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

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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: PP#9G2168. Chlorpyrifos on lemons and oranges.

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TO: Jay Ellenberger, Product Manager #12  
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The Dow Chemical Company is requesting an extension of the temporary tolerance for oranges and lemons and the accompanying Experimental Use Permit No. 464-EUP-68.

The extension would be for an additional period of 1 year, from June 1982 to June 1983 and would involve an increase of 990 lbs active in Florida.

Temporary tolerances for combined residues of chlorpyrifos (0,0-diethyl 0-(3,5,6-trichloro-2-pyridyl)phosphorothioate) and its metabolite 3,5,6-trichloro-2-pyridinol have been established in or on oranges and lemons at 2.5 ppm and dried citrus pulp at 15 ppm (food additive). These tolerances were granted based on a maximum foliar application rate of 30 pounds of chlorpyrifos/acre/season.

The proposed use in the requested program would increase the total maximum amount of the chlorpyrifos formulation, LORSBAN 15G, to be applied to orange and lemon orchard floors from 10 lbs. active to 15 lbs active/acre/season. There is to be no grazing of livestock in treated areas. No PHI is imposed.

Data from California showing residues of chlorpyrifos and 3,5,6-trichloro-2-pyridinol on lemons and oranges following treatment with LORSBAN 15G have been submitted. LORSBAN 15G was applied as an orchard floor or aerial application at rates ranging from 10.1 to 11.1 lb active of chlorpyrifos per acre. Samples of lemons or oranges were collected at 4, 14 to 17, and 28 days after treatment. The highest residue of

chloropyrifos, 0.29 ppm was found in oranges receiving aerial treatment and sampled 4 days after application. The highest residue reported of chlorpyrifos from citrus receiving orchard floor treatment was 0.04 ppm. The limit of detection is given as 0.010 ppm. Residues of 3,5,6-trichloro-2-pyridinol from all studies ranged from non-detectable to 0.06 ppm. The method sensitivity is 0.050 ppm.

Although the data submitted do not reflect the maximum proposed application rate, considering the low levels of initial residues and the fact that chlorpyrifos does not move in soil or translocate into plants through roots, we do not expect residues resulting from the proposed use to exceed the established temporary tolerance of 2.5 ppm for chlorpyrifos and its metabolite in oranges and lemons.

Since residue levels in the raw agricultural commodities are not expected to exceed 2.5 ppm, the 15 ppm food additive tolerance for dried citrus pulp and the established meat and milk tolerances are also considered to be adequate.

The petitioner should be advised that for establishment of permanent tolerances for citrus, we will require residue data reflecting all proposed treatment types (i.e., foliar plus orchard floor) at maximum application rates and minimum PHI.

#### Conclusions and Recommendations

Residues from the proposed use are not expected to exceed the established temporary tolerance for chlorpyrifos and its metabolite in oranges and lemons.

Therefore, we recommend in favor of extending this EUP.

We reiterate that for the establishment of permanent tolerances for citrus, residue data reflecting all proposed treatment types (i.e., foliar plus orchard floor) at maximum application rates and minimum PHI will be required.

cc: Reading file  
Circu  
Reviewer  
PP# No.  
TOX  
EEB  
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FDA  
Thompson

TS-769:RCB:Reviewer:LSPropst:LDT:X77324:CM#2:RM:810>Date:2/19/82  
RDI:Section Head:RJH>Date:2/18/82:RDS>Date:2/18/82

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