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

JUN 23 1986

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#4E3029 (no Acc. number) Acephate and Methamidophos in or on Avocados. Amendment of 4/14/86 (RCB #942)

FROM: W. T. Chin, Chemist  
Tolerance Petition Section III *W. T. Chin*  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

THRU: Philip V. Errico, Section Head *Errico for*  
Tolerance Petition Section III  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769)

TO: Hoyt L. Jamerson, PM #23  
Minor Uses Officer  
Registration Division (TS-767)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769)

In a previous review of PP#4E3029 (11/29/85 memo of L. L. Kutney), RCB recommended against the establishment of a tolerance for residues of the insecticide acephate (O,S-dimethyl acetylphosphoramidothioate) and its cholinesterase-inhibiting metabolite O,S-dimethyl phosphoramidothioate (methamidophos) in or on the raw agricultural commodity avocados at 1.0 ppm (methamidophos no more than 0.5 ppm) because of the three deficiencies identified in L. L. Kutney's 11/29/85 memo.

In response to the deficiencies identified above, the petitioner, IR-4, now submits an amendment which consists of a cover letter written by Dr. George M. Markle (4/14/86) and revised Sections B and F. The deficiencies mentioned above are restated below followed by the petitioner's responses and RCB's comments/conclusions.

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Deficiency No. 1

"The petitioner should express the dosage rate on the proposed label as pounds active ingredient per 100 gallons spray solution to runoff in agreement with the EPA Pesticide Assessment Guidelines, Section 173-3(a), Subdivision O, Residue Chemistry."

The petitioner's response to deficiency No. 1

The petitioner submits a revised Section B which indicates the recommended application rate of Orthene® 75S at 0.25 lb a.i. (0.33 lb formulated)/100 gal. and 1.0 lb a.i. (1.33 lb formulated)/acre.

RCB's comment/conclusion on the petitioner's response to deficiency No. 1

RCB concludes that deficiency No. 1 has been resolved.

Deficiency No. 2

"The label must also bear the following instructions for clarification: In order to apply the correct amount of product to your orchard, you must know the number of gallons of water needed to spray one acre of your trees to the point of drip. If you do not already know this gallonage, you should conduct a test to determine it. If you do not know how to conduct such a test with your equipment, you should ask for assistance from your equipment dealers."

The petitioner's response to deficiency No. 2

The revised Section B (label) includes the following paragraph: "NOTE: In order to apply the correct amount of product to your grove, you must know the number of gallons/water needed to spray one acre of trees to the point of drip. If you do not know this gallonage, you should conduct a test to determine it. If you do not know how to conduct such a test with your equipment, you should ask for assistance from your equipment dealers."

RCB's comment/conclusion on the petitioner's response to deficiency No. 2

RCB concludes that deficiency No. 2 has been resolved.

Deficiency No. 3

"The petitioner should submit a revised tolerance proposal in a new Section F for a tolerance of 1.0 ppm acephate and a separate tolerance of 1.0 ppm methamidophos for avocados."

The petitioner's response to deficiency No. 3

The revised Section F reads: "The petitioner, IR-4, on behalf of the IR-4 National Director, Dr. R. H. Kupelian, the IR-4 Technical Committee and the agricultural Experiment Stations of California and Florida requests the establishment of a tolerance for the residues of acephate (40 CFR 180.108) in or on the RAC, avocado, at 1 ppm, and a tolerance for the residues of methamidophos (40 CFR 180.315) in or on the RAC, avocado, at 1 ppm."

RCB's comment/conclusion on the petitioner's response to deficiency No. 3

RCB concludes that deficiency No. 3 has been resolved.

Other Considerations

1. In accordance with conclusions reached in RCB's third addendum to the Acephate Registration Standard (see the 10/5/84 memo of C. L. Trichilo), it is now recommended that all acephate tolerances be expressed in terms of only acephate per se under 40 CFR 180.108 and 21 CFR 561.20. Residues of methamidophos resulting from the metabolism of acephate are most appropriately placed under the tolerance regulations for methamidophos as a pesticide (40 CFR 180.315 and 21 CFR 561.277). The reason for this is to achieve compatibility with the MRLs of the Codex Alimentarius Commission, if only in terms of residue definition. Such a change in the residue definition would require deletion of paragraph (d)(8) of 40 CFR 180.3 which states that methamidophos residues may not exceed the higher of the two tolerances established for the use of acephate or methamidophos as a pesticide.

A statement should be added to 40 CFR 180.108 explaining that residues of the acephate metabolite methamidophos are regulated under 40 CFR 180.315, the methamidophos section. Also, 40 CFR 180.315 should be subdivided into parts (a) and (b) where (b) includes tolerances reflecting regulation of acephate formulations alone (i.e., methamidophos formulations are not registered for use on these commodities).

2. There are no Canadian, Mexican or Codex International residue limits established for residues of acephate and methamidophos in or on avocados. Therefore, the question of compatibility does not arise. An International Residue Limit Status sheet is attached to L. Kutney's 1/31/85 memo.

RECOMMENDATION

Toxicological considerations permitting, RCB recommends for the establishment of the proposed tolerances for residues of the insecticide acephate and methamidophos in or on the raw agricultural commodity avocados both at 1.0 ppm. In accordance with conclusions reached in RCB's third addendum to the Acephate Registration Standard (see the 10/5/84 memo of C. L. Trichilo), a 1.0 ppm tolerance for acephate residues should be expressed under 40 CFR 180.108 and a 1.0 ppm tolerance for methamidophos should be expressed under Section (b) of 40 CFR 180.315.

cc: Circu., R.F., EAB, PP#4E3029, EEB TOX, PM#23, W.T.Chin, PMSD-ISB  
RDI: P.V.Errico(6/23/86), R.D.Schmitt(6/23/86)  
TS-769: RCB: CM#2, RM812,557-4352, W.T.Chin,wc(6/23/86)

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