

US EPA ARCHIVE DOCUMENT

Shaughnessy No.: 059101

Date out of EAB: 16 APR 1984

To: J. Ellenberger  
Product Manager 12  
Registration Division (TS-767)

From: Samuel M. Creeger, Chief *Clayton Fletcher*  
Environmental Chemistry Review Section 1  
Exposure Assessment Branch  
Hazard Evaluation Division (TS-769c)

**COPY**

Attached, please find the EAB review of:

Reg./File No.: 464-448 and -523

Chemical: Chlorpyrifos

Type Product: Insecticide

Product Name: LORSBAN

Company Name: Dow

Submission Purpose: Add use in citrus orchards

ZBB Code: 3(c)(7)

Action Code: 305

Date In: 3/5/84

EAB No.: 4227-4228

Date Completed: 4/12/84

TAIS (Level II) Days

Deferrals To:

64

0.5

Ecological Effects Branch

Residue Chemistry Branch

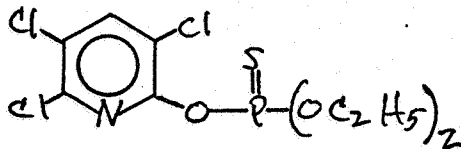
Toxicology Branch

1.0 INTRODUCTION

Chemical Name and Type of Pesticide: chlorpyrifos, O,O-diethyl O-(3,5,6-trichloro-2-pyridyl)phosphorothioate, insecticide.

Trade Name: LORSBAN 15G Granular Insecticide  
LORSBAN 4E Insecticide

Chemical Structure:



Dow Chemical is requesting the added use of LORSBAN 15G Granular Insecticide and LORSBAN 4E Insecticide to citrus orchard floors to control root weevil and ant species. LORSBAN 4E is currently registered on a wide variety of crops and tree fruits.

2.0 DIRECTIONS FOR USE

See attached labels.

3.0 DISCUSSION OF DATA

No new data submitted.

4.0 RECOMMENDATION

4.1 EAB notes that a previous review (31 Jan 1984) indicated our data supported use on filberts and pecans.

4.2 However, we also want to point out that the soil photolysis data gap still exists. A recent review (2 Feb 1984) found the submitted studies unacceptable.

*Herbert L. Manning*  
Herbert L. Manning, Ph.D.  
Review Section #1  
EAB/HED

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**SPECIMEN LABEL**  
REDUCED TO 55%



# Lorsoban

## AE insecticide



*chlorpyrifos = 40.7% ai  
solvent = 22.8*

*(Faint, illegible text)*

**WARNING**

(Faint warning text)

86-1417 PRINTED IN U.S.A. IN MAY, 1983.  
REPLACES SPECIMEN LABEL 86-1417 PRINTED IN APRIL, 1983.  
DISCARD PREVIOUS SPECIMEN LABELS.  
REVISIONS INCLUDE: (1) CONTROL OF BEET ARMYWORMS AND CUTWORMS IN SUGAR BEETS.

THE  
MIDLAND  
PUBLISHING

SL2100

3

KEEP OUT OF REACH OF CHILDREN

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**  
BE FATAL IF SWALLOWED • MAY BE ABSORBED  
THROUGH SKIN • MAY BE INJURIOUS TO EYES AND SKIN  
If Taken Internally • Do Not Get in Eyes, on Skin or on  
Clothing • Avoid Breathing Vapors and Spray Mist • Wash  
Thoroughly After Handling

**First Aid**  
If Swallowed: Do Not Induce Vomiting. Give 1-2 glasses of water.  
If on Skin: Wash with soap and water.  
If in Eyes: Flush with water for 15 minutes.  
If inhaled: Move to fresh air. If breathing is difficult, give oxygen.  
If on Clothing: Remove clothing and wash separately.

**Physical and Chemical Hazards**  
**COMBUSTIBLE**

Do Not Use or Store Near Heat or Open Flame  
Do Not Cut or Weld Container

**Environmental Hazards**

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**

READ AND FOLLOW COMPLETE DIRECTIONS FOR USE AND OTHER IMPORTANT INFORMATION ON BOOKLET ATTACHED TO PRODUCT CONTAINER

**STORAGE AND DISPOSAL**

Store in original container. Do not use if container is damaged. Do not use if contents are not as labeled. Do not use if contents are not as labeled. Do not use if contents are not as labeled.

