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REGISTRATION STANDARD'S PHASE I

QUALITATIVE USE ASSESSMENT

FOR

DICROTOPHOS

(035201)

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DICROTOPHOS*

(The imporant sites reviewed were determined as the sites of concern by considering high volume use sites, high rates of application; high concentrations of finished spray material, methods of application or formulations of the pesticide registered.)

*dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide

FEDERALLY REGISTERED LABELS*

DICROTOPHOS - 035201

LABEL NUMBER	ACTIVE INGREDIENT	% A.I.	FORMU-LATION	PRODUCT NAME	MANUFACTURER
	82% Technical Chemical				
000201-00142	dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide	82	Tech	Technical	Shell Chemical Company
	2 lb/gal Emulsifiable Concentrate				
000201-00229	dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide	25.05	EC	Bidrin Insecticide Emulsifiable Concentrate	Shell Chemical Company
	xylene	64.45			
	7.5 lb/gal Soluable Concentrate/Liquid				
010163-00035	dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide	75	SC/L	Bidrin 7.5 Insecticide	The Dune Company
	8 lb/gal Soluable Concentrate/Liquid				
000201-00274	dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide	82	SC/L	Bidrin 8	Shell Chemical Company
002749-00187	-same-	82	SC/L	DPHDC 8 Water Miscible Insecticide	Aceto Chemical Company Inc.
008620-00037	-same-	80	SC/L	Big Boy Technical Bidrin Insecticide	Escambia Chemical Corporation
	86% Liquid - Ready to Use				
000201-00153	dimethyl phosphate ester with 3-hydroxy-N,N-dimethyl-cis-crotonamide	86	RTU	Technical Bidrin Insecticide	-
007496-00003	-same-	86	RTU	Inject-A-Cide B	J. J. Mauget Company

*This table does not include intrastate or SLN(24C) registrations.
**This label was not included in the Index Entry.

QUALITATIVE USE ASSESSMENT

DICROTOPHOS

Common Name: Dicrotophos Trade Name: Bidrin

SITE CATEGORY: AGRICULTURAL CROPS

SITE: Cotton

PESTS: Cotton fleahopper, plant bugs, thrips

FORMULATIONS: (7.5 lb/gal SC/L; 8 lb/gal SC/L*)

LABEL SUMMARY:

Site and Pest	Dosages	Tolerance, Use, Limitations
Cotton		0.05 ppm (cottonseed) 30 day preharvest interval through 0.5 pounds per acre for foliar application. Do not graze livestock on treated fields or feed treated gin trash. Dc not apply or allow to drift where dairy animals or animals being finished for slaughter may be grazing. Apply in a minimum of 3 to 10 gallons of water per acre by aircraft or in a minimum of 3 to 20 gallons of water per acre by ground equipment. Apply to give uniform coverage and repeat as needed. Workers entering field within 16 hours of treatment should be protected. Apply only by power sprayers or aircraft.
Cotton fleahopper	0.1-0.2 lb/A (7.5 lb/gal SC/L) (8 lb/gal SC/L)	Foliar application. For early season control.
	0.25-0.5 lb/A (7.5 lb/gal SC/L) (8 lb/gal SC/L)	Foliar application. For mid or late season control.
Lygus bugs	0.25-0.5 lb/A (7.5 lb/gal SC/L) (8 lb/gal SC/L)	Foliar application. For mid or late season control.
Thrips	0.1-0.2 lb/A (7.5 lb/gal SC/L) (8 lb/gal SC/L)	Foliar application. For early season control.

*SC/L = Soluable concentrate/liquid

For additional information please refer to the "EPA Index of Pesticide Chemicals" entry.

CHEMICAL APPLICATION

Method of Application: aerial and ground, depending on the state and time of year.

Type of Application: foliar

Equipment and Type of Spray:

1. fixed wing (low-volume)
2. helicopter (low-volume)
3. boom sprayer (mid- to high-volume)

Applicator Category:

Certified applicator

Timing and Time of Year: generally early season

AK: from emergence to fruiting (1st - 2nd week of May through mid-July) for plant bugs and thrips
AZ: in June for Lygus bugs and cotton fleahopper
CA: occasional use from the on-set of squaring to the peak of squaring (June to mid-July) for Lygus bugs
LA: during the seedling stage (May or early June) for thrips and occasionally later on (mid- to late June) for plant bugs
MS: during the seedling stage (May) for thrips and the squaring stage (mid-June to July) for plant bugs

Number of Applications and Interval Between Applications:

Generally 1 application, which is properly timed by scouting, is all that is necessary. Occasionally there are 2 applications or more in bad years. The interval varies, depending on scouting results, but may range from 7-14 days.

