in an acre = (sq ft per acre ÷ row spacing in feet) ÷ 1000.

Assuming a 16-inch row spacing (1.33 ft) and 43,560 sq ft/acre: (43,560 ÷ 1.33) ÷ 1,000 = 32.67 1,000 ft segments per acre.

Rate per acre = 32.67 X 0.73 oz/1,000 ft segment = 23.85 oz = 1.5 lb
Spray volume per acre = 32.67 X 17.6 fl oz X 10 = 5,749 fl oz (5,749 ÷ 128 fl oz/gal = 44.9 gallons)

In this calibration example, the spray mixture should contain 1.5 lb of Lorsban 75WG in a minimum spray volume of 44.9 gpa.

Specific Use Restrictions:

- Do not make more than 1 application per year.
- Do not apply more than 1.33 lb of Lorsban 75WG (1 lb ai chlorpyrifos) per crop season.

PEANUT

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply to the soil surface as a preplant broadcast spray followed by immediate soil incorporation to a depth of 3 to 4 inches using a disc, field cultivator, or equivalent equipment. Use a minimum of 10 gpa total spray.

Target Pests	Lorsban 75WG (lb/acre)
wireworms (suppression)	2.67

Specific Use Restrictions:

- **Preharvest Interval:** Do not harvest within 21 days after treatment.
- The combined total of preplant and postplant applications of Lorsban 75WG, Lorsban 15G or other products containing chlorpyrifos must not exceed 4 lb ai chlorpyrifos per acre per season.
- Aerial application to peanuts is prohibited.
- Do not make more than 1 preplant application of Lorsban 75WG per season.
- Do not make a second application of any other product containing chlorpyrifos within 10 days of the first application.
- Do not feed treated peanut forage or hay to meat or dairy animals.

SORGHUM - GRAIN SORGHUM (MILO)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 15 gpa for ground spray equipment or 2 to 5 gpa for aircraft equipment. Control may be reduced at low spray volumes under high temperature and wind conditions.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
sorghum midge (1)	0.33
grasshoppers yellow sugar cane aphid and other aphids	0.33 - 0.67
greenbug (2)	0.33 - 1.33
webworms	0.67
armyworms chinch bugs (3) cutworms lesser cornstalk borer (3)	0.67 - 1.33
European and southwestern corn borer	1 - 1.33
corn earworm	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Sorghum midge:** Apply when 30% to 50% of the seed heads are in bloom.
2. **Greenbug:** Use a higher rate within the indicated rate range when pest populations are high.
3. **Chinch bugs and lesser cornstalk borer:** Apply as a directed spray toward the base of the plant using power-operated ground spray equipment with sufficient water to ensure coverage of an 8- to 12-inch band centered in the row. For plants less than 6 inches high, apply an 8- to 12-inch band centered over the row. Do not reduce the dosage for banded or directed applications. Concentrate the full labeled dosage rate in the treated zone.

Specific Use Precautions:

- To minimize the potential for chemical injury, do not apply Lorsban 75WG to drought stressed grain sorghum within 3 days following irrigation or rain except where the product is applied in irrigation water.
- Be aware that sorghum lines used in seed production fields may be more susceptible to chemical injury. Susceptible inbred lines or hybrids are likely to be at greater risk of yield-reducing chemical injury when treated at the higher application rates. Do not apply more than 0.67 lb of Lorsban 75WG per acre to seed sorghum if the additional risk of crop injury is unacceptable.

Specific Use Restrictions:

- **Preharvest Interval:** Do not harvest for grain, forage, fodder, hay, or silage within 30 days after application of 0.67 lb of Lorsban 75WG per acre or within 60 days after application of rates above 0.67 lb per acre.
- Do not apply more than 2 lb of Lorsban 75WG (1.5 lb ai chlorpyrifos) per acre per season.
- Do not make more than 3 applications per year of Lorsban 75WG or other products containing chlorpyrifos.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not treat sweet varieties of sorghum.

