059101

FILE COPY

Date Out EFB: JUL 07 1982

TO: Product Manager 12 Ellenberger
TS-767

FROM: Sam Creeger,
Acting Chief
Review Branch No. 1
Environmental Fate Branch
Hazard Evaluation Division

Attached please find the environmental fate review of:

Reg./File No.: 464-448

Chemical: Chlorpyrifos

Type Product: Insecticide

Product Name: Lorsban 4E

Company Name Dow Chemical

Submission Purpose Add new use- sugar beets

ZBB Code: 3(c)(7)

ACTION CODE: 335

Date in: 5/26/82

EFB # 343

Date Completed: 7/7/82

TAIS (level II)	Days
63	3

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

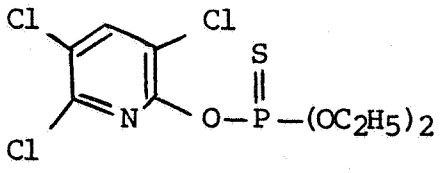
1.0 INTRODUCTION

Dow Chemical Company has submitted an application for registration of chlorpyrifos (Lorsban 4E) for use on sugar beets.

1.1 Chemical

Common name: Chlorpyrifos
Trade name: Lorsban 4E
Chemical name: 0,0-diethyl 0-(3,5,6-trichloro-2-pyridyl) phosphorothioate

Chemical structure:



Type pesticide: Insecticide 4 lb. ai/gallon

2.0 USE DIRECTIONS

Use Lorsban 4E by application as a broadcast foliar spray to control beet armyworms at a rate of 1 $^{1}/_{2}$ to 2 pints per acre and cutworms at a rate of 2 pints per acre. Treat when field counts indicate that damaging insect populations are or may be a problem. Mix the specified dosage with 2 to 5 gallons of water per acre using suitable aerial spray equipment or with 10 to 30 gallons of water per acre when using power-operated ground spray equipment. Repeat as necessary to maintain control. Do not apply more than a total of 8 pints of Lorsban 4E per acre per season.

3.0 DISCUSSION OF DATA

No new data were submitted. Data previously reviewed and accepted by EFB are:

Study	Date Reviewed
Hydrolysis	5/2/74
Photolysis	5/2/74, 7/26/78
Leaching	5/2/74
Aerobic/anaerobic metabolism	6/6/81
Field soil dissipation	5/2/74
Fish accumulation	2/15/74
Crop rotation	2/5/76

2

4.0 RECOMMENDATIONS

The environmental fate of chlorpyrifos has been adequately described for conditional registration of the proposed additional use of chlorpyrifos on sugar beets.

EFB, at this time, does not raise the issue of a rotational crop restriction. Rotational crop data on soybeans, wheat and sugar beets supported removal of the original restriction against rotating crops after application to cotton (0.25-1.0 lb. ai/A). Application rate in the study was 2 lb. ai/A.

Other rotational data for soybeans and sugar beets treated at 6 lb. ai/A support rotation only to soybeans and root crops. For future new uses where the application rates are in the range of 5-7 lb ai/A, rotational crop data for grain and leafy vegetable crops will be necessary. Otherwise, a restriction against rotating to grain and leafy vegetables will be needed.

Clinton Fletcher
Review Section #1
Environmental Fate Branch
Hazard Evaluation Division