C. Furlow
PIB/FOD

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

APR 11 1990

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: AR-900002; 24(c) Acephate (Orthene® 90 S) for use on Cotton to Control, In-Furrow Application.
EPA Reg. No. 59639-33.
(No MRID #, DEB # 6544).

From: Freshteh Toghrol Ph.D., Chemist F. Toghrol
Special Registration Section II
Dietary Exposure Branch
Health Effects Division (H7509C)

THRU: Francis B. Suhre, Section Head
Special Registration Section II
Dietary Exposure Branch
Health Effects Division (H7509C)

To: William Miller, PM-16
Insecticide-Rodenticide Branch
Registration Division (H7505C)

The Arizona, Department of Agriculture, has issued a Section 24(c) registration for the use of Acephate (trade name: Orthene® 90 S) on cotton, to control thrips and aphids. Similar SLN registrations were issued by Mississippi (MS-890004) and Louisiana (LA890004), and Missouri (MO90001), (F. Toghrol, memo dated 6/6/89 and 4/10/90).

Orthene® 90S (EPA Reg. No. 59639-33) is a registered pesticide of Valent U.S.A. Corporation; the formulation contains 90% acephate (O,S-Dimethyl acetylphosphoramidothioate) as its active ingredient.

Tolerances are established (40 CFR 180.108) for combined residues of acephate (O,S-dimethyl acetyl phosphoramidothioate) and its cholinesterase inhibiting metabolite methamidophos (O,S-dimethyl phosphoramidothioate) at 0.1 to 15.0 ppm in or on numerous commodities, including (but not limited to): cottonseed at 2 ppm, of which no more than 0.1 ppm is methamidophos; eggs, milk, meat, and meat by-product of cattle, goats, hogs, horses, poultry and sheep at 0.1 ppm.

Tolerances are established (40 CFR 186.100) for combined residues of acephate (O,S-dimethyl acetyl phosphoramidothioate)

and its cholinesterase inhibiting metabolite methamidophos (O,S-dimethyl phosphoramidothioate) at 8.0 ppm on cottonseed meal and 4 ppm in cottonseed hulls.

Tolerances are established (40 CFR 185.100) for combined residues of acephate (O,S-dimethyl acetyl phosphoramidothioate) and its cholinesterase inhibiting metabolite methamidophos (O,S-dimethyl phosphoramidothioate) at 0.02 ppm in or on all food items, resulting from use in food handling establishments.

A Registration Standard has been issued for acephate. The Residue Chemistry Chapter is dated 1/22/82. The Guidance Document to the Acephate Registration Standard is dated 9/87.

The registered use of Orthene 75 S on cottonseed calls for multiple foliar application (No. of applications per season not stipulated) at 0.5 to 1.0 lb ai/A using aerial or ground equipment, with a 21-day PHI. The label prohibits: a) The feeding of gintrash to livestock, and b) The grazing of livestock on treated area (PP#3F1375, W. S. Cox, memo dated 10/31/73).

Orthene®-80 seed protectant (EPA Reg. 239-2434-AA) is registered for use on cottonseed. The seed is treated with 8 oz (6.4 oz ai)/100 lbs seed with the following restriction: a) treated seed must not be used for or mixed with food or animal feed, or processed for oil. b) Seeds commercially treated with Orthene®-80 SP should be labelled; Treated seed. Do not use for food, feed, or oil.

Proposed use:

The label for this 24(c) Registration (AR-900002) calls for application of 0.8 to 1.0 lbs ai/A, in 3 to 5 gallons of water per furrow acre (13,068 linear feet of row). The 24(c) label stipulates the use of flat-fan nozzles to insure good spray deposition in the seed furrow. All applicable directions, restrictions, precautions and worker safety rules on the EPA registered label are to be followed.

Residue data were not provided with this Section 24(c) request, however, acephate residue data in or on cottonseed were previously provided to the Agency and reviewed by DEB in connection with the establishment of permanent acephate tolerance for cottonseed at 2.0 ppm, cottonseed hulls at 4.0 ppm, and cottonseed meal at 8.0 ppm (PP#3F1375, R. D. Schmitt, 8/5/74). These tolerances were based on multiple foliar application (5 to 8) at 1.0 lb ai/A, with 21 day PHI imposed, and seed treatments at 0.4 lbs ai/100 lbs of treated seeds. Data supporting the seed treatment registration [see data summary LA-860003, M. Metzger, residues (ND < 0.02 ppm)] indicate that no residues are present in the cottonseed and gintrash (61 day PHI), and that residues of acephate/methamidophos in the whole plant ranged from ND to 0.22

(61 day PHI). The cotton growing season is approximately 150 days.

Conclusions

1. Tolerances are established for residues of acephate/methamidophos in or on cottonseed at 2.0 ppm, cottonseed hulls at 4.0 ppm, and cottonseed meal at 8.0 ppm.

2. Based on previously submitted residue data supporting seed treatment, we conclude that residues of acephate/methamidophos will not exceed established tolerances (see conclusion 1) as a result of the "in-furrow" use directions described in the SLN label for AR-900002 plus the registered foliar uses.

Recommendation:

DEB has no objection to this Section 24(c) registration (AR-900002).

cc: Acephate S.F., R.F., Section 24(c), Circ., R. Schmitt, Branch Chief, F. Toghrol, FOD/PIB (C. Furlow), DRES (J. Kariya).
RDI: F. B. Suhre: Section Head (4/10/90): E. Zager: Deputy Chief (4/10/90):
H7509C:DEB:F.Toghrol:F.T.:RM:802:CM#2:557-7887:4/11/90.