SOYBEAN

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Soil Application

Apply as a broadcast treatment to soil surface in a minimum spray volume of 10 gpa using suitable ground spray equipment or as a band application. Use a higher rate in the rate range when there is increased pest pressure. For band application, equivalent rates of insecticide spray required per 100 feet of row for various row spacing are given in the accompanying table. For at-plant treatments, apply in a 4- to 6-inch band centered over the row. Position the spray nozzle in front of the planter shoe or press wheel or after the press wheel followed by a drag chain for light incorporation. **Do not apply as an in-furrow treatment.** For a postemergence rescue treatment, apply as a directed spray in a 9- to 12-inch band at the base of the plant. For plants less than 6 inches tall, apply over-the-top in a 6- to 12-inch band.

Target Pests	At-Plant Treatment (Broadcast, T-band or band) (lb/acre)	Postemergence Rescue Treatment (band only) (lb/acre)
cutworms lesser cornstalk borer	0.67 – 1.33	0.67 – 1.33

Fluid Ounces of Spray Required Per 100 Feet or Row for Various Row Spacings and Spray Volumes						
Volume of Spray Per Acre	40"	38"	36"	30"	20"	15"
10 gallons	9.80	9.31	8.82	7.35	4.90	3.67

15 gallons	14.70	13.97	13.2	11.8	7.35	5.51
20 gallons	19.60	18.62	17.6	15.7	9.80	7.34

Foliar Application
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 15 gpa for ground spray equipment or 2 to 5 gpa for aircraft equipment. Apply when field counts indicate damaging pest populations are developing or present. Use a higher rate in the rate range when there is increased pest pressure.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
grasshoppers green cloverworm velvetbean caterpillar	0.33 - 0.67
armyworms bean leaf beetle corn earworm cutworms Mexican bean beetle saltmarsh caterpillar and other woolly bears spider mites (1)	0.67 - 1.33
European corn borer southern green stinkbug	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. **Spider mites:** When large numbers of eggs are present, scout the treated area in 3 to 5 days. If newly hatched nymphs are present, make a follow-up application of a non-chlorpyrifos product that is effective against mites.

Specific Use Precaution:
- On determinate soybeans do not apply more than 1 application after pod set.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply last treatment within 28 days before harvest.
- Do not apply more than 4 lb of Lorsban 75WG (3 lb ai chlorpyrifos) per acre per season.
- Do not make more than 3 applications per year of Lorsban 75WG or other products containing chlorpyrifos.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 14 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas or otherwise feed treated soybean forage, hay, and straw to meat or dairy animals.

STRAWBERRY

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Preplant Incorporation Treatment
Apply specified rate in a minimum spray volume of 10 gpa and incorporate into the soil on the day of application using a disc, field cultivator, or equivalent equipment.

Target Pests	Lorsban 75WG (lb/acre)
grubs	2.67

Foliar Application
Apply as a broadcast foliar spray when buds first appear and repeat application 10 to 14 days later. Use a minimum spray volume of 40 gpa .

Target Pests	Lorsban 75WG (lb/acre)
strawberry bud weevil	1.33

Specific Use Precautions:
- Lorsban 75WG should not be tank mixed with pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination non-injurious under your current conditions of use.
- Phytotoxicity may occur when Lorsban 75WG is applied to strawberries under conditions of high temperature and drought stress.

Specific Use Restrictions:
- **For pre-bloom use only.** Do not apply after berries start to form or when berries are present.
- **Preharvest Interval:** Do not apply within 21 days before harvest.
- Do not make more than 2 applications per year of Lorsban 75WG or other products containing chlorpyrifos.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.

SUGARBEET

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

For use as a **soil application** (preplant broadcast spray or at-plant banded spray) or **foliar application** (postemergence broadcast foliar spray or banded foliar spray) for control of target pests in sugar beet.

Soil Treatment (At Planting or Preplant Incorporated)
Lorsban 75WG may be applied to the soil surface as a broadcast spray or an at-plant band treatment to reduce early season cutworm damage.

