



62719-79
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

07/27/2000 1/11

JUL 27 2000

John J. Jachetta, PhD.
DowAgroSciences
9330 Zionsville Road
Indianapolis, IN 46268-1054

Subject: LOCK-ON, Chlorpyrifos Memorandum Of Agreement (MOA)
EPA Reg No.: 62719-79
Submission dated July 5, 2000

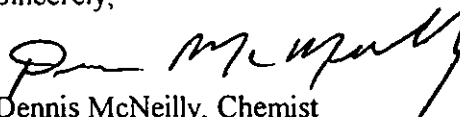
Dear Dr. Jachetta:

The revised labeling, referred to above, submitted in connection with the Chlorpyrifos Memorandum Of Agreement (MOA) is acceptable, provided you incorporate the Agency's condition as enumerated in this letter below and submit one copy of your final printed label prior to releasing the product for shipment. A stamped copy of the label is enclosed.

1. Revise the REI from 12 hours to 24 hours on page 6 of the label in the Agricultural Use Requirements box

As specified in paragraph 5 in the Chlorpyrifos MOA this amendment is effective Dec 1, 2000. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. Failure to comply with any of the conditions of registration set forth in Paragraph 10 the MOA shall be grounds for cancellation of the affected registration(s) under FIFRA section 6(e). Submit one copy of the revised final printed label before releasing the product for shipment. If the conditions enumerated above are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). If you have questions, please contact me at (703) 308-6742 or electronically at McNeilly.Dennis@EPA.gov.

Sincerely,


Dennis McNeilly, Chemist
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosed: stamped label

(Base label):

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

(Logo) Dow AgroSciences LLC

Lock-On***For control of various insects infesting alfalfa and cotton**

Active ingredient:

chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-
2-pyridinyl)phosphorothioate..... 22.9%

Inert ingredients[†]..... 77.1%

Total 100.0%

Contains 2 pounds of chlorpyrifos per gallon.

[†] Composition of inert ingredients includes xylene or xylene range aromatic solvent.

ACCEPTED
with **COMMENTS**
In EPA Letter Dated:

JUL 27 2000
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.

62719-79

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****May Cause Eye Injury • Harmful If Swallowed or Absorbed Through The Skin****Do not get in eyes, on skin, or on clothing.****Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selections chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber or Viton
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

First Aid**Organophosphate Insecticide**

If swallowed: Do not induce vomiting. Contains aromatic petroleum solvent. Call a physician or Poison Control Center immediately.

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If inhaled: Remove to fresh air if effects occur. Get medical attention.

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

Environmental Hazards

This pesticide is toxic to birds and wildlife, and extremely toxic to fish and aquatic organisms. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Cover or incorporate spills. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Avoid use when bees are actively foraging. Protective information may be obtained from your cooperative agricultural extension service.

Physical or Chemical Hazards

Flammable - Do not use or store near heat sources or open flame. Do not use in the vicinity of pilot lights.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

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

EPA Reg. No. 62719-79

EPA Est. 464-MI-1; 67545-AZ-001

*Trademark of Dow AgroSciences LLC

Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

Net Contents ____ gal

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Figure 1 shows a 10x10 grid of 100 squares. The top row contains 10 squares, each with a number from 1 to 10. The remaining 90 squares are empty.

2 3 3 3
 1 2 3 3
 2 3 3 3
 1 2 3 3

(Datapack cover):

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Lock-On*

For control of various insects infesting alfalfa and cotton

Active ingredient:

chlorpyrifos: O,O-diethyl-O-(3,5,6-trichloro-2-pyridinyl)phosphorothioate	22.9%
Inert ingredients †	77.1%
Total	100.0%

Contains 2 pounds of chlorpyrifos per gallon.

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Refer to inside of label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use including Storage and Disposal.

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Insecticide

Net Contents ___ gal

(Page 1 through end):

Precautionary Statements

Hazards to Humans and Domestic Animals

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Personal Protective Equipment (PPE)

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Users should:

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Physical or Chemical Hazards

Flammable - Do not use or store near heat sources or open flame. Do not use in the vicinity of pilot lights.

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) of 12 hours. Certified crop advisors or persons entering under their direct supervision under certain circumstances may be exempt from the early reentry requirements pursuant to 40 CFR Part 170.

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

- Coveralls
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, or Viton
- Shoes plus socks
- Protective eyewear

Storage and Disposal

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

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

Container Disposal: Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

General Information

Lock-On insecticide controls various insects infesting alfalfa and cotton. Lock-On forms an emulsion when diluted with water and is suitable for use in all conventional spray equipment.

General Use Precautions

Lock-On is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply when bees are foraging or clustered outside of hives. Information on methods of protecting bees from insecticide damage may be obtained from your agricultural extension service.

Chemigation: Do not apply Lock-On through any type of irrigation system.

Mixing Directions

Partly fill spray tank with water. Start agitation, and add the required amount of Lock-On. Continue agitation and finish filling spray tank to required spray volume. Maintain sufficient agitation during mixing and application to insure uniformity of the spray mixture.

