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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: ID #86-FL-01

Benomyl: Sec. 18 on potatoes
on in Florida.
[RCB #157] [Acc.# None]

TO: Donald R. Stubbs, PM #41
Emergency Response & Minor Use Section
Registration Support Branch
Registration Division (TS-767C)

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

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

William L. Anthony
E. Zager

The Florida Department of Agriculture and Consumer Services (FDACS) requests a Sec. 18 emergency exemption for use of benomyl [BENLATE®], a systems fungicide, to control "white mold," Sclerotinia sclerotiorum on potatoes.

Proposed Use

The fungicide is to be used only within Dade County, Florida. Two foliar ground applications of BENLATE® (50% benomyl) will be employed at rates of 1.0-1.5 lbs (0.5-0.75 lbs ai), using sufficient water (100 to 125 gals) per acre to obtain uniform coverage. The first application will be made four to seven weeks after planting or when S. sclerotiorum is first verified; the second application will follow at 10 to 14 days. The total amount of BENLATE® used for the 1982-83 season will not exceed 10,000 lbs (5000 lbs. ai). A maximum residue limit of 0.05 ppm and a 23 day PHI is proposed.

Two similar Sec.18 proposals, submitted by FDACS, were favorably reviewed by RCB (Memo: D. Reed, 9/6/77 and E. Zager, 10/1/82).

No tolerance has been established for benamyl for residues of (methyl-1 (butyl carbamoyl)-2-benzimidazolecarbamate and its metabolites containing the benzimidazole moiety (calculated as benamyl) in/on potatoes. However tolerances have been established for residues of benamyl and its metabolites on numerous R.A.C. including 0.1 ppm tolerances for meat, milk, and eggs.

Nature of the Residue

Current tolerances are established for combined residues of benamyl and its metabolites containing the benzimidazole moiety (calculated as benamyl) (40 CFR 180.294). By current standards, data gaps on the identity of residues, (especially in animal tissues) have been identified; steps are being taken to fill those gaps (Benamyl Registration Standard Residue Chemistry Chapter Update, October 1, 1985). Because of tolerances on major items at levels substantially above the method sensitivity levels expected in potatoes from this limited Section 18 request remain in effect and because residue which might occur in animal products as the result of possible feeding of potato culls are expected to be below current 0.1 ppm tolerances for animal products, RCB considers the residue to be adequately understood for the proposed use.

Residue Data

No residue data were submitted with this request. Previous RCB Sec. 18 reviews were based on data submitted by DuPont which resulted from

residue studies carried out in Florida and Delaware in 1973 and 1974; all residue levels on potatoes were <0.05 ppm. The studies reflect two to five applications at rates of 0.5 - 0.75 lb ai/a with 29 to 69 day PHI. The analytical methodology has been discussed in our review of PP#4F1466. Validation data was submitted in PP#1707 using carrots instead of potatoes. Suitable methods are available for regulatory purposes.

FDACS has notified RD that potato residue data has recently been collected in Florida and will be submitted through IR-4 as soon as data from other states has been received.

Although the data from the recent IR-4 field studies are not yet available to EPA, RCB's telephone inquiry to Dr. Charles Meister, IR-4 Director, University of Florida (Ives. 11/19/85), did confirm that trials were conducted at the proposed application rate and 2X. In both cases maximum residues did not exceed the 0.01 and 0.06 ppm method sensitivity levels for MBC and 2-AB respectively (0.015 ppm and 0.13 ppm respectively calculated as benamyl).

Conclusion and Recommendation

1. The nature of the residue is adequately understood for the proposed use.
2. Suitable methods are available for regulatory purposes in PAM II.
3. Benomyl residues and its metabolites containing the benzimidazole moiety (calculated as benomyl) will not exceed non-detectable levels (<0.05ppm).
4. The possible feed use for benomyl- treated potatoes culls would not result in residues exceeding the established meat and milk tolerances.

We have no objection to this Sec.18 emergency exemption, TOX considerations permitting. An agreement should be made with FDA regarding the legal status of the treated potatoes in commerce.

cc: Reviewer:RD#41:SF (Benomyl):RF:Sec.18(SF)Benomyl:PMSD/ISB:Circu.
TS-769:Reviewer:(W.Anthony:rk:CM-2:Rm:810:X557-7484).
RDI:Sec.head:E.Zager:11/19/85::R.Schmitt:11/19/85.