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**DOW CHEMICAL COMPANY**  
ANN ARBOR, MICHIGAN  
MIDLAND, MICHIGAN  
TORONTO, ONTARIO, CANADA

18010-001-2

45378-X483

**THE DOW CHEMICAL COMPANY**  
Midland, MI 48640 U.S.A.



**Lorsban 4E**  
insecticide

*For Control of Various Insects  
Infesting Certain Field, Fruit,  
Nut, and Vegetable Crops*

**Complete Directions for Use, Use  
Precautions and Restrictions, Hazards  
and Other Important Information for the  
Proper Use, Handling, Storage and  
Disposal of this Product.**

EPA Reg. No. 464-448 EPA Est. 464-MI-1

45378-X483

\*Trademark of THE DOW CHEMICAL COMPANY

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**Environmental Hazards**

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.

LORSBAN 4E insecticide is toxic to fish, birds and other wildlife. Fish and crustaceans may be killed if their waters are contaminated with this product. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Do not apply where runoff is likely to occur. Do not apply when wind-blown dusts favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes. Use this product only as specified on this label.

**DIRECTIONS FOR USE**

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

**General Information**

LORSBAN 4E insecticide forms an emulsion when diluted with water and is suitable for use in all conventional hand and power operated ground spray equipment. Aerial spray equipment also may be used where specified.

**Mixing Instructions**

To prepare the spray, add a portion of the required amount of water to the spray tank and with agitation add the LORSBAN 4E. Complete filling the tank with the balance of water needed. Maintain sufficient agitation during both mixing and application to ensure uniformity of the spray mixture.

LORSBAN 4E insecticide may also be used in tank mixtures with certain herbicides and/or with non-pressure fertilizer solutions as recommended under specific crop use directions. Prepare tank mixtures in the same manner as recommended above for use of LORSBAN 4E alone. When tank mixtures of LORSBAN 4E and herbicides are involved, add wettable powders first, flowables second, and emulsifiable concentrates last. Where a fertilizer solution is involved, it is strongly recommended that a fertilizer-pesticide compatibility agent such as Deter or Compel be used. Maintain constant agitation during both mixing and application to ensure uniformity of the spray mixture.

**NOTE:** Test compatibility of the intended tank mixture before adding LORSBAN 4E to the spray or mix tank. Add proper amounts of each ingredient to a pint or quart jar, cap, shake and let set 15 minutes. Formation of precipitates that do not readily redispense indicates an incompatible mixture that should not be used.

The label of The Dow Agrochemicals Company is a trademark of Kalle Laboratories, Inc.

**Use and Dosage Recommendations**

**ALFALFA:** Use LORSBAN 4E to control the following pests at the dosages indicated by application as a broadcast, foliar spray.

- Corn rootworm adults (spotted cucumber beetle), grasshoppers . . . . . 1/2 to 1 pint per acre.
- Alfalfa blotch leafminer, alfalfa looper, alfalfa weevil larvae and adults, aphids, armyworms, cutworms, Egyptian alfalfa weevil larvae and adults, plant bugs, leafhoppers, spittlebugs . . . . . 1 to 2 pints per acre

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Page 7

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**READ ENTIRE LABEL BEFORE USING THIS PRODUCT**

**CAUTION AL USUARIO:** Si usted no lee las, no use este producto hasta que etiqueta le haya sido explicada plenamente.

**TRANSLATION: (TO THE USER:** If you cannot read English, do not use this product if the label has been fully explained to you.)

**ACTIVE INGREDIENTS:**

Chlorpyrifos (0,0-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate) ..... 40.7%

Aromatic petroleum derivative solvent ..... 22.8%

**INERT INGREDIENTS** ..... 36.5%

Contains 4 pounds of chlorpyrifos per gallon.

In case of an emergency endangering life or property involving this product, call collect **517-636-4400**

**AGRICULTURAL CHEMICAL**

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

Do not use on turf or for structural pest control. Do not formulate this product into other end use products.

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**HAZARDS**  
**KEEP OUT OF REACH OF CHILDREN**  
**WARNING**

**PRECAUTIONARY STATEMENTS**  
*Hazards to Humans and Domestic Animals*

**MAY BE FATAL IF SWALLOWED • MAY BE ABSORBED THROUGH SKIN • MAY BE INJURIOUS TO EYES AND SKIN**

**Do Not Take Internally • Do Not Get In Eyes, on Skin or on Clothing • Avoid Breathing Vapors and Spray Mist • Wash Thoroughly After Handling**

**Statements of Practical Treatment**

**If Swallowed:** Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician immediately.

**If On Skin:** In case of contact, remove contaminated clothing and immediately flush skin with soap and water. Wash contaminated clothing before reuse.

