

Shaughnessy No.: 084301 (benefin)
104201 (oryzalin)
02 FEB 1984
Date Out of EAB: _____

To: Robert Taylor
Product Manager 25
Registration Division (TS-767)

From: Samuel Creeger, Chief *SK*
Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached, please find the EAB review of...

Reg./File # : 1471-EUP-IT
Chemical Name: N-butyl-N-ethyl-a,a,a-trifluoro-2,6-dinitro-p-toluidine
(benefin),
3,5-dinitro-N⁴,N⁴-dipropyl sulfanilamide (oryzalin)
Type Product : Herbicide
Product Name : Balan XL
Company Name : Elanco
Purpose : EUP - Use on Turf

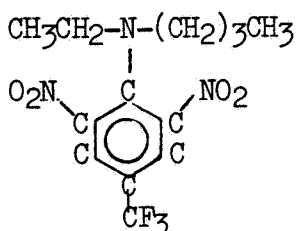
ZBB Code : other EAB #(s) : 4076
Action Code(s): 740 TAIS Code: 63
Date Received: 11/17/83 Total Reviewing Time: 2.0 days
Date Completed: 2/1/84

Deferrals to: _____ Ecological Effects Branch
_____ Residue Chemistry Branch
_____ Toxicology Branch

1.0 INTRODUCTION

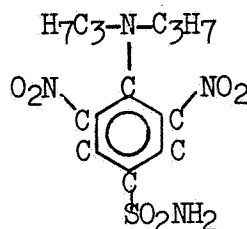
The registrant, Elanco, has requested an EUP to test the new product BALAN XL, a granular formulation containing 1% benefin and 1% oryzalin, to be used for preemergent weed control on lawns and golf courses (turf). No Subpart N data was included with this submission.

2.0 STRUCTURES



Benefin

N-butyl-N-ethyl-a,a,a-trifluoro-2,6-dinitro-p-toluidine



Oryzalin

3,5-dinitro-N⁴,N⁴-dipropyl sulfanilamide

3.0 DIRECTIONS FOR USE

A copy of the proposed directions for use is appended to this review. Rates of application for preemergence control would be about 2 to 3 pounds ai per acre, applied in late winter or early spring. In some areas, a second application may be made at the same rates 8 to 10 weeks later. The product is applied by drop or rotary spreader. Two passes at half the recommended rate at right angles to each other are recommended for more even coverage.

4.0 EXPERIMENTAL PROGRAM

A copy of the experimental program is appended to this review. In brief, the registrant proposes to evaluate BALAN XL in 16 states, applying a total of 5000 lb ai to 2000 acres. The program is to run for 1 year.

5.0 REVIEW OF SUPPORTING DATA

5.1 Benefin

The last valid review of benefin was completed on 6/10/76, for a tank mix containing 0.92% benefin + 0.46% chlorpyrifos to be used on turf lawns. According to § 1.5 of that review, benefin had been accepted for use on turf (Reg. #'s 1471-49 & -50), although no supporting environmental chemistry data had been reviewed. Actual use rate for benefin was 2 lb ai/A. As of this review, no additional EF data have been submitted on this chemical.

5.2 Oryzalin

There are a number of recent reviews in the EAB files. On 3/31/81 an EEC was performed for the use of Surflan on corn/soybeans. The conclusion of the modelling was that up to 1.27% of the applied pesticide might reach the pond as the result of a severe event.

In the review of 7/10/80, it was concluded that Surflan did not present a potential for leaching. However, the possible use in tile-drained fields may lead to possible ground and surface run-off.

✓ In the review of 3/31/80 (use on bearing fruit/nut trees, and vineyards it was concluded that the hydrolysis data requirement had been satisfied (surflan did not hydrolyze).

The next earliest relevant review was completed on 10/29/76, and referenced previously submitted data of varying acceptability.

6.0 CONCLUSIONS

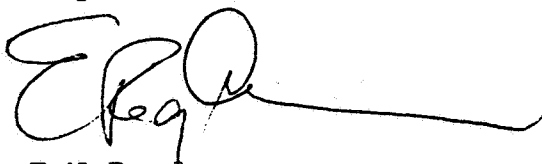
The experimental program and label appear complete.

However, since no new EF data have been submitted with this EUP application, and since the supporting data base is marginal at best for the oryzalin component and virtually non-existent for the Benefin component, EAB cannot concur with the proposed EUP at this time.

7.0

RECOMMENDATION

The registrant should submit sufficient data to support the proposed EUP. For the turf use, the following data will be required: Hydrolysis (benefin only), aerobic soil metabolism (for benefin and oryzalin) and accumulation in fish (for benefin and oryzalin). The hydrolysis study for oryzalin has already been reviewed, and found acceptable (oryzalin does not hydrolyze). The rotational crop data requirement does not apply to this turf use.

A handwritten signature in dark ink, appearing to read 'EReg', with a long horizontal flourish extending to the right.

Emil Regelman
Chemist
EAB/HED
February 1, 1984