At-Plant Banded Spray: Apply in a 5- to 7-inch wide band centered over the row. Use a minimum of 6 1/2 gpa of finished spray. Do not reduce the dosage for band applications. Concentrate the full labeled dosage rate in the treated zone. For best results, band treatments should be lightly incorporated, either mechanically or with irrigation. **Do not apply as an in-furrow treatment and avoid contact with seed.**

Preplant Broadcast Spray: Apply to the soil surface in a minimum of 10 gpa and on the day of application incorporate to a depth of 1 to 2 inches using disc, field cultivator, or equivalent equipment.

Lorsban 75WG Soil Treatments		
Target Pest	Broadcast (lb/acre)	Band (lb/acre)
cutworms	1.33	0.89

Foliar Application
Apply as a foliar spray either as a broadcast or banded treatment. Treat when field counts indicate that damaging insect populations are developing or present.

Broadcast Foliar Spray: Apply in a minimum of 10 gpa by ground spray equipment or 2 to 5 gpa for aerial equipment using sufficient spray volume to ensure thorough coverage of treated plants.

Banded Foliar Spray: Apply the specified dosage using a minimum of 6 1/2 gpa of spray volume in a 5- to 7-inch wide band centered over the row. Do not reduce the rate for band applications. Concentrate the full labeled rate (see band rates in table below) in the treated zone. For best results, band-applied treatments should be lightly incorporated, mechanically or with irrigation.

Chemigation: Lorsban 75WG may be applied through sprinkler irrigation systems at recommended broadcast application rates to control listed soil and foliar pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Lorsban 75WG Foliar Treatments		
Target Pests	Broadcast (lb/acre)	Band (lb/acre)
grasshoppers (1)	0.33 - 0.67	--
leafminers spider mites	0.67	0.45
fall armyworm webworms yellowstriped armyworm	0.67 - 1.33	0.45 - 0.89
beet armyworm	1 - 1.33	0.67 - 0.89
cutworms flea beetle adults	1.33	0.89
sugarbeet root maggot **adults** (2) (5)	0.33 - 0.67	--
sugarbeet root maggot **larvae** (3) (5)	--	0.89 - 1.33
sugarbeet root maggot **larvae** (4) (5)	1.33	0.45 - 0.89

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. **Grasshoppers:** The low rate will control small nymphs (1st through 3rd instar).
2. **Sugarbeet root maggot adults:** Apply anytime from 7 days before until 3 days after peak adult emergence in order to target adults present at time of application based on local field trap monitoring.
3. **Sugarbeet root maggot larvae:** Use as **primary treatment** to control root maggot larvae. Base application timing on local field trap monitoring. Apply anytime from 7 days before until 3 days after peak adult emergence.

4. **Sugarbeet root maggot larvae:** Use as a **supplemental postemergence treatment** following an at-plant insecticide application for control of root maggot larvae. Base application timing on local field trap monitoring. Apply anytime from 7 days before until 3 days after peak adult emergence.
5. To prevent the potential development of insecticide resistance in **sugarbeet root maggot**, producers are encouraged to take the following steps: (1) avoid making more than 2 applications of Lorsban 75WG per season when adults are active; (2) if an organophosphate insecticide was applied at planting, make no more than 1 postemergence application of Lorsban 75WG when adults are active.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 30 days of harvest of beet roots and tops.
- Do not apply more than 3 lb of Lorsban 75WG (2 lb ai chlorpyrifos) per acre per season.
- Do not make more than 3 applications of Lorsban 75WG or products containing chlorpyrifos per season or a maximum of 3 lb ai chlorpyrifos per acre per season.
- Do not make a second application of Lorsban 75WG or any product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas or harvest treated beet tops as feed for meat or dairy animals within 30 days of last treatment.

SUNFLOWER

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Preplant Incorporation Treatment
Broadcast apply to soil surface in a minimum spray volume of 10 gpa using suitable ground spray equipment. On the same day of treatment, incorporate the insecticide into the top 2 to 4 inches of soil using a disc, field cultivator, or equivalent equipment. Use a higher rate in the rate range when there is increased pest pressure.

