8-9-84

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

AUG - 9 1984

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: 84-WA-12. Section 18 exemption for Iprodione on dry bulb onions in the State of Washington.

FROM: William Anthony, Chemist
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

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

TO: D. Stubbs, PM# 41
Emergency Response Section
Registration Division (TS-767)

The Washington State Department of Agriculture requests an exemption under Section 18 of FIFRA for use of the fungicide iprodione (Rovral®) to control white rot on dry bulb onions in Walla Walla County. The exemption is needed at planting, starting September 1, 1984 and terminating by June 15, 1985.

The proposed use could require up to 3200 lbs a.i. for an estimated 800 acres in Walla Walla County. The proposed treatment calls for application 1 to 2 a.i. (2 to 4 lbs Rhone-Poulenc's Rovral®, EPA Reg. #359-685)/A by ground equipment in a 4 inch band over the seed at planting time. Applications are to be made in at least 15 gals water/A. A second application may be needed the following spring if the conditions over the winter are favorable to the disease.

The residues of concern for iprodione consist of the parent [3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxoimidazolidine-1-carboxamide] and its isomer RP-30228, [3-(1-methylethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide] and its metabolite RP-32490, [3-3,5-dichlorophenyl)-2,4-dioxoimidazolidine].

Permanent tolerances for residues of the a.i., its isomer [RP-302287], and its metabolites [RP-32490] have been established for several RAC's ranging from 0.05 ppm to 20 ppm. Temporary tolerances on residues in/on dry and succulent beans (except cowpeas), grapes, and lettuce are to expire 12/31/84.

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Residue Data

Study# 1: Residue data were previously submitted in support of N.J. Section 18 (memo: E. Zager, May 6, 1982) for use of iprodione on onions and leeks. Three studies were submitted. Following 1 or 2 applications at 1 lb. a.i./A, residue of iprodione ranged from 0.08-0.36 ppm in or on onions (scallions) with a 61-65 day PHI. No detectable residues (<0.05 ppm) of the isomer RP-30228 and the metabolite RP-32490 were found in any sample.

The Rhone-Poulenc Analytical Method #151 to determine the parent iprodione, its isomer RP-30228 and its metabolite RP-32490 is adequate for enforcement purposes [memo: pp# 0G2402, L. Propst, 11/28/80].

Two recent studies on residue data in/on onions have been submitted (PP# 4F3111, June 28, 1984) and are included below:

Study #2: Two onion test plots in Oregon were treated by direct spray on a 4" band at planting in furrow at the rate of 4.0 lb a.i./A. One sample at 113-day PHI and one sample at 146 days contained no residue for the parent, the isomer RP-30228, or the metabolite RP-32490. Recoveries from one sample spiked with 0.5 ppm iprodione were 112%; one sample spiked with 0.1 ppm of iprodione, RP-30228, and RP-32490 showed recoveries of 106.0%, 118.9%, and 95.7%, respectively. The limit of detection was <0.05 ppm. (Acc.# 077710)

Study 3: Iprodione was applied to ten onion test plots; four in New York, two in Oregon, one each in California, Texas, Michigan, and Illinois. Iprodione was applied post-emergence at approximately weekly intervals at rates of 0.75 lb a.i./A, 1.0 lb a.i./A, and 2.0 lb a.i./A. Eight to ten applications were made. The PHI between the last treatment and harvest ranged from zero to 21 days. In all, 21 samples were analyzed. Prior to residue determinations the root hairs and stems were removed from each bulb.

The residue samples were analyzed for the parent and its metabolite (RP-32490) according to Rhone-Poulenc's Analytical Method #151. Samples spiked with the ai, RP-30228, or RP-32490, at from 0.05 ppm to 10 ppm had near recoveries of 104.4%; 95.5%, and 89.9% respectively. The limit of detection was <0.05 ppm.

The parent was the only chemical detected with no sample exceeding 0.20 ppm at the maximum rate of 2 lbs a.i. (1X)/A following nine applications at zero day PHI. For samples collected at 7 days or longer after the last treatment, no residues were found, <0.05 (Acc.# 072710).

Based on the above residue data, we estimate that iprodione residues from the proposed use would not exceed 0.5 ppm in or on dry bulb onions.

Meat, Milk, Poultry and Eggs

There will be no problem with secondary residues in meat, milk, poultry and eggs since there are no feed items involved in the proposed use.

Conclusions

(1) Residues of Iprodione and its isomer RP-30228 and its metabolite RP-32490 will not exceed 0.5 ppm in/on dry bulb onions as a result of the proposed use.

(2) Secondary residues in meat, milk, poultry and eggs are not a problem since there are no feed items involved in the proposed use.

Recommendation

We have no objections to granting the proposed Section 18 emergency use, TOX considerations permitting. An agreement should be made with FDA with respect to legal status of treated onions in commerce.

cc: Section 18 S.F., R.F., Iprodione S.F., Reviewer, Circu.,
RDI:EZ:8/6/84:RDS:8/6/84
TS-769:RCB:W.Anthony:gmk:CM#2:RM810:X77484:8/8/84