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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: 84-OR-12. Proposed Section 18 exemption for the use of Chlorothalonil on cranberries.

FROM: Nancy Dodd, Chemist *Nancy Dodd*  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

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

TO: Don Stubbs, P.M.#41  
Registration Division (TS-767)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769)

The State of Oregon requests an exemption under Section 18 of FIFRA to allow the emergency use of the fungicide chlorothalonil (2,4,5,6-tetrachloroisophthalonitrile) on cranberries to control *Lophodermium oxycocci*.

No Section 18's have been requested previously for chlorothalonil on cranberries. No tolerances or temporary tolerances for chlorothalonil on cranberries are established. A petition for registration of chlorothalonil at 2.0 ppm on cranberries (IR-4 Project No. PR 1758) is in reject status (PP#3E2939, Accession # 071773, M. Kovacs, 1/13/84). Tolerances are established for combined residues of chlorothalonil (2,4,5,6-tetrachloroisophthalonitrile) and its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile on various commodities at levels ranging from 0.05-15 ppm (40 CFR 180.275).

The proposed use involves treatment of 1200 acres of cranberries with 4500 gals. Bravo 500 (18, 765 lbs a.i.) from June 1, 1984 to Aug 15, 1984.

Bravo 500 will be applied at the rate of 6-10 pts Bravo 500/A (3.1-5.2 lb. a.i./A). Applications will be started at late bloom. Repeat applications can be made at 10-14 day intervals but no more than 3 applications are allowed per season. A 50-day PHI

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will be observed. Bogs are not to be flooded until cranberries are ready to be harvested. Bravo 50 can be applied through solid set sprinkler irrigation systems. No spreader-sticker or spray adjuvant will be added to the spray solution. We note that the use proposed in this Section 18 is essentially the same as that proposed in PP#3E2939, Acc# 071773 (M. Kovacs, 1/13/84), which is in reject status.

The metabolism of chlorothalonil in plants and animals is adequately defined. Chlorothalonil (DS-2787) and 4-hydroxy-2,5,6-trichloroisophthalonitrile (DS-3701) are the residues of concern.

No residue data or analytical method are submitted with this request for a Section 18. Residue data on cranberries is contained in PP#3E2939 (Acc#071773), which was submitted by the IR-4 Technical Committee and the Agricultural Experiment Stations of MA, NJ, WA, and WI. The IR-4 request is in reject status because of the deficiencies which were listed in the review of PP#3E2939, Acc#071773 (M. Kovacs, 1/13/84).

Residue data submitted in PP#3E2939, Acc#071773 indicated that residues of chlorothalonil and its 4-OH-metabolite from 2-3 applications of Bravo 500 in 5 studies in the states of MA, NJ, WA, and WI at rates of 3-20 pts/A (1.56-12.0 lb. a.i./A) at 10-18 day intervals and PHI's ranging from 50-100 days were <0.01-4.96 ppm. Of the 5 studies, only the NJ study reflected the maximum proposed use (ie. 5.2 lb. a.i./A, 3 applications 10 days apart, 50-day PHI). Reported residues in NJ were 1.01-1.65 ppm. The highest residues (4.96 ppm) were for a 2X treatment in NJ (ie. 10.4 lb. a.i./A, 3 applications 10 days apart, 50-day PHI). The other states reported data with longer PHI's (ie. 63-100 days). For WA state, a value of 1.98 ppm chlorothalonil and <0.1 ppm DAC-3701 were reported for 2 applications at 6.0 lb a.i./A (1.15X) and a PHI of 100 days. Because WA state control values ranged from <0.01-1.90 ppm, additional information was requested in the review of PP#3E2939 to clarify actual residue levels.

In order to determine residues at a 50-day PHI, more residue data would be needed at the 50-day PHI reflecting the maximum proposed use (5.2 lb a.i./A, 3 applications 10 days apart) unless the actual residues in WA are demonstrated to be much lower than reported (as requested in PP#3E2939, Acc#071773, review of M. Kovacs, 1/13/84).

Although we are not able to determine residues at a 50-day PHI, we do not expect residues resulting from 2 applications at the rate of 5.2 lb a.i./A to exceed 2.0 ppm at a 100-day PHI.

Since no animal feed items are involved with this use, there will be no problem with secondary residues in meat, milk, poultry, and eggs.

Conclusions

1. The metabolism of chlorothalonil in plants and animals is adequately defined. Chlorothalonil (DS-2787) and 4-hydroxy-2,5,6-trichloroisophthalonitrile (DS-3701) and possibly the impurities HCB and PCBN are the residues of concern.

2. We defer to TOX concerning maximum calculated residues of the impurities of  $<0.002$  ppm HCB and  $<0.05$  ppm PCBN on cranberries resulting from use of Bravo 500 under this proposed emergency exemption.

3. The IR-4 petition on cranberries (PP# E2939, Acc#071773, M. Kovacs, 1/13/84) is in reject status. The IR-4 petition was submitted by the IR-4 Technical Committee of the Agricultural Experiment Stations of MA, NJ, WA, and WI.

4. In order to determine residues resulting from the proposed use at a 50-day PHI, more data would be needed at the 50-day PHI reflecting the maximum proposed use unless the actual residues in WA state (PP#3E2939) can be demonstrated to be much lower than reported in the IR-4 petition.

5. Although we are not able to estimate residues at a 50-day PHI, we can estimate that residues resulting from 2 applications at the rate of 5.2 lb. a.i./A are not likely to exceed 2.0 ppm at a 100-day PHI.

6. Since no feed items are involved with this use, there will be no problem with secondary residues in meat, milk, poultry, and eggs.

7. Method I, Pesticide Analytical Manual, Vol II may be used for enforcement.

Recommendation

TOX considerations permitting, we recommend for this proposed Section 18 provided that the use is revised to impose a 100-day PHI and limit the treatment to a maximum of 2 applications.

cc:R.F., Circu. Reviewer, TOX, Section 18 S.F., Chlorothalonil S.F.  
RDI:EZ:5/1/84:RDS:5/1/84  
TS-769:RCB:ND:gmk:CM#2:RM800:Date:5/2/84