

US EPA ARCHIVE DOCUMENT

FILE COPY

Date Out EFB: MAY 28 1980

To: Product Manager Stone (PM 23)
TS-767

Through: Dr. Gunter Zweig, Chief
Environmental Fate Branch

From: Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 707-149, 707-150

Chemical Acifluorfen sodium salt

Type Product: Herbicide

Product Name: Blazer

Company Name: Rohn & Haas

Submission Purpose: Analysis of leaching studies

ZEB Code: 3(c)(7)

Date in: 5/13/80

Date Completed: MAY 28 1980

ACTION CODE: 550 both
EFB# 451, 452

Deferrals To:

 Ecological Effects Branch

 Residue Chemistry Branch

 Toxicology Branch

1. INTRODUCTION

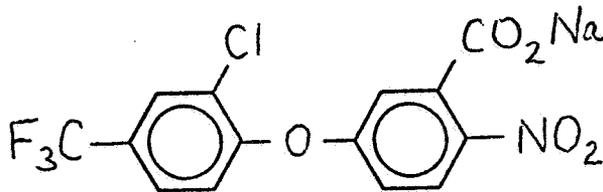
1.1 The registrant has submitted additional leaching data and refers to previously submitted soil metabolism and leaching data to satisfy our concerns over possible contamination of groundwater from the use of Blazer.

The data in this resubmission will be considered in lieu of field/groundwater monitoring data.

1.2 Refer to the previous review of Blazer 707-RUO, RLN; PP9F2158, dated January 3, 1980.

1.3 One volume was submitted of accession number 242395.

1.4 Structure and chemical name



sodium 5-[2-chloro-4-(trifluoromethyl)-phenoxy]-2-nitrobenzoate

2. DISCUSSION OF DATA

2.1 Field leaching Data, section J, page 4.

Blazer was applied to a silty loam (26% sand, 60% silt, 14% clay, 1.8% OM, pH=7.2, CEC=13.2) at 0.5 lb ai/A. During 4 months post-application, the soil was sampled to 12 inches for determination of Blazer residue content.

Results

- 1) Residues were not detected beyond 6 inches at any time during the study.
- 2) Residues in the top 3 inches degraded to non-detectable compounds (the method detected nitro and amino containing compounds). The half-life was about 2 weeks.

Conclusions

Under use conditions, leaching of Blazer to groundwater is not expected.

2.2 Field Leaching Data, section J, page 4.

Blazer was applied to a clay soil (7% sand, 33% silt, 60% clay, 1.9% OM, pH=6.6, CEC=24.6) at 1.0 lb ai/A. During 4 months post-application, the soil was sampled to 12 inches for determination of Blazer residue content.

Analysis was for nitro and amino containing metabolites of Blazer.

Results

- 1) Residues were not detected beyond 6 inches at any time during the study.
- 2) Residues in the top 3 inches degraded to non-detectable compounds. The half-life was about 2 weeks.

Conclusions

Under use conditions, leaching of Blazer to groundwater is not expected.

3. CONCLUSIONS

- 3.1 Blazer, as the parent compound, leaches readily in soil. However, soil aged residues of Blazer do not leach in soil. Since the aerobic soil half-life of Blazer is 1-6 months and is about a week under anaerobic conditions, Blazer, as parent compound, is not expected to persist long enough to reach groundwater under use conditions. This information, plus the new leaching data reviewed above (showing no field leaching beyond 6 inches) allows us to conclude that Blazer contamination of groundwater under use conditions will not occur.

4. RECOMMENDATIONS

- 4.1 The submitted data allows us to conclude that groundwater contamination resulting from the proposed use of Blazer on soybeans is unlikely. The field/groundwater monitoring study required in our January 13, 1980 evaluation of 707-RUO, RLN is no longer needed.

Samuel M. Creeger May 27, 1980

Samuel M. Creeger
Review Section #1
EFB/HED