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

MAR - 4 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: ID# 000618-00075. Review of label amendment for thiabendazole (Mertect 340-F Fungicide). MRID# 429052-01. Barcode D195001. Case 002896. CBTS# 12535.

FROM: G.F. Kramer Ph.D., Chemist
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THRU: P.V. Errico, Section Head
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Health Effects Division (7509C)

TO: Cynthia Giles-Parker, Product Manager
James Stone, Team 22 Reviewer
Registration Division (7505C)

Merck is proposing a label amendment for thiabendazole (Mertect 340-F Fungicide) to allow use on tobacco seedlings. Tolerances for thiabendazole are established for numerous RACs under 40 CFR § 180.247. The present submission consists of the amended label and a magnitude of the residue study in mature tobacco leaves following thiabendazole application to seedlings.

RECOMMENDATIONS

CBTS recommends in favor of the proposed label amendment for Mertect 340-F to allow use on tobacco seedlings.

CONCLUSIONS

1. ^{14}C-Thiabendazole was applied to tobacco seedlings in accordance with label instructions at a total rate of 3.77 lbs. ai/A (0.92X). The average TRR in mature tobacco leaves was 0.0097 ppm.

2. The level of thiabendazole residues in mature tobacco leaves was well below the Agency trigger value of 0.1 ppm for requiring the performance of pyrolysis studies. No further residue chemistry data is required to register Mertect 340-F for use on tobacco seedlings.

DETAILED CONSIDERATIONS

Proposed Use: Thiabendazole is formulated as Mertect 340-F, a water dispersible suspension containing 3.8 lbs. ai/gal. Thiabendazole is applied in a water volume of 1 gal/1000 ft^2 of seedbed. The first application can be made when seedlings are the size of a dime at a rate of 0.77 fl. oz./1000 ft^2. A second application can be made 2 weeks later at a rate of 1.2 fl. oz./1000 ft^2. A final application may be made near the time of transplanting at a rate of 1.2 fl. oz./1000 ft^2. The total application rate is 3.17 fl. oz./1000 ft^2 (4.1 lbs. ai/A) and all applications are made prior to transplanting seedlings to the field.

Magnitude of the Residue in Tobacco Leaves: Tobacco seedlings were grown in a test plot and treated with ^{14}C-thiabendazole on 6/3, 6/17 and 7/1/92 at rates of 0.92, 1.42 and 1.42 lbs. ai/A, respectively. The total use rate was 3.77 lbs. ai/A (0.92X). On 7/8/92, the seedlings (≈6 in. tall) were transplanted and cultured using normal commercial practices. On 10/22/92, the lowest 2-4 leaves were harvested (excluding the lowest two leaves which are discarded commercially). Samples were immediately frozen and shipped in a freezer truck to the analytical laboratory. Both treated and control leaves were composited by homogenization to a fine powder. The TRR was determined by combustion of triplicate subsamples. The treated samples had a TRR of 0.0117, 0.00059 and 0.0016 ppm for an average of 0.0097 ± .0033 ppm. The level of thiabendazole residues in mature tobacco leaves was well below the Agency trigger value of 0.1 ppm for requiring the performance of pyrolysis studies. No further residue chemistry data is required to register Mertect 340-F for use on tobacco seedlings.

cc: S.F., Kramer, circ., R.F., Thiabendazole List B File, Amended Use File
RDI: P.V. Errico (2/25/94), R.A. Loranger (2/25/94), D.F Edwards (2/28/94)
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