

JUL 16 1990

Dr. George R. Oliver
DowBlanco
4040 Vincennes Circle
Indianapolis, IN 46268-3030

Dear Dr. Oliver:

Subject: Label Amendments - Brassica (Cole) Crops
Torban 50W Wettable Powder Insecticide
EPA Registration No. 62719-39
Your Application Dated November 28, 1989

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

Sincerely yours,

Dennis H. Edwards, Jr.
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (#7505C)

Enclosure

54249:I:WP5.0:A-4:Andreasen:C.Disk:KEMCO:07/11/90:ek:VO:JH:CL

CONCURRENCES

SYMBOL	SURNAME	DATE						

Specimen Label

RECEIVED
 JUL 16 1990
 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 625719-351

Lorsban* 50W Wettable Powder Insecticide

For Control of Various Insects on Certain Fruit and Nut Crops

Active Ingredient(s):
 Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate) 50%
 Inert Ingredient(s): 50%
 E.P.A. Registration No. 464-552
 E.P.A. Est. 477-TX-1

KEEP OUT OF REACH OF CHILDREN

WARNING

AVISO:

PRECAUCION AL USUARIO:

Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
MAY BE FATAL IF SWALLOWED

- HARMFUL IF ABSORBED THROUGH SKIN OR INHALED
- CAUSES EYE IRRITATION

Avoid Contact With Eyes, Skin, Or Clothing

- Avoid Breathing Dust Or Spray Mist
- Wash Thoroughly With Soap And Water After Handling And Before Eating Or Smoking
- When Loading The Spray Tank Or Handling The Powder, Wear A Pesticide Respirator Jointly Approved By The Mining Enforcement And Safety Administration (Formerly The U.S. Bureau Of Mines) And By The National Institute For Occupational Safety And Health Under The Provisions of 30 CFR Part 11
- Wear Protective Clothing Such As Long Pants, Long Sleeved Shirt, Gloves, Hat, And Boots When Loading The Spray Tank Or Handling The Powder And During Application Of The Spray Mixture
- Work To Windward To Stay Out Of Spray Drift Or Mist
- Remove Contaminated Clothing And Wash Before Reuse
- Do Not Apply This Product In Such a Manner as to Directly or Through Drift Expose Workers or Other Persons
- The Area Being Treated Must Be Vacated by Unprotected Persons
- Keep Away From Food, Feedstuffs And Water Supplies

STATEMENT OF PRACTICAL TREATMENT:

If Swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting

or give anything by mouth to an unconscious person. If On Skin: Wash with plenty of soap and water. Get medical attention if irritation persists. If In Eyes: Flush with plenty of water for 5 minutes. Get medical attention if irritation persists. If Inhaled: Remove to fresh air if effects occur. Get medical attention.

NOTE TO PHYSICIANS: 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.

Environmental Hazards

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

NOTICE

Read and understand the entire label before using. Use only according to label directions.

Before buying or using this product, read **WARRANTY LIMITATIONS AND DISCLAIMER** elsewhere on this label. If terms are not acceptable, return unopened package at once to retailer for full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under **WARRANTY LIMITATIONS AND DISCLAIMER**.

IN CASE OF AN EMERGENCY

endangering life or property involving this product, call collect 817-638-4400

AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, Drugs, or Clothing

Lorsban* 50W

ENDANGERED SPECIES RESTRICTIONS

The use of LORSBAN 50W may pose a hazard to certain Federally endangered fish species. This product cannot be used on sour cherry trees in the following counties:

COLORADO: Delta, Larmer and Mesa;

OHIO: Washington

UTAH: Emery, Grand, Utah and Washington

WISCONSIN: Iowa, Pierce, Richland and Vernon

DIRECTIONS FOR USE

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

General Information

LORSBAN 50W insecticide is a wettable powder formulation designed for use as a cover spray to control various pests. The pests controlled are listed in the accompanying table. LORSBAN 50W is compatible with insecticides, miticides, and fungicides commonly recommended in orchard spray schedules except for alkaline materials such as Bordeaux mixture and lime.

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

Mixing Instructions

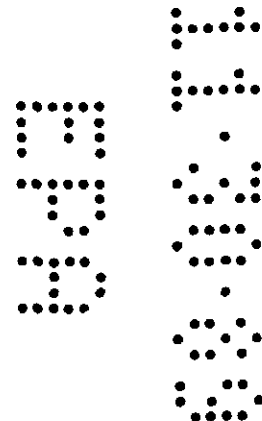
LORSBAN 50W mixes readily with water to form a suspension. Mix the required amount of LORSBAN 50W with a small quantity of water and add this premix while filling the spray tank. Alternatively, fill the tank with the required amount of water and then add the premix. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture. LORSBAN 50W contains a wetting agent. Do not use additional wetting agents, spreaders or stickers.