PEST INFORMATION

Distribution:

Cotton fleahopper: occurs throughout the Cotton Belt, but is considered a more serious pest in TX and OK.
Lygus bugs: these or other mirids are found throughout the Cotton Belt.
Thrips: Cotton belt

Stage of Growth:

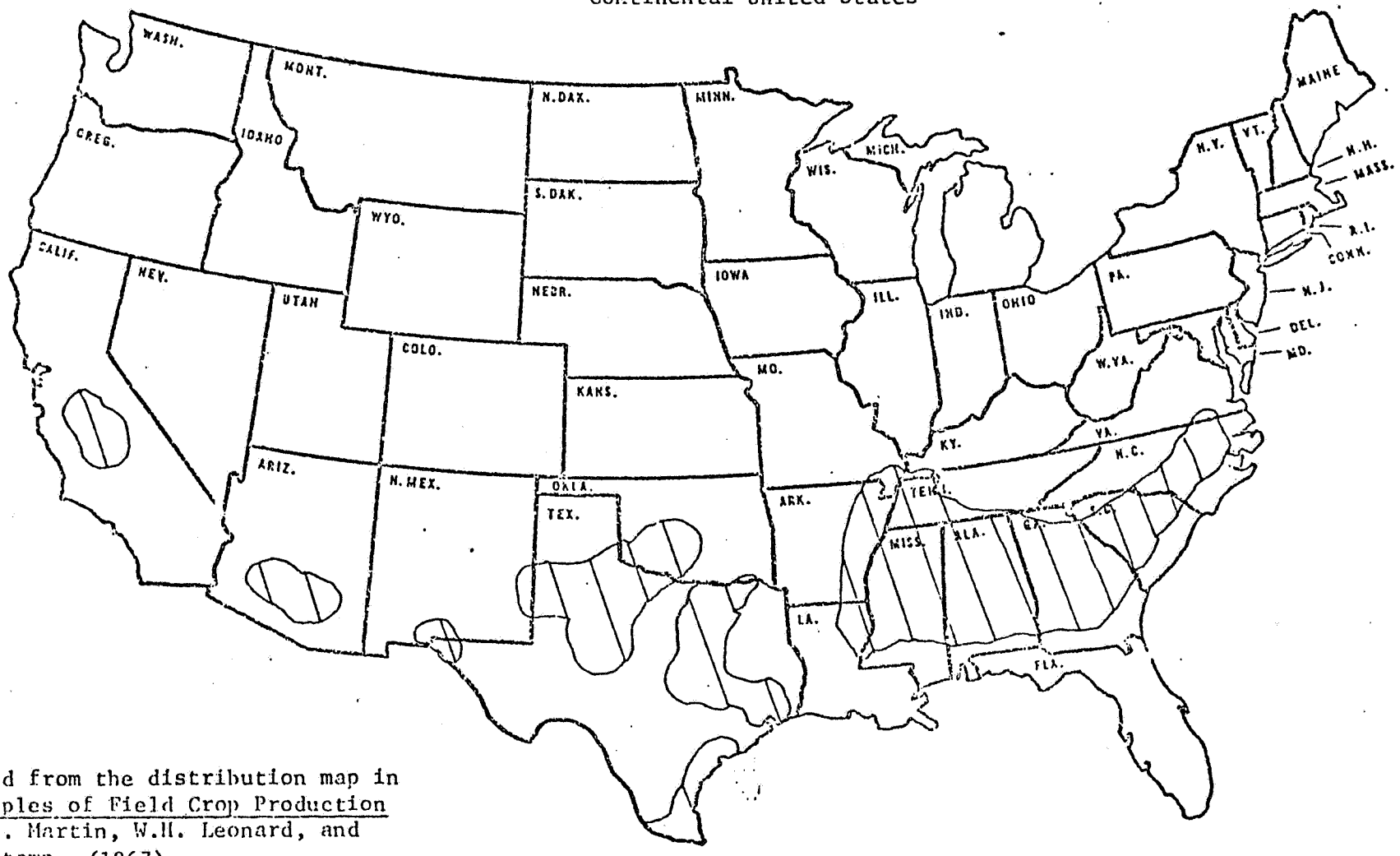
Cotton fleahopper: nymph and adult
Lygus bugs: nymph and adult
Thrips: nymph and adult

