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

FEB 2 1984

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg No. 464-448. Amended registration to permit use of chlorpyrifos plus non-emulsifiable oil through overhead sprinkler irrigation systems on various raw agricultural commodities.

FROM: Linda S. Propst, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief
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Hazard Evaluation Division (TS-769)

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

Dow Chemical is requesting an amended registration which would allow for the chlorpyrifos formulation LORSBAN® 4E plus non-emulsifiable oil to be applied to alfalfa, cotton, peanuts, sorghum, soybeans, and sweet corn through overhead sprinkler irrigation systems.

Tolerances have been established for combined residues of the pesticide chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate and its metabolite 3,5,6-trichloro-2-pyridinol (TCP) in or on these commodities at the following levels:

Alfalfa, green forage	4.00 ppm
Alfalfa, hay	15.00 ppm
Cottonseed	0.50 ppm
Peanuts	0.50 ppm
Peanut hulls	15.00 ppm
Sorghum fodder	6.00 ppm
Sorghum forage	1.50 ppm
Sorghum grain	0.75 ppm
Soybeans	0.50 ppm
Soybean forage	8.00 ppm
Soybean straw	15.00 ppm
Corn, field, grain	0.10 ppm
Corn, fresh (inc. sweet K-CWHR)	0.10 ppm
Corn fodder	10.00 ppm
Corn forage	10.00 ppm

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(40 CFR 180.342)

There was no submission of new residue data. The registrant referred us to residue data (EPA Accession No. 248248) which reflected the proposed use on corn. That data was reviewed in detail (see memo by Edward Zager, 11/19/82) and it was concluded that residues of chlorpyrifos and its metabolite TCP will not exceed the established tolerances on field corn, fresh corn, corn forage or fodder as a result of the proposed irrigation sprinkler applications in combination with non-emulsifiable oil. We have no reason to anticipate higher residues in sweet corn and reiterate that the established tolerances will be adequate to cover total residues of chlorpyrifos on sweet corn (K-CWHR),and sweet corn fodder and forage. However, any conclusions made concerning total maximum residues resulting from irrigation sprinkler application in combination with non-emulsifiable oil will need to be done on a case by case basis. Residue data on each crop will be necessary to demonstrate that residues resulting from the proposed use will be covered by the established tolerances.

Lacking appropriate data, we are unable to conclude that maximum residues occurring as a result of overhead irrigation sprinkler application in combination with non-emulsifiable oil will not exceed the established tolerances for alfalfa, cotton, peanuts, sorghum, or soybeans.

CONCLUSIONS AND RECOMMENDATIONS

1. From residue data for corn available in our files, we conclude that residues of chlorpyrifos and its metabolite TCP occurring from the proposed use will not exceed the established tolerances on fresh corn (inc. sweet K-CWHR), corn fodder and forage.

2. In the absence of data, we are unable to conclude that the tolerances established to cover residues of chlorpyrifos and its metabolite TCP will be adequate to cover all residues occurring in or on alfalfa, cotton, peanuts, sorghum, and soybeans as a result of overhead irrigation sprinkler application in combination with nonemulsifiable oil.

We have no objections to the proposed use on sweet corn. However for the reason given in Conclusion 2, we recommend against the proposed amended registration. We will need appropriate residue data reflecting the proposed overhead irrigation sprinkler application in combination with nonemulsifiable oil on all raw agricultural commodities for which this use is requested.

TS-769:L.Propst:lsp:CM#2:Rm810:X77324:2/1/84
cc:R.F.,Circu.,Reviewer,Subject File,Amended Use
RDI:R.Hummel, 1/31/84; R. Schmitt, 1/31/84