Use and Dosage Recommendations

Use LORSBAN 50W at the dosages indicated by application as a foliar spray to control pests listed in the following table. Where a rate range is listed in the use directions, use the higher rate for more severe infestations. Mix the required dosage in sufficient water to ensure adequate coverage and apply as a concentrate or dilute spray using conventional, power-operated ground spray equipment or by aircraft (fixed-wing or helicopter). For dilute sprays applied to tree fruits and nuts, mix the required dosage in sufficient water to allow for spray to run off. For concentrate sprays, apply an equivalent amount of LORSBAN 50W per acre. Treat when pests appear or in accordance with local conditions. Mow or beat down orchard blooming weed cover crops before applying spray to tree fruit crops to reduce hazard to bees. This step is especially important in relation to early Spring cover sprays when morning conditions may be wet from dew. LORSBAN 50W will perform best in an almond or walnut pest control program that includes winter sanitation (removal of mummy nuts) and regular monitoring of target pests. To control apple aphid infesting apples, spray every 10 to 14 days on a preventative schedule. To suppress pecan leaf scorch mite on pecans, use in a preventative program. For best pecan *Phytoxera* control, use two applications 7 to 10 days apart starting at bud swell and ending by early leaf expansion. For ant control on pecans, do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor. Consult your State Agricultural Experiment Station, Certified Pest Control Advisor, or Extension Service specialist for specific use information in your area.

LORSBAN 50W may also be used on almonds and walnuts as a dormant/delayed dormant treatment applied at the dosages indicated in a dilute or concentrate spray. Proper equipment must be used to obtain complete coverage of the entire tank area. If scale infestations are severe, dilute sprays should be used to ensure complete coverage. Use oil as recommended by your State Agricultural Experiment Station, State Extension Service Specialist, or Certified Pest Control Advisor. Do not use oil with LORSBAN 50W on walnuts. Because dry or cold conditions may cause LORSBAN 50W plus oil sprays to injure trees resulting in bud damage or drop, do not apply until winter rains or irrigation has replenished soil moisture such that bark and twigs are not desiccated.

BEST AVAILABLE COPY



APPLES: Use LORSBAN 50W to control the pests listed in the following table at the rates indicated.

