

US EPA ARCHIVE DOCUMENT

109901
SHAUGHNESSEY NO.

21
REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 3-2-82 OUT 4-15-82

FILE OR REG. NO. 3125-320

PETITION OR EXP. PERMIT NO. _____

DATE OF SUBMISSION 2-11-82

DATE RECEIVED BY HED 3-1-82

RD REQUESTED COMPLETION DATE 5-15-82

EEB ESTIMATED COMPLETION DATE _____

RD ACTION CODE/TYPE OF REVIEW 335/Amendment - New Food/Feed Use

TYPE PRODUCT(S): I, D, H, F, N, R, S Fungicide

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. H. Jacoby (21)

PRODUCT NAME(S) Bayleton 50% WP

COMPANY NAME Mobay Chemical Corporation

SUBMISSION PURPOSE Proposed Conditional Registration of Apple
and Grape uses

SHAUGHNESSEY NO. CHEMICAL, & FORMULATION 8 A.I.

ENVIRONMENTAL SAFETY REVIEW

100 Pesticide Name

Bayleton® (Triadimefon)

100.1 Pesticide Use

Bayleton 50% WP will be used as a systemic fungicide for control of certain diseases on apples and grapes.

100.2 Formulation Information

ACTIVE INGREDIENT:
 1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H
 -1,2,4-triazol-1-yl)-2-butanone.....50%

100.3 Application Methods, Directions, Rates

<u>Crop</u>	<u>Disease</u>	<u>Rate (50% W.P.)</u>	<u>Numbers of application</u>
		<u>Protective spray</u> 1/2 to 1 oz/100 gallons, or 2 to 4oz/acre	2 application
Apples	Powdery Mildew	<u>Post-infection spray</u> 1 to 2 oz/100 gallons, or 4 to 8 oz/acre	2 application Max. 1 lb/appl or 4 lb/season
	Powdery Mildew	2 to 6 oz/acre	Multiple applications Max 1 lb/acre/season
Grapes	Black Rot	4 to 6 oz/acre	

101 Physical and Chemical Properties

See previous review by R. Balcomb dated 1/27/82

102 Behavior in Environment

(A summary from previous review by R. Balcomb dated 1/27/82)
 Triadimefon is stable to hydrolysis but susceptible to
 photodegradation in water with a half-life of 10-12 hrs.

It is non-persistent in soil with the half-life of 6 days (in aerobic soil in lab study) or 5 days (in field study) and relative low leaching ability. It is also rapidly metabolized and excreted by test animals with little or no tendency of accumulation in tissues.

103

Toxicological Properties

(A summary from previous review by R. Balcomb dated 1/27/82) Triadimefon is practically non-toxic or slightly toxic to most mammal species tested. It is also practically non-toxic to avian species and slightly toxic to fish species tested. However, it is moderately toxic to daphnia. Triadimefon is also relatively non-toxic to honey bees.

104.0

Hazard Assessment

(From previous EEB review on proposed conditional registration of uses on apples, grapes and seed grass)

Acute oral and short-term dietary studies (Section 103.1-2) demonstrate that Bayleton is of low toxicity to mammals and birds. The highest rate of application requested under the proposed new uses (.5 lbs a.i./A) may result in (maximum) residues on typical avian and small mammal foods (insects, small fruits and seeds) of 6-29 ppm (Kenaga, 1973). The 'worst case' residue situation would arise on thin broad-leaf surfaces where concentrations of 100 ppm may occur. Using even the 'worst case' scenario acute poisoning of terrestrial wildlife appears a remote possibility.

Short-term (96-hr) fish tests for three species demonstrate with consistency the low toxicity of Bayleton (Bluegill = 11 ppm, Rainbow trout = 14 ppm and channel catfish = 15 ppm) to aquatic vertebrates. The Daphnia 48-hr LC₅₀ though somewhat lower (1.6 ppm) suggests aquatic invertebrates are likewise not sensitive to this compound. Bayleton is of sufficiently low toxicity such that a direct application (max. rate) to shallow water (6") would not be expected to result in significant effects (estimated concentration = 0.367 ppm (by R. Balcomb 1/27/'82) Although a worst case EEC of 0.367 ppm slightly exceed the MATC for Daphnia >154 <314 ppb a significant increase in risk to non-target aquatic invertebrates is unlikely in light of its current usages (See EEB review by R. Lee 4/'82). Furthermore, the direct application situation would not develop during these uses.

104.3

Endangered Species Considerations

No potential hazard is expected.

105.0 Conclusions

105.1 Data Requests

No additional data are required.

105.2 Summary

EEB has complete an incremental risk assessment (3(c)(7) finding) of the proposed conditional registration of triadimefon for use on apples and grapes. Based upon the available data EEB concludes that proposed use provide for no significant increase in exposure or risk to nontarget organisms.

Richard Lee 4/14/82
Richard Lee, Entomologist
Section #4, EEB, HED

Harry Craven 4/14/82
Harry Craven, Head
Section #4, EEB, HED

Clayton Bushong 4/15/82
Clayton Bushong, Chief
EEB/HED

See: Peara
EEB Review # 19

Date Out of EFB: JUN 17 1982

(4/14/82)

To: Henry Jacoby
Product Manager 21
Registration Division (TS-767)

From: Mr. Samuel Creeger, Head (acting)
Review Section No. 1
Environmental Fate Branch
Hazard Evaluation Division (TS-769)

Attached please find the environmental fate review of:

Reg./File No.: 3125-320

Chemical: Bayleton

[1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone]

Type Product: Fungicide

Product Name: @Bayleton 50% Wettable Powder

Company Name: Mobay

Submission Purpose: Worker Exposure Analysis - Use on Apples and Grapes

ZBB Code: other

ACTION CODE: 435

Date In: 4/21/82

EFB # 292

Date Completed: 6/17/82

TAIS (level II)

Days

76

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