Target Pests	Lorsban 75WG (lb/acre)
cutworms	1.33 - 2.67

Postemergence Broadcast Treatment
Apply as a postemergence broadcast spray using sufficient spray volume to ensure thorough coverage of treated plants, but no less than 15 gpa for ground spray equipment or 2 to 5 gpa for aircraft equipment. Use a higher rate in the rate range when there is increased pest pressure.

Target Pests	Lorsban 75WG (lb/acre)
grasshoppers	0.67
banded sunflower moth sunflower beetle larvae and adults (1) stem weevil (2) sunflower moth (3) seed weevil (4) woolly bears	0.67 - 1
cutworms	1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:
1. **Sunflower beetle:** For control of larvae or adults, treat when field counts indicate 10 larvae or 1 to 2 adults per seedling.
2. **Stem weevil:** Optimal treatment time is within 5 to 7 days after adult weevils begin to appear.
3. **Sunflower moth:** To control, make first application during early 1% to 5% bloom stage.
4. **Seed weevil:** To control, apply when field counts indicate 10 to 12 adults per plant for oil crop varieties and 1 to 3 adults per plant on confectionery crop varieties.

Specific Use Restrictions:
- **Preharvest Interval:** Do not apply within 42 days before harvest.
- Do not apply more than 4 lb of Lorsban 75WG (3 lb ai chlorpyrifos) per acre per season.
- Do not make more than 3 applications per season of Lorsban 75WG or other products containing chlorpyrifos.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 7 days of the first application.
- Do not allow meat or dairy animals to graze in treated areas.

SWEET POTATO

Worker Restricted Entry Interval: 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.

Apply to the soil surface as a preplant broadcast spray to reduce the feeding damage caused by listed pests. Use a spray volume of 10 gpa or more. Incorporate immediately after application to a depth of 4 to 6 inches using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant sweet potatoes in the usual manner no more than 14 days after treatment. Delaying planting more than 14 days after application will reduce the time interval of protection against feeding damage.

Target Pests	Lorsban 75WG (lb/acre)
Conoderus wireworm *Systena* flea beetle sweet potato flea beetle	2.67

Specific Use Precaution:

- Lorsban 75WG will not control false wireworms, white fringe beetle or other grubs that attack sweet potatoes.

Specific Use Restrictions:

- **Preharvest Interval:** Do not harvest within 125 days of treatment.
- Do not make more than 1 application of Lorsban 75WG or other products containing chlorpyrifos per season.

TOBACCO

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a preplant broadcast spray to reduce the feeding damage caused by listed pests. Apply 24 to 48 hours before bedding and transplanting using a spray volume of 10 gpa or more. Incorporate immediately after application to a depth of 2 to 4 inches using suitable incorporation equipment. The application of Lorsban 75WG will also suppress the movement of imported fire ants into treated fields.

Before broadcast application of Lorsban 75WG onto existing beds, knock down beds to final shape for transplanting. Use of PTO-driven implements that will incorporate Lorsban 75WG to a depth of 4 inches is recommended.

Target Pests	Lorsban 75WG (lb/acre)
cutworms flea beetle (larvae) mole crickets root maggots wireworms	2.67

To control the above listed pests and suppress populations of rootknot nematodes in all tobacco growing regions, use Lorsban 75WG in a tank mix with Nemacur 3 at the rate of 2.67 lb of Lorsban 75WG plus 4 quarts of Nemacur 3 nematicide per acre. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for Nemacur 3 used in combination with Lorsban 75WG. Apply the specified rate(s) to the soil surface in a spray volume of 10 gpa or more 24 to 48 hours before bedding and transplanting. Immediately following application, incorporate into the soil to a depth of at least 4 inches using suitable equipment. Where the nematode species *Meloidogyne arenaria* or *M. javanica* are present or high populations of *M. incognita*, apply Telone* II soil fumigant at the recommended label rate.