Geographic Location	Pests Controlled	Dosage Recommendations	Remarks
<p>Restrictions (All use Areas) Make no more than 8 applications per season. Do not apply last treatment within 28 days before harvest or apply last two treatments closer than 21 days apart. Do not allow livestock to graze in treated orchards. Additional Restrictions (by Geographic Location) In California: Do not do work involving contact with trees within 2 days after treatment.</p>			
All Areas	<ul style="list-style-type: none"> - Apple aphid¹, - Apple maggot, - Climbing cutworm, - Codling moth, - Dogwood borer (trunk spray), - European apple sawfly, - Eyespotted bud moth, - European corn borer, - Fruitree leafroller, - Green fruitworm, - Lesser appleworm, - Obliquebanded leafroller, - Orange tortrix, - Pandemis leafroller, - Oriental fruit moth, - Periodical cicada, - Plum curculio, - Redbanded leafroller, - Rosy apple aphid, - San Jose scale, - Tarnished plant bug, - Tufted apple bud moth, - Variegated leafroller, - Woolly apple aphid. 	3 lb/acre	¹ For apple aphid control LORSBAN 50W should not be used alone as a rescue treatment.
Connecticut, Delaware, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, N. Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, West Virginia.	<ul style="list-style-type: none"> - Apple aphid², - Apple maggot³, - Codling moth, - Dogwood borer (trunk spray)⁴, - European apple sawfly⁵, - European corn borer⁶, - European red mite⁷, - Eyespotted bud moth, - Fruitree leafroller, - Green fruitworm, - Lesser appleworm, - Obliquebanded leafroller⁸, - Oriental fruit moth, - Periodical cicada⁹, - Plum curculio¹⁰, - Potato leafhopper, - Redbanded leafroller, - Rosy apple aphid, - San Jose scale, - Spotted tentiform leafminer¹¹, - Tarnished plant bug, - Tufted apple bud moth¹², - Variegated leafroller, - White apple leafhopper¹³, - Woolly apple aphid 	2-3 lb/acre (8-12 oz/100 gal dilute) ¹⁴ OR A tank mix of 1 1/2 lbs/acre (6 oz/100 gal dilute) with one of the following: 1 1/2 pints/acre LANNATE 1.8L (6 fl oz/100 gal dilute) ¹⁵ 6 oz/acre LANNATE 90SP (1 1/2 oz/ 100 gal dilute) ¹⁶ 2 lbs/acre IMIDAN 50W (8 oz/100 gal dilute) ¹⁷ 1 1/2 lbs/acre GUTHION 35W (8 oz/ 100 gal dilute) ¹⁸ 2 pints/acre PENNCAP M (8 fl oz/100 gal dilute) ¹⁹	² For apple aphid control, use 2-3 lbs/acre LORSBAN 50W or a tank mix with LANNATE 1.8L or LANNATE 90SP as recommended. LORSBAN 50W should not be used alone or in a tank mix as a rescue treatment. Treatments should be applied at regular intervals (1-2 weeks apart). ³ For apple maggot control in Michigan or in other areas after July, use 3 lbs/acre LORSBAN 50W or a tank mix with IMIDAN 50W, GUTHION 35W or PENNCAP M as recommended. ⁴ No tank mix recommended. ⁵ For European apple sawfly control, use 2-3 lbs/acre LORSBAN 50W or a tank mix with IMIDAN 50W, GUTHION or PENNCAP M as recommended. ⁶ For control of European corn borer or obliquebanded leafroller, use 2-3 lbs/acre LORSBAN 50W or a tank mix with LANNATE 1.8L or LANNATE 90SP as recommended. ⁷ European red mite suppression with LORSBAN 50W is achieved when a regularly scheduled preventative spray program is followed or when used with other mite management practices such as biological control. ⁸ For plum curculio control in Michigan, use 3 lbs/acre LORSBAN 50W or a tank mix with IMIDAN 50W, GUTHION 35W or PENNCAP M as recommended, for other areas, use 2-3 lbs/acre LORSBAN 50W or one of the above-mentioned tank mixes. ⁹ For control of spotted tentiform leafminer or white apple leafhopper, use a tank mix with LANNATE 1.8L or LANNATE 90SP as recommended. LORSBAN 50W alone is not recommended for control of these pests. ¹⁰ For tufted apple bud moth control, use 3 lbs/acre LORSBAN 50W or a tank mix with LANNATE 1.8L or LANNATE 90SP as recommended. ¹¹ Based on 400 gal dilute/acre.

BRASSICA (C): Use LORSBAN 50W to control pests listed in the following table at the rates indicated.

Crop	Geographic Area	Insects Controlled	Dosage LORSBAN 50W	Remarks
Brassica (cole) Such as: Broccoli Brussels sprouts Cabbage Cauliflower Collards Kale Kohlrabi	All areas Except Texas	Cabbage aphid Cutworms Imported cabbageworm Striped flea beetle (adult)	2 lb/acre	Make no applica- tions season Do not harvest 21 days after har- vest To avoid toxic vegeta- tion not m pesti or tr are u heat stres
	Texas	Beet armyworm Cabbage aphid Cutworms Diamondback moth ¹ Imported cabbageworm Striped flea beetle (adult)	2 lb/acre	Make no applica- tions season Do not harvest 21 days after har- vest Do not that extre droug For ae ation minim of wa Contr reduc spray

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(Table Continued)



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.² Read and carefully follow all applicable directions, restrictions, and precautions on labeling for other products used in combination with LORSBAN 50W.

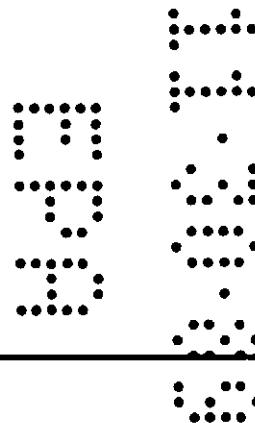
¹Significant organophosphate insecticide resistance has been reported for diamondback moth populations in Texas. LORSBAN 50W will not control organophosphate - resistant populations of diamondback moth. Consult your local Extension Service for resistance management information.

²For regional information regarding a specific tank mix, contact your local Dow Chemical Company representative. Tank mixes with Thiodan 3EC, Thiodan 50WP, or cottonseed oil are not recommended. Refer to the General Information section of this label for directions on testing tank mix compatibility.

