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WASHINGTON, D.C. 20460

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA # 239-2418. Acephate: Amended Use for Non-bell Type Peppers in Puerto Rico.
[RCB #1299] [Acc. #258786]

FROM: William L. Anthony
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

TO: W. Miller/M. Mautz, PM #16
Registration Division (TS-767)

THRU: Ed Zager, Section Head
Special Registration II
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

William L. Anthony

EZager

The Chevron Chemical Company, Ortho Agricultural Chemicals Division, Richmond, CA, requests an amended registration to extend the use of acephate on peppers (non-bell type) to Puerto Rico for control of aphids.

Acephate is formulated as Orthene®75S, soluble powder, containing 75% ai. It is registered (EPA #239-2418) for use on several crops with residue tolerances at levels ranging from 0.1 to 10 ppm.

There is a permanent tolerance for residues of acephate in/or peppers (of which no more than 1 part per million is methamidophos[Monitor]) at 4.0 ppm. (See Federal Register, 50, January 9, 1985, p. 1051).

The registered use of Orthene®-75S, on non-bell type peppers is 0.5 lb ai/A in 40 to 150 gals water applied with ground equipment at 7 to 10 day intervals as needed throughout the growing season with a 7-day PHI. Application is restricted to seven per season. Use is restricted to Midwestern and Eastern States.

The proposed use would permit an extension to Puerto Rico.

Residue Data

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Two residue studies were submitted on the acephate treatment of two non-bell type pepper varieties (Blano del Pais and Cubanelle) grown in Puerto Rico. These data had been previously submitted and reviewed (memo: S. Malak, April 27, 1984).

In the first study (Blano del Pais variety) one sample had been treated with four applications at 1.0 lb ai/100 gals per acre plus two applications at 0.5 lb ai/100 gal per acre. The second sample had been treated with six applications of 1 lb ai/100 gals per acre. Treatments were at approximately seven-day intervals with a 7-day PHI. Residues were 2.19 and 3.5 ppm for acephate; 0.61 and 0.76 for methamidophos, respectively.

In the second study (Cubanelle variety), one sample had been treated with six applications at 1.0 lb ai/100 gals per acre. A second sample had been treated with four applications of 1.0 lb ai/100 gals per acre plus two applications at 0.5 lbs ai/100 gals per acre. As before, treatments were at approximate seven-day intervals with a seven-day PHI. Residues for duplicate samples averaged 3.2 and 1.5 ppm for acephate and 0.90, 0.46 ppm for methamidophos, respectively. All treatments were by ground application.

The analytical method cited was RM:12-6a, which is essentially the same as the enforcement method in PAM II, Method I (September 12, 1972). Fortification of the two pepper varieties with 0.25 ppm acephate and 0.10 ppm methamidophos resulted in recoveries of 93 to 94 percent for acephate and 87 to 89 percent for methamidophos.

Method sensitivity was reported as 0.02 ppm and 0.01 ppm for acephate and methamidophos, respectively.

Residue data submitted with PP#4F3098 (memo: E. Haberer, August 13, 1984) and in conjunction with 84-NJ-08 (memo: S. Malak, April 27, 1984) were collected from 55 studies on non-bell type peppers (e.g., Serrano, Cascabella, Jalapeno, etc.) conducted from 1972 to 1982 in California, Wisconsin, several states east of the Mississippi and Puerto Rico. Plants received from 1 to 9 applications of Orthene®75S at rates ranging from 0.5 to 2.0 lb/acre. Preharvest intervals ranged from 0 to 126 days. At (2-3X) the recommended application rate and a 7 day PHI, the total residue range (acephate plus methamidophos) was 0.16 to 5.7 ppm and for methamidophos, 0.02 to 1.6 ppm.

Based on the above data for non-bell type peppers, we conclude that residues of acephate and its metabolite methamidophos are not likely to exceed the established tolerance of 4 ppm.

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Conclusion and Recommendation

1. The residues of concern are the parent, acephate and its metabolite, methamidophos (Monitor).
2. Residues of acephate in/on the non-bell type peppers resulting from the proposed use are not likely to exceed 4 ppm (of which not more than 1 ppm is methamidophos).
3. We have no objection to this amended registration including the use of acephate in/on non-bell type peppers in Puerto Rico.

cc: Reviewer
Circu.
SF (Acephate)
RF
PMSD/ISB

cc: R.F., Circu, Reviewer, SF, (Acephate) FDA, PMSD/ISB
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