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

MAR 16 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Fenbuconazole Metabolism in Stone Fruit, Pecans, Almonds, Bananas, Apples, and Wheat. The HED Metabolism Committee Meeting Held on 3/1/94.

FROM: Nancy Dodd and William D. Wassell, Chemists
Chemistry Branch I - Tolerance Support
Health Effects Division (7509C)

WDW 3/7/94
NDD 3/7/94

THROUGH: Debra Edwards, Ph.D., Chief
Chemistry Branch I - Tolerance Support
Health Effects Division (7509C)

TO: Members of the HED Metabolism Committee
Health Effects Division (7509C)

A. Individuals in Attendance:

1. Metabolism Committee: (Signatures indicate concurrence unless otherwise stated)

Richard Schmitt

Karl Baetcke

Charles Frick

Richard Loranger

Michael Metzger

Alberto Protzel

2. Scientists: (Non-committee members responsible for data presentation; signatures indicate technical accuracy of panel report)

Jess Rowland

Sanyvette Williams S. A. Williams-Foy

Elizabeth Haeberer Elizabeth Haeberer

Nancy Dodd Nancy Dodd

Bob Quick Robert J. Quick

William Wassell Will A. Wassell 3/9/94

3. Metabolism Committee Members in Absentia: (Committee members who were unable to attend the discussion; signatures indicate concurrence with the overall conclusions of the Committee)

Reto Engler

George Ghali G. Ghali

B. Material Reviewed:

The plant metabolism data reviewed were a peach metabolism study (MRID #410735-08 in PP#9G3746), a peanut metabolism study (MRID #'s 424477-00 and 424477-01 in PP#1F3995) and a wheat metabolism study (MRID #418750-34 in PP#2G4143/PP#2F4127) submitted to the agency by Rohm and Haas. The metabolism data were summarized in the N. Dodd/W. Wassell briefing memo to the HED Metabolism Committee dated 12/13/93 and in R. Loranger's addendum dated 2/25/94.

The analytical methods for the various crops are all gas liquid chromatography with a thermionic specific detector with nitrogen selectivity. All the methods determine parent, RH-9129, and RH-9130. Some methods determine additional metabolites.

RH-9129 and RH-9130 are both plant and rat metabolites.

C. Discussion:

Metabolism of fenbuconazole in stone fruit, pecans, almonds, bananas, apples, and wheat was discussed by the HED Metabolism Committee on 3/1/94. Following a discussion of the metabolism in peaches, peanuts, and wheat (see the 12/13/93 briefing memo, the 2/25/94 addendum, and the material section above), members of the HED Metabolism Committee were asked to determine the residues of concern in stone fruit, pecans, almonds, bananas, apples, and wheat.

In response, the HED Metabolism Committee concluded that the residues of concern resulting from the proposed uses of fenbuconazole on stone fruit, wheat, pecans, bananas, apples and almonds are fenbuconazole (RH-7592), RH-9129, and RH-9130 provided

that the petitioner shows that RH-4911 is only a minor residue in these crops. Since the lactone metabolites (RH-9129 and RH-9130) are to be included in the tolerance expression, then the iminolactone metabolite (RH-6468) is also included by virtue of the registrant's contention that this compound is converted to the lactones by the analytical methodology. Triazolealanine and triazoleacetic acid are not residues of toxicological concern. The residues of concern in peanuts will be determined separately when a petition requesting a tolerance on peanuts is submitted. A metabolism study will be required for a crop not botanically similar to the crops for which metabolism studies are available.

The decisions in the paragraph above were based on residue levels found in the metabolism and field studies. Due to the somewhat different metabolic routes in the crops previously studied, a metabolism study will be required for a crop dissimilar to the crops for which metabolism studies have been performed. Almonds can be considered botanically related to stone fruit. The field trial data shows that the lactone metabolites of fenbuconazole (RH-9129 and RH-9130) may account for up to approximately a third of the residue in some crops. The registrant contends that RH-4911 was identified only in the peanut metabolism study and was not present or was present only as a minor component of the residue in the wheat and stone fruit metabolism studies. All conclusions are contingent upon the registrant formally submitting data concerning the conjugated metabolite RH-4911 in the metabolism studies and residue field trials.

cc: RF, SF, Circu., PP#1F3989, PP#1F3995, PP#3F4194, PP#2G4143, PP#2G4145, PP#2F4154, N. Dodd (CBTS), W. Wassell (CBTS), E. Haeberer (CBTS), PM#22, A. Kocialski (CCB), Nan Gray (CCB)

RDI: R.Quick:3/08/94;E.Haeberer:3/09/94; R.Loranger:3/09/94; DEdwards:3/09/94.
7509C:CM#2:Rm 804F:305-5681:N. Dodd:nd:3/01/94