Specific Use Restriction:

- Do not make more than 1 application of Lorsban 75WG or other product containing chlorpyrifos per season.

TREE FRUITS AND TREE NUTS (DORMANT/DELAYED DORMANT SPRAYS)

Worker Restricted Entry Interval: 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.

Apply as a dormant or delayed dormant spray. While Lorsban 75WG may be used without oil, oil is recommended to control additional pests such as European red mite. See precautions for use of oil below.

Foliar Sprays: Apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For **dilute sprays** (greater than 200 gpa), use sufficient spray volume to completely wet tree foliage, but not to point of runoff. For **concentrate sprays** (less than 200 gpa), uniformly apply a minimum of 1 lb of Lorsban 75WG in the required spray volume.

Use a higher rate in the rate range when there is increased pest pressure.

Crops	Target Pests	Lorsban 75WG (lb/100 gal)
apple	brown almond mite climbing cutworms European red mite *Lygus* obliquebanded leafroller pandemis leafroller rosy apple aphid San Jose scale	0.33 –0.67 (1) (Use a minimum of 1 lb/acre of Lorsban 75WG)
almond cherry nectarine peach pear plum prune	brown almond mite climbing cutworms European red mite mealy plum aphid peach twig borer pear psylla adults San Jose scale	

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. Application rate is based on 200 to 600 gpa as a dilute spray depending on the size of trees (use a minimum of 1 lb per acre of Lorsban 75WG). Do not exceed 2.67 lb of Lorsban 75WG per acre as a either a dilute or concentrate spray.

Specific Use Precautions:

- Cold or dry conditions may cause Lorsban 75WG plus oil sprays to infuse into trees, resulting in bud damage or bud drop. Do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 75WG.
- Avoid contact with foliage in sweet cherries as premature leaf drop may result.

Recommendations for Use of Oil:

1. In almonds, peaches and nectarines, use up to 3% of supreme oil with up to a maximum of 6 gpa. In the 8 northern California counties of Butte, Colusa, Glenn, Solano, Sutter, Tahema, Yolo and Yuba, use up to 2% of supreme oil with up to a maximum of 4 gpa.
2. In apples, pears, cherries, plums and prunes, refer to the University of California recommendations for the use of supreme oil.
3. In orchards with high overwintering populations of European red mite, brown almond mite or San Jose scale, use higher spray volumes which allow the use of higher rates of oil.
4. For use of any additional adjuvant or surfactant, in addition to or as a substitute for supreme oil, contact your local Dow AgroSciences representative.

Specific Use Restrictions:

- Do not use more than 2.67 lb of Lorsban 75WG (2 lb ai chlorpyrifos) per acre per season as a dormant/delayed-dormant application.
- Post-bloom application to apples is prohibited.
- Do not make a soil or foliar application of Lorsban 75WG or products containing chlorpyrifos within 10 days of a dormant/delayed dormant application of chlorpyrifos to the orchard.
- Make only 1 of chlorpyrifos application during the dormant season.
- Do not allow meat or dairy animals to graze in treated orchards.

Additional Restrictions Specific to California:

- Do not use more than 2% supreme oil in almond, peach and nectarine orchards of less than 4 years old.
- Do not use more than 6 gpa of supreme oil in almonds, peaches or nectarines.
- Do not use less than 100 gpa of total spray volume.

TREE FRUITS AND TREE NUTS (FOLIAR SPRAYS)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 days for tree fruits and 24 hours for tree nuts unless PPE required for early entry is worn.

Apply Lorsban 75WG as a foliar spray at the dosages indicated to control pests listed in the following table. Mix the required dosage in sufficient water to ensure thorough and complete coverage of the foliage and crop and apply as a concentrate or dilute spray using conventional, power-operated spray equipment. For dilute sprays applied to tree nut crops, mix the required dosage in sufficient water to allow for spray to runoff. For concentrate sprays, apply an equivalent amount of Lorsban 75WG per acre. Treat when pests appear or in accordance with local conditions. Aerial application may result in less effective insect control because of reduced coverage. Consult your State agricultural experiment station, certified Pest control advisor, or Extension service specialist for specific use information in your area.

