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

SEP 10 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#3E2889 (RCB No. 1229) Dimethoate on Blackberries and Raspberries. Evaluation of an Amendment Dated June 18, 1986 (Accession No. 263562)

FROM: V. Frank Boyd, Ph.D., Chemist
Tolerance Petition Section II
Residue Chemistry Branch/HED (TS-769)

THRU: John H. Onley, Ph.D., Section Head
Tolerance Petition Section II
Residue Chemistry Branch/HED (TS-769)

TO: Hoyt L. Jamerson
Minor Use Officer
Registration Support and Emergency
Response Branch
Registration Division (TS-767C)

and

Toxicology Branch
Hazard Evaluation Division (TS-769C)

Dr. Jerry J. Baron on the behalf of Interregional Research Project 4 has responded to EPA's letter of November 22, 1983 by submitting a 6/18/86 amendment to PP#3E2889. This amendment contains revised Sections B and D.

Deficiency:

RCB in the original evaluation of PP#3E2889, memo of J.E. Mayes, 9/16/83, concluded," we recommend that the tolerance not be established because of the need for more supporting residue data. Additional residue data are needed to make a determination as to the adequacy of the proposed 0.2 ppm dimethoate tolerance on blackberries and rasberries. Only one study was submitted and no supporting data was located in RCB's files for this use."

Petitioner Response:

(1) Amended Section B removes the restriction of Cygon® 400 use only in the states of DE, CT, MA, ME, MD, NH, NJ, NY, PA, RI, VT and WV. Thus, the revised proposed use has no geographical restrictions. Other instructions were not changed.

(2) Amended Section D presents additional residue data on blackberries from NY and WA. These data were generated from applications of 0.5 and 1.0 lbs ai/A (1X and 2X proposed rate), a single application with harvest sampling at 28 days, according to the proposed use. A tabulation of the new blackberry data and the old raspberry study are given in the following table on page 3:

Location & Crop	Application Rate (lb a/A)	Preharvest Interval (days)	Total Residue (ppm)
	----- NEW	DATA -----	
Geneva, NY (blackberries)	0.5	28	0.11(0.11-0.15) [1/]
	1.0	28	0.18(0.11-0.22) [1/]
Vancouver, WA (blackberries)	0.5	28	0.04(0.03-0.044) [1/]
	0.5	37	<0.03 [2/] (<0.03) [1/]
	1.0	28	0.07(0.06-0.09) [1/]
	1.0	37	<0.03 [2/] (<0.03) [1/]
	----- OLD	DATA -----	
Geneva, NY (raspberries)	0.5	27	0.09
	0.5	34	<0.01 [3/]
	0.5	42	<0.01 [3/]
	1.0	27	0.17
	1.0	34	0.03
	1.0	42	0.01

1/ Range of four replicated samples
2/ Sensitivity is given as 0.01 ppm for dimethoate + 0.02 ppm for oxon = 0.03
3/ Sensitivity of 0.01 ppm given for total dimethoate residues

RCB's Comments/Conclusions:

There is good agreement between the residues level in raspberries (1975) from Geneva, NY and blackberries (1985) from Geneva, NY at both rates of application. However, the residues found in the State of Washington blackberries are 3 X less than those reported in NY. With only two locations (states) in the U.S. represented by residue data and a 3 or 4 X difference in the levels found between these two locations, it is impossible to conclude that midwest, southeast, southwest or California residue data would fall inside or outside of the presented residue data range (<0.01-0.15 ppm). Insufficient residue data are available. We can not adequately determine a residue level at which a tolerance should be established.

As found previously (PP#3E2889, memo of J.E. Mayes, 9/16/83) supporting data on dimethoate residues in similar crops are not available. The use of dimethoate in apples and pears (single application of 0.5 lbs. ai/A and 28 days PHI) produced data responsible for establishing a tolerance of 2.0 ppm, and in cherries at a rate of 0.33 lb. ai/A, a tolerance of 2.0 ppm (RCB Reregistration Standard, 9/30/82). A previous petition for 0.5 lbs. ai/A application, repeat as needed, with 5-day PHI in strawberries has a proposed tolerance pending at 2.0 ppm (PP#6F1663, M.J. Nelson, 11/5/75). These uses or proposed uses serve only to indicate that the proposed tolerance for blackberries and raspberries at 0.2 ppm residues of dimethoate and its oxon might be too low.

Other Considerations

An International Residue Limit Status sheet is included with this review as Attachment 1. There are no compatability problems since Codex or International tolerances for dimethoate have not been established for bushberries.

Recommendations:

RCB cannot recommend for establishing the proposed tolerance of 0.2 ppm dimethoate on blackberries and raspberries resulting from the proposed use due to insufficient residue data.

RCB:TS-769:F.Boyd:vg:CM#2:Rm804:X77484:9/3/86
cc: Circ., R.F., EAB, PP#3E2889, EEB, TOX, PMSD/ISB, F. Boyd
RDI: J.H.Onley, 8/29/86; R.D.Schmitt, 8/29/86

ATTACHMENT 1

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL Dimethoate

CCPR NO. 27

PETITION NO. #3E2889
BDyD 9/8/86
J. Abs 9/9/86

Codex Status

/ / No Codex Proposal
Step 6 or above

Residue (if Step 9): sum of dimethoate and omethoate resulting from the use of formothion, dimethoate and omethoate

Crop(s) Limit (mg/kg)

None (on these commodities) 1/

Proposed U.S. Tolerances

Residue: DIMETHOATE AND ITS OXON.

Crop(s) Tol. (ppm)

Blackberry 0.2
Raspberry 0.2

CANADIAN LIMIT

Residue: dimethoate and omethoate

Crop Limit (ppm)

None (on these commodities) 2/

MEXICAN TOLERANCIA

Residue:

Crop Tolerancia (ppm)

None (on above commodities)

NOTES: 1/ There is a 1 ppm Codex limit on strawberries.
2/ There is a Canadian 1 ppm limit for blueberries and strawberries.