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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MAY 16, 1989

MEMORANDUM

*Should be PP8E3642 MR*

SUBJECT: PP#8E3624 Triadimenol (Baytan or BAY KWG 0519) on Imported Bananas. Letter of March 28, 1989. MRID #'s 410514-00 & 410514-01. DEB #5221.

FROM: Sami Malak, Ph.D., Chemist *Sami Malak*  
Tolerance Petition Section III  
Dietary Exposure Branch/DEB  
Health Effects Division/HED (H7509C)

TO: Lois Rossi, PM #21  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

and

Toxicology Branch  
Fungicide, Herbicide & Antimicrobial Support  
Health Effects Division (H7509C)

THRU: Philip V. Errico, Section Head *P. V. Errico*  
Tolerance Petition Section III  
Dietary Exposure Branch/DEB  
Health Effects Division (H7509C)

Mobay's transmittal of March 28, 1989 and the accompanying data are in response to DEB's comments listed as deficiencies in a memo dated January 6, 1989 (subject petition, S. Malak). Detailed considerations of each deficiency, petitioner's response to each, and DEB's comments are listed below following our conclusions and recommendation regarding this submission.

CONCLUSIONS

1. To PM, please advise the petitioner to impose on the label a maximum limit of 44 pounds per acre of 3% GR Baytan (600 g ai/acre). If the petitioner agrees to this limitation, there is no need to submit a revised Section B.

2. The petitioner has addressed the remaining deficiencies listed in DEB's memo of January 6, 1989 (subject petition, S. Malak).

### RECOMMENDATIONS

TOX considerations permitting, we recommend for establishment of a permanent tolerance of 0.2 ppm for the combined residues of the fungicide, beta-(4-chlorophenoxy)-alpha-(1,1-dimethyl-ethyl)-1H-1,2,4-triazole-1-ethanol; and its butanediol metabolite, 4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-1,3-butanediol, calculated as beta-(4-chlorophenoxy)-alpha-(1,1-dimethyl-ethyl)-1H-1,2,4-triazole-1-ethanol in/on bananas that will be imported to the United States.

### DETAILED CONSIDERATIONS

#### Deficiency 3

The petitioner is advised to revise Section F by indicating the chemical name of the parent compound and any metabolites of toxicological concern that ought to be regulated in the tolerance expression for Baytan. It is our assessment that tolerances for Baytan should be expressed as follows: "The combined residues of the fungicide, beta-(4-chlorophenoxy)-alpha-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol; and its butanediol metabolite, 4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-1,3-butanediol, calculated as beta-(4-chlorophenoxy)-alpha-(1,1-dimethyl-ethyl)-1H-1,2,4-triazole-1-ethanol.

#### Petitioner's Response

A revised Section F was submitted proposing establishment a permanent tolerance of 0.2 ppm for the combined residues of the fungicide, beta-(4-chlorophenoxy)-alpha-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol; and its butanediol metabolite, 4-(4-chlorophenoxy)-2,2-dimethyl-4-(1H-1,2,4-triazol-1-yl)-1,3-butanediol, calculated as beta-(4-chlorophenoxy)-alpha-(1,1-dimethyl-ethyl)-1H-1,2,4-triazole-1-ethanol in/on bananas that will be imported to the United States.

#### DEB's Comments

The petitioner complied with our request and revised section F as directed.

Deficiency 3 is resolved.

Deficiency 4(a)

The petitioner should explain what is meant by a production unit in terms of ai/acre.

Petitioner's Response

The petitioner stated that there are between 640 to 800 production units grown per acre. The use rate of 0.75 g ai/production unit would therefore result in a rate of 480 to 600 g ai/acre.

DEB's Comments

DEB has no objection to express the rate based on a production unit. However, since there are some variations as to the number of plants per production unit and number of production units per acre, a maximum limit of 44 pounds per acre of 3% GR Baytan (600 g ai/acre) should be imposed on the label.

DEB considers deficiency 4(a) resolved if the PM advises the petitioner to impose on the label a maximum limit of 44 pounds per acre of 3% GR Baytan (600 g ai/acre).

Deficiency 4(b)

The petitioner is advised to revise Section B by giving more details of the proposed use such as implement for applying the pesticide, depth of placing the pesticide in soil, method of applying the pesticide (foliar, broadcast, in furrow, rows, etc.), and the PHI in days.

Petitioner's Response

A revised Section B was submitted proposing the following:  
"Baytan 3% GR should be applied to the soil in a diameter of about 30 to 35 cm around the base of the mat or production unit at the rate of 25 grams/mat or production unit once per season. Applications should be made with a knapsack granule gravity flow applicator with a mechanical dosing unit ( a widely used brand is "Matabi"). Prior to application, leaves and debris should be removed from the soil surface. Applications may be made up to the day of harvest."

DEB's Comments

The same comments under 4(a) applies, in that DEB considers deficiency 4(b) resolved if the PM advises the petitioner to impose on the label a maximum limit of 44 pounds per acre of 3% GR Baytan (600 g ai/acre).

Deficiency 5

The petitioner should indicate the country or countries in which Baytan 3%G will be used and if the product is registered in those countries. If the product is not registered in those countries, the petitioner should tell us whether they intend to register it.

Petitioner's Response

The petitioner stated that once an import tolerance is established on bananas by the EPA, BAYER AG plans to register Baytan 3% GR in Costa Rica, Guatemala, Honduras and Ecuador. Baytan is not currently registered in these countries for use on bananas since the fruit would not be acceptable by the American fruit companies for importation into the United States.

DEB's Comments

Deficiency 5 is resolved.

Deficiency 6

The raw agricultural commodity is the whole banana (pulp plus peel). Therefore, the petitioner should report on the total Baytan residues in/on whole banana or provide the weights of banana pulp and peel for each residue value, as well as calculated values for the total residues in the fruit.

Petitioner's Response

The petitioner submitted the requested residue values contained in MRID #410514-01, entitled "Triadimenol - Magnitude of Residues on Bananas, EPA Guideline No. 171-4 Magnitude of the Residue, Mobay Report No. 95684-1, authored by K. M. Pither of Mobay Corporation, dated March 16, 1989, 11 pp."

In this submission, the petitioner reported the actual residue levels in/on whole banana fruit (pulp plus peel) for all the samples discussed in DEB's memo of subject petition (S. Malak, 1/6/89). At the 1X rate (0.75 g ai/production unit), total residues in whole banana did not exceed 0.1 ppm, reflecting 130 day PHI. The next highest level was 0.06 ppm reflecting 0-day. At higher rates, two residue values were noted, 0.17 ppm reflecting 2X rate, sampled 130 days after application; and 0.15 ppm reflecting 1.3X rate, harvested 203 days after application.

In DEB's memo of 1/6/89, we noted that all residue values in/on banana pulp were below 0.1 ppm, reflecting all dosages and PHI's tested (up to 2.7X rate and 203 day PHI).

DEB's Comments

It appears from the data presented that the proposed 0.2 ppm tolerance for residues of Baytan in/on whole banana that will be imported to the United States is adequate.

Deficiency 6 is resolved

cc: S. Malak (DEB), PP#8E3642, PP#3F2854, PP#5F3224,  
PP#4F3155, E. Eldredge (ISB/PMSD), R. D. Schmitt,  
Circulation, SF (Baytan), and RF.

RDI: P. V. Errico:5/15/89: R. L. Loranger: 5/16/89  
H7509C:DEB/HED:CM#2:RM814A:S.Malak:X557-4379:s.m.:4/19/89