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Walnuts	Codling moth, Walnut scale, Walnut husk fly	4 lb per acre	dormant/delayed dormant spray application and no more than two foliar spray applications on walnuts per season, and no more than three foliar spray applications on filberts per season.
Filberts	Eyespotted bud moth, Filbert aphid, Filbert leafroller, Filbertworm Obliquebanded leafroller, Omnivorous leafher, Winter moth	3 to 4 lb per acre	Do not apply within 14 days of harvest. Do not allow livestock to graze in treated orchards. Do not apply as a dormant spray application on almonds in the following counties in California: Butte, Colusa, Glenn, Solano, Sutter, Tehama, Yolo and Yuba.
Pecans	Black pecan aphid, Hickory shuckworm, Pecan leaf scorch mite (suppression)	2 lb per 100 gallons	Make no more than 5 applications per season. Do not apply within 28 days of harvest. Do not allow livestock to graze in treated orchards.
	Pecan nut casebearer, <i>Phytokora</i> spp., Fall webworm, Spittlebug	1 lb per 100 gallons	
	Fire ants and other ant species (orchard floor)	2 lb per acre	
Brassica (cole) Broccoli Brussels sprouts Cabbage Cauliflower Collards Kale Kohlrabi	Cabbage aphid Cutworms Imported cabbageworm Striped flea beetle (adult)	2 lb per acre	Make no more than 6 applications per season. Do not apply within 21 days before harvest. To avoid phytotoxicity in vegetable crops, do not mix with other pesticide products or treat plants that are under extreme heat and drought stress.
Sour Cherries	Borers American plum Lesser peachtree Pacific flatheaded Peach twig Peachtree Shot-hole Climbing cutworm Green fruitworm Leafrollers Fruitree Obliquebanded Pandora Redbanded Lesser appleworm Tarnished plant bug Moth Eyespotted bud Minors Scale European fruit lecanium San Jose Stink bug	2 to 3 lb per acre	Make no more than 8 applications per season. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated orchards. In California do not do work involving contact with trees within 2 days after treatment. Do not use on sweet cherries. Refer to the Endangered Species Section of this label for geographic restrictions on the use of LORSBAN 50W on sour cherries.
	Black cherry aphid Cherry fruit fly Plum curculio Rose chafer	3 lb per acre	



REENTRY STATEMENT

Do not allow reentry into treated areas within 24 hours unless protective clothing is worn. Protective clothing consists of at least a hat or other suitable head covering, a long-sleeved shirt and long-legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. These oral warnings shall inform workers of areas or fields that may not be entered without protective clothing and actions to take in case of accidental exposure as shown by the Statement of Practical Treatment section on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written warnings must include the following information: WARNING: Area treated with LORSBAN 50W wettable powder insecticide on (insert date of application). Do not enter without protective clothing for 24 hours. In case of accidental exposure (insert actions to take as shown by the Statement of Practical Treatment section on this label).

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY LIMITATIONS AND DISCLAIMER

The Dow Chemical Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions therein under normal conditions of use. THIS IS THE ONLY WARRANTY MADE ON THIS PRODUCT. NO OTHER EXPRESS AND NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OUTSIDE OF THIS LABEL. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller.

When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify in writing The Dow Chemical Company of any claims to be eligible to receive either remedy given below. The EXCLUSIVE REMEDY OF THE BUYER OR USER and the LIMIT OF LIABILITY of The Dow Chemical Company or any other seller will be one of the following, at the election of The Dow Chemical Company:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

The seller will not be liable for consequential or incidental damages or losses.

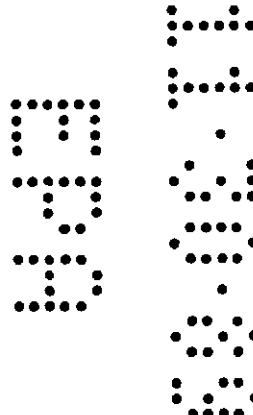
The terms of this Warranty Limitations And Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations And Disclaimer in any manner.

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THE DOW CHEMICAL COMPANY
Midland, Michigan 48674 U.S.A.

*Trademark of THE DOW CHEMICAL COMPANY

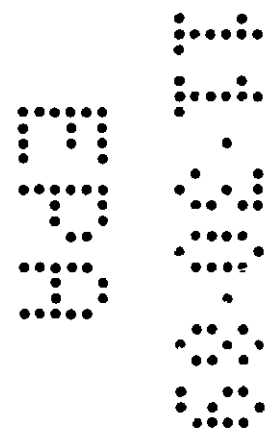


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**SPECIMEN LABEL 86-1777 DATE CODE J989
REPLACES 86-1777 DATE CODE I 189
DISCARD PREVIOUS SPECIMEN LABELS**

**REVISIONS INCLUDE:
1) REVISED TABLE FOR USE ON APPLES
2) REVISED USE RECOMMENDATIONS
- 3RD SENTENCE**