Shaughnessy No.: 109901

Date Out of EAB: OCT 26 1988

TO: Donald Stubbs/Libby Pemberton
Product Manager 41
Registration Division (TS-767C)

FROM: Patrick W. Holden, Chief
Ground-Water Technology Section
Environmental Fate and Ground-Water Branch
Environmental Fate and Effects Divisions (TS-769C)

THRU: Henry Jacoby, Acting Chief
Environmental Fate and Ground-Water Branch
Environmental Fate and Effects Division (TS-769C)

Attached, please find the EAB review of . . .

Reg./File # : 3125-340-AA

Chemical Name : Triadimefon

Type Product : Fungicide

Product Name : Bayleton

Company Name :

Purpose : Review Section 18 request by California Department of Food and Agriculture for use on artichokes.

Date Received: 9/19/88 Action Code: 510

Date Completed: 10/14/88 EFGWB#: 81034

Total Reviewing Time (decimal days): 1.5 days

Deferrals to: x Ecological Effects Branch, EFED

_____ Science Integration & Policy Staff, EFED

_____ Non-Dietary Exposure Branch, HED

_____ Dietary Exposure Branch, HED

_____ Toxicology Branch, HED

1. CHEMICAL:

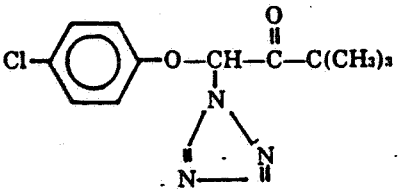
Common name: Triadimefon

Chemical name: 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone

Trade Names: Bayleton, Amiral

Formulation: 50% wettable powder

Chemical Structure:



2. TEST MATERIAL: Not applicable

3. STUDY/ACTION TYPE: Request by the California Department of Food and Agriculture for reissuance of a Emergency Exemption (Section 18) to use triadimefon on artichokes on 14,400 acres in California.

4. STUDY IDENTIFICATION: Not applicable

5. REVIEWED BY:

Richard C. Doyle

Richard C. Doyle
Chemist, GWIS
EFGWB/EFED/OPP

Date: 10/26/88

6. APPROVED BY:

Patrick W. Holden,
Chief, GWIS
EFGWB/EFED/OPP

Date: _____

7. CONCLUSIONS:

Previous reviews by Environmental Fate and Ground-Water Branch (EFGWB) (formerly Exposure Assessment Branch) determined that aged residues of triadimefon are moderately mobile and thus have the potential to leach into ground water in some situations. The region in which the use of triadimefon is proposed can be divided into two areas: a flat coastal region; and, a rolling hilly inland area. The coastal region has soils with a predominately clay loam texture with organic matter at 3 to 4%, a perched water table at 5-10 ft that is drained by tiles at 8 ft in most areas, and potable aquifers at 270 ft and below. The inland area is

areas, and potable aquifers at 270 ft and below. The inland area is dominated by sandy clay and sandy clay loam soils with 0.5 to 15% organic matter. Depth to ground water is variable but is generally ≥ 270 feet. There is no perched water table in this area. Both areas have impermeable clay layers at varying depths, and the subsoils tend to have a heavier texture than the surface soil. Irrigation is used in both areas. The total water input is expected to average 1.75 acre-feet/year.

The potential for triadimefon to leach to potable ground-water supplies following application for a single season appears to be low in light of the soil characteristics, depth to potable ground water, and expected water inputs. However, leaching to the perched water table in the coastal regions is almost certain. Much of the water in the perched water table is drained into adjacent estuaries. Triadimefon in the perched water table of undrained areas is not expected to migrate to deeper aquifers.

8. RECOMMENDATIONS:

Application of triadimefon to 14,400 acres of artichokes in California (Monterey County and adjacent areas) for a single season does not appear to pose a threat to potable ground water. The perched water table along the coastal region (30% of treated area) is expected to be contaminated. Much of this contaminated water will be drained into nearby estuarine systems. EFGWB defers to Ecological Effects Branch to evaluate the hazard to the estuarine ecology.

9. BACKGROUND: Refer to Section 3.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES:

No studies submitted.

11. COMPLETION OF ONE-LINER:

No changes required.

12. CBI APPENDIX:

Not Applicable.