Crop	Target Pests		Lorsban 75WG (lb/acre)
almond	navel orangeworm peach twig borer San Jose scale		2.67
cherry (sour)	Borers, including: (American plum) (lesser peachtree) (Pacific flatheaded) (peach twig) (peachtree) (shothole) climbing cutworm eyespotted bud moth green fruitworm	leafrollers, including: (fruittree) (obliquebanded) (pandemis) (redbanded) lesser appleworm mineola moth scales, including: (European fruit lecanium) (San Jose) stink bug tarnished plant bug	1.33 - 2
	black cherry aphid cherry fruit fly	plum curculio rose chafer	2
filbert	eye-spotted bud moth filbert aphid filbert leafroller filbert worm	obliquebanded leafroller omnivorous leaftier winter moth	2 - 2.67
pecan	blackmargined aphid (1) spittlebugs (2) yellow pecan aphid (1)		0.67 - 2.67
	fall webworm pecan nut casebearer		1 - 2.67
	black pecan aphid hickory shuckworm (3) *Phylloxera* spp.(4)	pecan leaf scorch mite (suppression) (5)	1.33 - 2.67
walnut	codling moth walnut husk fly walnut scale		2.67

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. For control of **yellow pecan aphid** and **blackmargined aphid**, apply in tank mix combination with the recommended rate of a pyrethroid insecticide labeled for control or suppression of these aphids.
2. For control of **spittlebug**, use a dosage of 1.33 to 2.67 lb per acre for concentrate sprays.
3. For best results against **hickory shuckworm**, make 2 applications, 10 to 14 days apart.
4. For best control of ***Phylloxera* spp.**, make 2 applications at a 10-day interval using a minimum of 0.67 lb of Lorsban 75WG per acre starting at bud swell.
5. For suppression of **pecan leaf scorch mite**, use a preventative program.

Specific Use Precautions:

- Lorsban 75WG is highly toxic to bees exposed to direct treatment and should not be applied when bees are actively foraging in the treated area.
- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 75WG.

Specific Use Restrictions:

Crop	Preharvest Interval (Days)	Total Number of Sprays	Total Amount Chlorpyrifos per Season (lb ai/acre)	Total Amount Lorsban 75WG per Season (lb/acre)
Almond	14	3	6	8
Filbert	14	3	6	8
Pecan	28	3	6	8
Sour cherry	21	8	12	16
Walnut	14	2	4	5.33

- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated orchards.
- Do not use as a foliar spray on sweet cherries.

TREE FRUITS AND TREE NUTS (TRUNK SPRAY AND/OR PREPLANT DIP)

Worker Restricted Entry Interval: 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.

Apply Lorsban 75WG to tree trunks and lower branches using a coarse, low-pressure spray to control pests listed in the following table. Use a higher rate in the rate range when there is increased pest pressure. Unless otherwise specified, a second application may be made after 2 weeks and a third application may be made after harvest. Avoid spray contact with foliage in sweet cherries as premature leaf drop may result. Consult your state agricultural experiment station or extension service specialist for proper application timing for your area.

Crop	Target Pests	Lorsban 75WG (lb/100 gal)
cherry	American plum borer greater peach tree borer lesser peach tree borer	2 - 4
almond nectarine peach	peach tree borers (1) (2)	4

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Preplant Dip Application (Peaches and Nectarines Only).** For preplant control of **peachtree borer**, use Lorsban 75WG at the equivalent application rate of 4 lb per 100 gallons of water. Dip trees several inches above the grafting bud scar and plant immediately or allow them to dry before returning to storage. Do not allow peach trees to remain in contact with the dip solution.
2. For control of **peach tree borer** in established trees, apply before newly hatched borers enter the tree. Use as a coarse, low-pressure trunk spray and thoroughly wet all bark areas from ground level to scaffold limbs. Do not allow spray to contact fruit. Consult written recommendations provided by your State agricultural experiment station or extension service specialist for proper time to treat in your area.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 14 days of harvest of almonds, peaches and nectarines or within 21 days before harvest of cherries.
- Do not make more than 1 chlorpyrifos application per year in peaches and nectarines and no more than 3 chlorpyrifos applications per year in cherries.
- Do not allow meat or dairy animals to graze in treated orchards.

