Shaughnessy Number: 128997

Date out of EFGWB: JAN 30 1990

To: S. Lewis/J. Fairfax
Product Manager 21
Registration Division (H7505C)

From: Emil Regelman, Supervisory Chemist
Environmental Fate Review Section #2
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Thru: Hank Jacoby, Chief
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Attached, please find the EFGWB review of...

Reg./File #: 3125-EUP-ROO, -ENN, 4G3817; 3124-GOG, -GOE, -GOU, 9F03818

Chemical Name: te(r)buconazole

Type Product: fungicide

Product Name: various

Company Name: Bayer AG

Purpose:

EFGWB 90-0070, EFGWB 90-0071

1) approval of EUP on peanuts
2) approval of EUP on grapes
3) temporary tolerance on peanuts, peanut hulls and hay; grapes, grape pomace (wet and dry), raisins; eggs; meat, fat and meat byproducts of poultry, cattle, goats, hogs, horses, and sheep; and milk.

EFGWB 90-0075, 90-0076, 90-0077

4) tolerance on barley, straw and hay; grass (forage); oat, grain, green forage, hay, and straw; peanuts; wheat (green forage)

Date Received: 11/17/89

Total Reviewing Time (days): 1

Action Code: 710, 100

EFGWB#(s): 90-0070,-0071; -0075, -0076, 0077

Deferrals to:

___Ecological Effects Branch, EFED

___Dietary Exposure Branch, HED

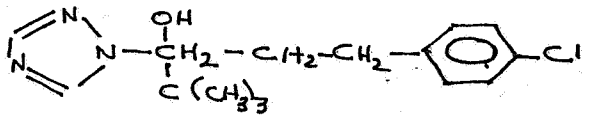
___Toxicology Branch, HED

___Non-Dietary Exposure Branch, HED

___Science Integration and Policy Staff, EFED

1. CHEMICAL:

chemical name: a-[2-(4-Chlorophenyl)ethyl]-a-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol
common name: te[r]buconazole, folicur
trade name: Elite
structure:



CAS #: unknown
Shaughnessy #: 128997

2. TEST MATERIAL: formulated products

3. STUDY/ACTION TYPE:

1) EUP on peanuts -- EFGWB
2) EUP on grapes
3) temporary tolerances on
   peanuts, peanut hulls and hay
   grapes, grape pomace (wet and dry), raisins
   eggs
   meat, fat and meat byproducts of poultry, cattle, goats, hogs, horses, and sheep
   milk
4) tolerances on
   barley, straw and hay
   grass (forage)
   oat, grain, green forage, hay, and straw
   peanuts
   wheat (green forage)

4. STUDY IDENTIFICATION: n.a.

5. REVIEWED BY:

Typed Name: E. Brinson Conerly E.B. Conerly 1/26/90
Title: Chemist, Review Section 2
Organization: EFGWB/EFED/OPP

6. APPROVED BY:

Typed Name: Emil Regelman
Title: Supervisory Chemist, Review Section 2
Organization: EFGWB/EFED/OPP
JAN 30 1990

7. CONCLUSIONS:

There are no environmental fate data contained in this submission. Most of the requirements are fulfilled and indicate a persistent but not mobile compound.

8. RECOMMENDATIONS:

EFGWB has no objections to granting of the EUPs or tolerances.

The remaining required data and information should be submitted as soon as possible.

9. BACKGROUND:

There are no environmental fate data in this submission. Available data indicate persistence but low soil mobility. Some plant uptake occurs.

1) EUP on peanuts: to evaluate effectiveness of terbuconazole (Folicur 3.6 F) against certain fungi, testing biological performance in large plots, optimal timing, crop and varietal tolerance, sprayability in ground and aerial equipment, yields, and effect of adjuvants on performance.

The test area is a total of 475 acres in TX (20 A), OK (20 A), GA (150 A), AL (75 A), FL (80 A), NC (50 A), SC (30 A), and VA (50 A). The test period is 5/1/90 to 12/31/90. A maximum of 207.80 gallons of 3.6 F (748.08 lb a.i.) will be used, based on maximum application rate of 8 fl oz product/A per application and 7 applications per season. No environmental fate studies are proposed in this EUP.

2) EUP on grapes: to evaluate effectiveness of terbuconazole (Elite 45 DF) against certain fungi, assessing the same factors as mentioned in 1) above.

The test area is a total of 235 acres in TX (10 A), MS (10 A), AK (10 A), CA (100 A), OR (10 A), WA (10 A), PA (30 A), NY (40 A), MI (5 A), OH (10 A), from 1/1/90 to 12/31/90. A maximum of 470 lb (211.5 lb a.i.) will be used, based on a maximum application rate of 4 oz product per acre per application and 8 applications per season.

3) temporary tolerances on
peanuts, peanut hulls and hay
grapes, grape pomace (wet and dry), raisins
eggs
- meat, fat and meat byproducts of poultry, cattle, goats, hogs, horses, and sheep
milk

4) tolerances on
barley, straw and hay
grass (forage)
oat, grain, green forage, hay, and straw
peanuts
wheat (green forage)

The status of data requirements is as follows:

hydrolysis -- fulfilled as of 6/9/89, stable at pH 5, 7, and 9 -- no hydrolysis after 28 days incubation

photolysis in water -- fulfilled as of 6/9/89 -- no photodegradation detected; extrapolated $t_{1/2}$ of 600 days

soil photodegradation -- fulfilled as of 6/9/89 -- slow reaction; extrapolated $t_{1/2}$ ca 191 days, producing two unidentified degradates (<3% of applied)

aerobic soil metabolism -- additional data on product identification required as of 6/9/89 -- resistant to metabolism -- extrapolated $t_{1/2}$ 610 days in sandy loam soil. Residues at 1 year were terbuconazole at 67.4%, unextractables at 29.1% [ca. 20% of this (3% of the total applied) was parent compound], an unidentified extractable material at 2.1%, extractable polar compounds at 1.1%, and $CO_2$ at less than 0.7%.

anaerobic soil metabolism -- additional data required on product identification as for the aerobic study -- extrapolated $t_{1/2}$ ca 400 days

leaching/adsorption/desorption -- fulfilled as of 6/9/89 -- in column leaching studies on sand, sandy loam, silt loam, and silty clay loam, little leaching occured below 6 cm

terrestrial field dissipation -- study submitted, but not accepted because of inadequate analytical methods and lack of detail in the report. EFGWB has required a *turf field dissipation study* because of this compound's use pattern

confined accumulation on rotational crops -- additional data required on characterizing residues -- *SMALL GRAIN, LEAFY VEGETABLES, AND ROOT CROPS SHOW UPTAKE*

fish bioaccumulation -- study submitted and under review at this time

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: n.a.

11. COMPLETION OF ONE-LINER: no information added

12. CBI APPENDIX: n.a.