Application Guidelines

Proper application techniques are necessary to insure thorough spray coverage and correct dosage required for effective insect control. The following recommendations should be followed when applying Lock-On.

Aerial Application

Shorten boom length if necessary to prevent spray from entering vortices generated by wing tips or helicopter rotors. Reduce swath width when the wind direction is parallel to the direction of spraying. A flying height of 5 to 15 feet above the target surface is recommended to achieve optimum coverage. Use permanent swath markers or flagging for aerial application.

Proper nozzle arrangement and swath width are required to prevent variability in the spray pattern and insure proper spray deposition. Spray boom nozzle orientation affects the amount of droplet break-up which occurs. More break-up occurs when nozzle orientation is changed from straight back (parallel) to straight down (at a right angle) to the air flow over the boom. The desired droplet size (100 to 200 microns) is obtained by setting the nozzle orientation somewhere between these two extremes.

Spray pattern deposition, droplet size distribution and effective swath width can be evaluated by application of sprays containing a water-soluble dye over a paper tape (adding machine tape).

Ground Application

Use power-operated equipment capable of thorough coverage of the target crop. Use flat fan or disc-core hollow cone nozzles. Refer to manufacturer's recommendations on nozzle spacing, boom height and operating pressure to obtain uniform coverage. Swath width should not exceed boom width. Ideal droplet size (100 to 200 microns) is obtained with a boom spray pressure of 40 to 60 psi. Adjust boom pressure to minimize spray drift. Spray drift is wasted spray and cannot be confined to the target area.

Approved Crops

Alfalfa (For Use in Arizona and California)

Use Lock-On to control insects infesting alfalfa by application as a broadcast spray at the dosages indicated:

Pest	Application Rate
alfalfa caterpillar	1 1/2 to 2 pints/acre
armyworms	2 pints/acre
Egyptian alfalfa weevil	
pea aphid	
blue alfalfa aphid	

Apply Lock-On in enough water to ensure thorough coverage of crop foliage using aerial (fixed wing or helicopter) or power-operated ground spray equipment. Lock-On should be applied in 3 to 10 gallons of water per acre. Do not apply in dilutions exceeding 10 gallons (water plus insecticide) per acre. Treat when field counts or crop injury indicates that damaging pest populations are developing or present. Excessively cool conditions may cause a reduction in insect control.

Precautions

Do not tank mix Lock-On with pesticides, surfactants, or fertilizer formulations unless prior use has shown the combination to be non-injurious under current conditions of use.

Some phytotoxic symptoms may be observed on young, tender, rapidly growing alfalfa plants or alfalfa plants under extreme heat or drought stress when treated with Lock-On. Alfalfa will outgrow these symptoms and no yield loss is expected.

This product is highly toxic to bees exposed to direct treatment. 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.

Do not apply through overhead sprinkler irrigation systems.

Restrictions

Do not cut or graze treated alfalfa within 4 days after application of 1 1/2 to 2 pints of Lock-On per acre. Do not make more than 4 applications per year or apply more than one time per crop cutting.

Cotton (For Use in Arizona and California)

Use Lock-On to control the following pests at the dosages indicated:

Pest	Application Rate
armyworm	2 pt/ acre
cotton aphid	
cotton fleahopper	
<i>Lygus</i>	
salt marsh caterpillar	
thrips	
cotton bollworm	
tobacco budworm	
boll weevil	
cutworm	

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pink bollworm

Note: The 2.0 pint per acre rate will aid in the suppression of cotton leafperforator and spider mites.


Lock-On may be applied undiluted (0.25 gallons/acre) or in up to 10 gallons of total spray volume per acre using aerial (fixed wing or helicopter) or power-operated ground equipment. Do not exceed 10 gallons total spray volume per acre. Treat when field counts indicate damaging insect populations are developing or present. Retreat as necessary to maintain control.


Special Guidelines for Bollworm and Budworm Control

For the most effective control of bollworms and budworms, scout fields twice a week and apply Lock-On when worms are 1/4 inch or less in length. The following table illustrates the size of worms in relation to age and stage of development (instar) as a guide to timing treatments for optimum control.

When to Treat	Age (Days)	Average Size	Instar
Treat worms from "Hatch" through "II" Instar	Hatch	1/16"	Hatch
	3	3/32"	I
	5*	9/32"	II
	6	7/16"	III
	8	11/16"	IV

1/16"
3/32"
9/32"
7/16"
11/16"





1/2"

***Note:** A scouting schedule of once per week is inadequate since hatching worms will have exceeded ideal size for control (hatch through II instar) before the next scouting observation has determined the need to spray.

Restrictions

Do not apply Lock-On within 40 days before harvest.
Do not allow livestock to graze in treated areas.
Do not feed gin trash or treated forage to livestock.

Warranty Disclaimer

Dow AgroSciences 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, subject to the inherent risks set forth below. Dow AgroSciences **MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

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

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

*Trademark of Dow AgroSciences LLC
EPA Accepted Date: __/__/__