ORCHARD FLOORS (ANT CONTROL IN ALMOND, PECAN AND WALNUT)

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours unless PPE required for early entry is worn.

Apply as a ground broadcast spray directed to the orchard floor using ground application equipment that will apply the spray uniformly. Do not allow spray to contact foliage or fruit. Treat when ant activity becomes evident in the orchard. Since worker ants cease most of their foraging activity at temperatures above 90°F, best results will be achieved if applied when temperatures are below 90°F.

Chemigation: Lorsban 75WG may be applied to almond, pecan and walnut orchard floors through sprinkler irrigation systems only if the system uniformly covers the soil surface at the base of the tree. Use recommended broadcast application rates to control listed pests. See Chemigation (Sprinkler Irrigation) section for application instructions.

Target Pests	Lorsban 75WG (lb/acre)
imported fire ant other ant species	2.67 - 5.33

Eliminate weed growth that would prevent uniform coverage of the orchard floor by mowing or herbicide treatment. Foliar applications of Lorsban 75WG may be made in addition to the orchard floor treatment.

Specific Use Precaution:

- To avoid contamination of irrigation tail waters, do not flood irrigate within 24 hours of application of Lorsban 75WG.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply the last treatment within 14 days of harvest.
- Do not apply more than 5.33 lb of Lorsban 75WG (4 lb ai chlorpyrifos) per acre per season to almond and walnut orchard floors.
- Do not apply more than 2.66 lb of Lorsban 75WG (2 lb ai chlorpyrifos) per acre per season to pecan orchard floors.
- Do not make more than 2 applications of Lorsban 75WG or other products containing chlorpyrifos per season to the orchard floor.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.
- Do not allow meat or dairy animals to graze in treated orchards.

VEGETABLES

Worker Restricted Entry Interval: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours (3 days for cauliflower) unless PPE required for early entry is worn.

Soil Application

Apply as indicated in Pest-Specific Use Directions. Use a higher rate in the rate range when there is increased pest pressure.

Crop	Target Pests	Lorsban 75WG (oz/1000 ft of row)
cauliflower	root maggot (1)	1.1 - 1.6
broccoli Brussels sprout cabbage Chinese cabbage collard kale kohlrabi turnip	root maggot (1)	1.1 - 1.8
broccoli cabbage	root aphid (2)	0.8 (1.6 for double row plantings)
radish	root maggot (3)	0.67
rutabaga	root maggot (1)	1.1 - 2.15

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. **Root maggot:**
   - **Direct seeded crops (Cauliflower, Broccoli, Brussels Sprout, Cabbage, Chinese Cabbage, Collard, Kale, Kohlrabi, Turnip, Rutabaga):** Apply the specified dosage in a water-based spray as a 4-inch wide band over the row at planting time. Band placement should be behind the planter shoe and in front of the press wheel to achieve shallow incorporation. Use a minimum of 40 gpa of total spray volume.
   - **Transplanted crops (Cauliflower, Broccoli, Brussels Sprout, Cabbage, Chinese Cabbage, Collard, Kale, Kohlrabi, Turnip):** Apply Lorsban 75WG as a water-based spray directed to the base of the plants immediately after setting. Use a minimum of 40 gpa of total spray. Do not add any additional adjuvants, surfactants or spreader stickers. Do not apply as a foliage application.
2. **Root aphid (Broccoli, Cabbage):** Apply Lorsban 75WG in water or with liquid fertilizer **(28-0-0 only)** injected as a sidedress on each side of the row after plants are established. See Mixing Directions section for Mixing Instructions for Liquid Fertilizer. Avoid mechanical damage to crop roots. Use a minimum of 15 gpa of total spray volume.
3. **Root maggot (Radish):** Apply the specified dosage as a water-based drench in the seed furrows with the seed at planting time. Use a minimum of 40 gpa of total drench.