**If In Eyes:** Flush eyes with plenty of water for 15 minutes. Call a physician.

**NOTE TO PHYSICIAN:** Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine only by injection is an antidote.

**Physical and Chemical Hazards**  
**COMBUSTIBLE**

**Do Not Use or Store Near Heat or Open Flame • Do Not Cut or Weld Container**

**CITRUS ORCHARD FLOORS:** Use LORSBAN 4E to control the root weevil complex, red imported fire ants and other ant species by applying the specified dose in 25 to 50 gallons of water with ground application equipment that will uniformly apply the spray to the orchard floor. For control of the root weevil complex, apply LORSBAN 4E to the orchard floor directly below the tree canopy at the rate of 10 quarts per treated acre when weevils begin emerging in late spring or early summer. For weevil species with two generations per year (sugarcane rootstalk borer weevil and little leaf notcher), two applications of LORSBAN 4E at the rate of 5 quarts per treated acre each may be applied with the first application in late spring or early summer when weevils begin emerging and the second application in late summer or early fall when weevil numbers begin to increase. Consult your State Agricultural Experiment Station or Extension Service Specialist for additional information on weevil biology, best time of application, and other citrus pests and diseases. For red imported fire ants, apply LORSBAN 4E to the orchard floor at the rate of 2.4 to 3 quarts per acre. Retreat as needed. For most insect pests, uniform coverage of the orchard floor is essential. Do not apply where weed growth or other obstructions will impede uniform coverage of the orchard floor. Do not apply in tank mixtures with Roundup or Paraquat herbicides. Foliar applications of LORSBAN 4E may be made in addition to the orchard floor treatments.

Trademark of Monsanto Company

**RESTRICTIONS:** Do not apply more than 10 quarts of LORSBAN 4E per acre per season. Do not apply LORSBAN 4E to citrus trees or other plants. Do not apply LORSBAN 4E to citrus trees or other plants.

<sup>1</sup>In California apply as Thorough Distribution Coverage (TDC) using 1/2 to 1 pint of LORSBAN 4E in 100 gallons of water and 6 to 12 pints LORSBAN 4E per acre in dilute or concentrate sprays. For dilute sprays, apply 600 to 1200 gallons of spray per acre.

<sup>2</sup>In California apply as Thorough Coverage (TC) using same dosages as in <sup>1</sup>. For dilute sprays apply 1200 to 2400 gallons of spray per acre but do not apply more than 12 pints of LORSBAN 4E per acre.

<sup>3</sup>Gallonage per acre based on average size of mature trees. Adjust to tree size per acre.

For dilute applications, use the specified dosage in 100 gallons of water for the spray type indicated for pest to be controlled. For concentrate sprays, use the same amount of LORSBAN 4E per acre that would be needed for application as a diluted spray, using appropriate application/coverage procedures. Treat when insects become a problem or in accordance with the local spray schedule recommended by your State Extension Service Specialist. Do not apply during bloom period or when temperature exceeds 95 F. Do not tank mix LORSBAN 4E and PLIOTRAN™ 50A until one in low volume applications.

**Restrictions:** Do not apply more than 2 applications per year. Do not apply more than 15 pints of LORSBAN 4E insecticide per acre per fruit year. Do not make second application within 30 days of the first application. Do not treat within 21 days before harvest for applications up to 7 pints of LORSBAN 4E per acre per year. Do not apply for application rates above 7 pints per acre. Do not pick fruit or do other work involving contact with trees within 2 days after treatment. Do not allow livestock to graze in treated areas.

**FIELD CORN, POPCORN, SWEET CORN:** For use to control cutworms, army worms, chinch bugs, grasshoppers, wireworms, flea beetle larvae and adults, aphids, beetbugs, grass western bean cutworm, corn borers, symphylans and lesser cornstalk borer.

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SPECIMEN LABEL  
REDUCED TO 40°



Trademark of THE DOW CHEMICAL COMPANY

86-1375 PRINTED IN U.S.A. IN APRIL, 1985.

REPLACES SPECIMEN LABEL 86-1375 PRINTED IN DECEMBER, 1982.

DISCARD PREVIOUS SPECIMEN LABELS.

REVISIONS INCLUDE: (1) Revised use directions on corn and sugar beets.  
(2) Changed the U.S. Patent Number.

ai = 15%

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SL209C

