



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 2 1983

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: EPA Reg. No. 464-448. Amended registration for
chlorpyrifos on corn.

FROM: Andrew Rathman, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief *Ch. L. Trichilo*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

TO: Jay Ellenberger, Product Manager #12
Insecticide-Rodenticide Branch
Registration Division (TS-767)

Dow Chemical is requesting to amend the current label for Lorsban 4E (chlorpyrifos) to permit foliar aerial applications of the product in combination with a non-emulsifiable oil to corn.

Tolerances for residues of chlorpyrifos and its metabolite 3,5,6-trichloro-2-pyridinol have been established at 0.1 ppm on field corn and fresh corn (inc sweet K + CWHR) and at 10 ppm on corn forage and fodder (180.342).

The currently registered use of Lorsban 4E on corn is the following:

Pre-plant incorporated treatment at the rate of 1-2 lbs ai/A.

Multiple post-emergent applications (aerial or ground) at the rate of 0.25-1.5 lb ai/A. (This includes applications with sprinkler irrigation equipment in combination with 2 pints of non-emulsifiable oil).

No application is to be made within 35 days before harvest of grain. Livestock are not allowed to graze in treated areas, nor is treated corn silage to be fed to dairy or meat animals within 14 days of treatment. Treated corn fodder is not to be fed to dairy or meat animals within 35 days of treatment. No more than 15 pints (7.5 lb ai/A) of Lorsbon 4E may be applied per season.

The amended use would permit post-emergence applications by air in combination with 2 pints of non-emulsifiable oil/acre. A minimum of 2 gallons of spray is to be applied/A.

The same restrictions as noted above would apply.

The Company wishes to use residue data submitted in connection with a previous application that resulted in the addition of overhead sprinkler irrigation application in combination with oil. These data reviewed in the E. Zager memo dated 11/19/82. These data showed that the established tolerances would not be exceeded; however, we are unable to understand why the Company feels the sprinkler irrigation data applies to an aerial use. The submitted data do not specify the gallonage of water applied in those tests. However, our calculations indicate that it takes 27,000 gallons of water to equal 1 acre inch of water. We would assume that at least 10,000 gallons of water would be applied per acre at a minimum even with pesticide applications. We do not believe these data have any bearing on an aerial use that will be applied in a minimum of 2 gallons of liquid of which 2 pints will be oil and 2 pints will be product. As a result, we are unable to conclude that the established tolerances are adequate to cover this use and will need residue data reflecting this proposed use.

Conclusions and Recommendation

The available data are not sufficient for us to conclude that residues from the proposed amended use will not exceed the established tolerances. We therefore recommend against this amended registration. For further consideration, we will need data reflecting the proposed use (aerial application in combination with oil).

cc: Amend Reg. F., R.F. Subject file, Circu, Rathman
 RDI:Section Head:RJH>Date:4/20/83:RDS>Date:4/20/83
 TS-769:RCB:Reviewer: ARRathman:LDT:X557-7484:CM#2:RM:812>Date:4/21/83