Specific Use Restrictions:

- **Cauliflower:** Do not apply more than 1.33 lb of Lorsban 75WG to cauliflower planted in 40-inch rows. Use proportional amounts for other row spacings, but do not to exceed 2.67 lb per acre of Lorsban 75WG. Do not make more than 1 soil application per crop.
- **Broccoli, Brussels Sprout, Cabbage, Chinese Cabbage, Collard, Kale, Kohlrabi, Turnip:** Do not apply within 30 days of harvest. Do not make more than 1 soil application per crop. Do not apply more than 1.73 lb of Lorsban 75WG per acre when planted in 40-inch rows. Do not apply more than 3 lb of Lorsban 75WG per acre to these crops when in 20-inch rows (or 2 rows per bed). Use proportional amounts for other row spacings, but do not exceed 3 lb per acre of Lorsban 75WG.
- **Radish:** Do not apply more than 3.67 lb of Lorsban 75WG per acre. Do not make more than 1 soil application per crop.
- **Rutabaga:** Do not apply more than 3 lb of Lorsban 75WG per acre. Do not make more than 1 soil application per crop. Do not use rutabaga tops for food or feed purposes.
- **Soil applications (all labeled crops):** Do not foliar apply any chlorpyrifos product labeled for foliar application (e.g., Lorsban 50W) within 10 days of a soil application of Lorsban 75WG.

Foliar Application

Apply with conventional power-operated spray equipment in 20 to 150 gpa of water. For aerial applications, apply in a minimum of 5 gpa of water. Control may be reduced at low spray volumes. Use a higher rate in the rate range when there is increased pest pressure. Consult your state agricultural experiment station, extension service specialist, or integrated pest control advisor for proper time to treat in your area.

Crop	Target Pests	Lorsban 75WG (lb/acre)
Brassica (cole) (1) broccoli Brussels sprout cabbage cauliflower collard kale kohlrabi	armyworms (including beet armyworm) cabbage aphid cutworms diamondback moth (2) imported cabbage worm striped flea beetle (adult)	0.67 – 1.33

Numbers in parentheses (-) refer to Pest-Specific Use Directions.

Pest-Specific Use Directions:

1. To avoid phytotoxicity in Brassica crops, do not treat plants under stress from extreme heat and/or lack of moisture. 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. Read and carefully follow all applicable directions, restrictions, and precautions on labeling for other products used in combination with Lorsban 75WG. Tank mixing with Thiodan 3EC, Thiodan 50WP, or cottonseed oil is not recommended.

2. **Diamondback moth:** Significant organophosphate insecticide resistance has been reported for diamondback moth populations in Texas. Lorsban 75WG will not control organosphosphate-resistant populations of diamondback moth. Consult your local extension service for resistance management information.

Specific Use Restrictions:

- **Preharvest Interval:** Do not apply within 21 days before harvest.
- Do not make more than 3 applications of products containing chlorpyrifos per crop.
- Do not make a second application of Lorsban 75WG or other product containing chlorpyrifos within 10 days of the first application.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Avoid storing above 122°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. Packets may become brittle when stored below 32°F. Handle carefully to avoid breakage.

Pesticide Disposal: Waste resulting from the use of this product (that cannot be used according to label instructions) may be disposed of on site or at an approved waste disposal facility.

Container Disposal: When all packets 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 OF CONDITIONS OF SALE AND WARRANTY AND LIABILTY LIMITATIONS

Important: Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our recommendations for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. All such risks shall be assumed by the Buyer and User.

Gowan Company warrants that his product conforms to the specifications on the label and is reasonably fit for the intended purpose referred to on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY

BUYER'S OR USER'S EXCLUSIVE REMEDY AND GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY'S SOLE DISCRETION.

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CA Text Pending: Lorsban 75WG (resent to CA 08-09-04)