Number of Generations:

Cotton fleahopper: multiple
Lygus bugs: multiple
Thrips: multiple

Principal Areas Where Cotton is Grown in the

Continental United States



Adapted from the distribution map in
Principles of Field Crop Production
by J.H. Martin, W.H. Leonard, and
D.L. Stamp. (1967)

Areas where cotton is grown

035201-5

QUALITATIVE USE ASSESSMENT

DICROTOPHOS

Common Name: Dicrotophos Trade Name: Bidrin

SITE CATEGORY: ORNAMENTALS

SITES: Ash, elm, hackberry, linden, maple, oak, pine, sycamore, white birch

PESTS: see Label Summary

FORMULATIONS: (86% RTU)

LABEL SUMMARY:

General Warnings and Limitations: If trees have been topped or heavily pruned, reduce dosage 1 milliliter per injection site. If more than 50 per cent of root system is obstructed or damaged, reduce dosage 1 milliliter per injection site. After correction for topping, pruning, and physical root obstructions, trees with determinations of less than 1 milliliter per injection site are not to be treated. Space injections 5 to 6 inches apart around bole of tree. Confine injections to no more than 3 during an 18 month period. When weather is dry and hot, water trees before or at time of injection.

Site and Pest

Ash, linden, maple
- Aphids

Elm
- Aphids
- Elm leaf beetle
- European elm scale
- Smaller european elm bark beetle

Hackberry
- Hackberry psyllids (including hackberry nipplegall maker)

Oak
- California oakworm
- Gypsy moth
- Myzocallis aphids
- Obscure scale
- Pit scale
- Western tent caterpillar

Pine
- European pin sawfly
- Pine spittlebug
- Spider mites

Sycamore
- Sycamore scale

White birch
- Bronze birch borer

For additional information please refer to the "EPA Index of Pesticide Chemicals" entry.

CHEMICAL APPLICATION

Method of Application: ground

Type of Application: injection of chemical into the bole (base) of the tree truck.

Equipment and Type of Spray: specialized injector unit

Applicator Category: certified applicator

Timing and Time of Year: generally early in the season, around springtime when insects appear

Number of Applications and Interval Between Applications: generally 1 application/year.

Use Summary

Dicrotophos is an insecticide registered for foliar application to cotton and soybeans grown for seed. A specialized injector unit containing dicrotophos is also available and is used on ornamental trees. A variety of insect pests are controlled by the use of this pesticide. The major use is on cotton in the south central states. The use on ornamental trees is not as widespread but is increasing for the control of insects in residential and other areas, where space sprays are not desirable.

Dicrotophos is formulated into a 7.5 and 8 pounds active ingredient per gallon water miscible insecticide and an 86% ready-to-use injector unit. Application rates range from 0.1-1.0 pound active ingredient per acre for cotton and soybeans grown for seed and 1-3 milliliters active ingredient per injection site. The water miscible insecticide formulation is applied by aircraft and boom sprayers. The ready-to-use injector unit is applied at 4-6 inch spacings in a circular pattern at the base of the tree trunk.

BIBLIOGRAPHY

Information on the use of dicrotophos on cotton and as an injection treatment for ornamentals was obtained from conversations from the following personnel:

G. Andrews, Mississippi Cooperative Extension Service (Cotton)

Bonham, Arkansas Cooperative Extension Service (Cotton)

D. Burns, Arizona Cooperative Extension Service (Cotton)

V. Burton, California Ccoperative Extension Service (Cotton)

C. Cissel, Guardian Tree Experts, Inc. MD (Ornamentals)

J.Davidson, Maryland Cooperative Extension Service (Ornamentals)

D. Leonardson, J.J. Mauget Co., CA (Ornamentals)

J. Roussel, Louisiana Cooperative Extension Service (Cotton)