

185066
RECORD NO.

121001
SHAUGHNESSEY NO.

16
REVIEW NO.

EEB REVIEW

DATE: IN 11-20-86 OUT FEB 12 1987

FILE OR REG. NO. 7969-58

PETITION OR EXP. NO. _____

DATE OF SUBMISSION 7-31-86

DATE RECEIVED BY HED 11-12-86

RD REQUESTED COMPLETION DATE 1-19-86

EEB ESTIMATED COMPLETION DATE 1-12-87

RD ACTION CODE/TYPE OF REVIEW 335

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) Poast

COMPANY NAME BASF Corporation

SUBMISSION PURPOSE Proposed Registration of uses on

cabbage, broccoli, cauliflower, cantaloupe,

cucumber, musk melon, pumpkin, summer

squash, watermelon, and winter squash.

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

121001 2-[1-(ethoxyimino)butyl]-5-[2- 18

ethylthio)propyl

7
148

ECOLOGICAL EFFECTS BRANCH REVIEW

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Add use on cucurbits (cantaloupe, cucumber, musk melon, pumpkin, summer squash, watermelon and winter squash) and brassica leafy vegetables (cabbage, broccoli, and cauliflower) for grass control.

100.2 Formulation

Active Ingredient:

Sethoxydim.....18.0%

Inert Ingredients:.....82.0%

One gallon contains 1.5 lb ai.

100.3 Application Methods, Directions, Rates

See attached supplemental labeling.

100.4 Target Organisms

Annual and perennial grass weeds.

100.5 Precautionary Labeling

Do not apply directly to water.

Do not contaminate water by cleaning of equipment or disposal of wastes.

The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species or adversely modify their habitat is a violation of Federal law.

The use of this product is controlled to prevent death or harm to Solano grass which occurs in Solano County, CALIFORNIA. Before using this product in this county you must obtain the EPA Endangered Species Bulletin (EPA/ES-85-13) available from either your County Agricultural Extension Agent, the Endangered Species Specialist in the California Department of Fish and Game, or the Regional Offices of the U.S. Fish and Wildlife Service (Portland, Oregon) or the U.S. Environmental Protection Agency (San Francisco, California). THIS BULLETIN MUST BE REVIEWED PRIOR TO PESTICIDE USE. THE USE OF THIS PRODUCT IS PROHIBITED IN THIS COUNTY UNLESS SPECIFIED OTHERWISE IN THE BULLETIN.

8
199

101 Hazard Assessment

101.1 Discussion

Poast is currently registered for use as a foliar treatment for grass control on soybeans, virginia pine (forest), ornamental herbaceous plants, nursery stock, and nonfood crops. (NPIRS 12-16-86).

This amendment will allow use of Poast on cucurbits and brassica leafy vegetables for control of grasses. This will add approximately 500,000 acres of cropland that could be exposed.

For broad spectrum control of annual grasses 1 1/2 pints of Poast per acre (.28 lb ai) are applied. One additional application may be made if new growth occurs (maximum 3 pints per season, .56 lb ai).

101.2 Likelihood of Adverse Effects to Non-target Organisms

Terrestrial

The toxicity data available suggest that sethoxydin is practically non-toxic to mammals based on an acute oral LD₅₀ of > 2,000 mg/kg for rats and > 5,000 mg/kg for mice. With an LD₅₀ of > 2,000 mg/kg for the mallard duck, sethoxydin may be characterized as practically non-toxic on an acute oral basis. The chemical also has a low order of toxicity on a dietary basis for avian species (LC₅₀ > 5,000 ppm for bobwhite quail and mallard duck).

Following a single application at .28 lb ai/A (1 1/2 pints), maximum expected residues would range from 67.2 ppm on short rangegrass to 16.2 ppm on forage (insects). These values are significantly below mallard duck and bobwhite quail LC₅₀ values.

With a half-life of < 4 days in soil and water (< 1 day in direct sunlight) an additional application at .28 lb ai/A to control newly emerged grasses would not pose any greater risk than the initial application.

Aquatic

Sethoxydin is practically non-toxic to freshwater fish, LC₅₀ > 100 ppm, and slightly toxic to aquatic invertebrates, LC₅₀ 75.7 ppm. Assuming a direct application to water at .28 lb ai, the concentration in 6 acre feet of water would be 17.08 ppb. This level is substantially below that necessary to adversely effect aquatic organisms.

4
JWC

101.3 Endangered Species Consideration:

No significant impact is expected to any endangered or threatened animal from the use of Poast on cucurbits and brassica leafy vegetables because of the low application rate, minimal toxicity, and relatively short persistence. However, the chemical is phytotoxic to annual and perennial grasses and the following three grasses are currently listed as endangered:

Texas wild rice Zizania texana
Solano grass Orcuttia mucronata
Eureka dune grass Swallenia alexandrae

Of these three grasses, only Solano grass has been identified as growing in an area where exposure could occur. Since the Office of Endangered Species (OES) has provided Ecological Effects Branch (EEB) with a jeopardy opinion for Solano grass in the corn cluster, EEB is assuming that jeopardy will also occur from the use of Poast. Consequently, in order to avoid possible injury, Poast should not be used in the area adjacent to the Olcott Pool in Solano County, California.

OES will be notified in writting of EEB's assumption of jeopardy.

101.4 Adequacy of Toxicity Data

No new data were submitted with this amendment. All data in EEB files have been previously reviewed.

101.5 Adequacy of Labeling

The endangered species section on the submitted amended label for cucurbits and brassica leafy vegetables should be changed. This statement will not be required until April 1988.

"The use of any pesticide in a manner that may kill or otherwise harm an endangered or threatened species or adversely modify their habitat is a violation of federal laws. The use of this product is controlled to prevent death or harm to endangered or threatened species that occur in the following counties or elsewhere in their range.

Before using this pesticide in the following county you must obtain the appropriate EPA Endangered Species Bulletin.
The use of this pesticide is prohibited in Solano County, California unless specified otherwise in the Bulletin.

10
201

The EPA Bulletin is available from either your local pesticide distributor, your County Agricultural Extension Agent, the Endangered Species Specialist in your State Wildlife Agency Headquarters or the appropriate Regional Office of either the U.S. Fish and Wildlife Service or the U.S. Environmental Protection Agency. THIS BULLETIN MUST BE REVIEWED PRIOR TO PESTICIDE USE."

102 Classification

Unclassified, conditional registration. (NPIRS 12-17-86)

103 Conclusions

The Ecological Effects Branch has completed an incremental risk assessment [3(c)(7) finding] for the proposed registration of Poast on cucurbits and brassica leafy vegetables. This use will enlarge the potential acreage that could be exposed to the chemical, however based on the data available, does not increase the risks to non-target organisms except to the endangered plant Solano grass Orcuttia mucronata. The labelling proposed by the registrant is inadequate. The labelling in Section 101.5 of this review is required and is adequate to avoid possible jeopardy to this species.

Charles Lewis *Charles Lewis* 2-4-87
Agronomist
Ecological Effects Branch
Hazard Evaluation Division (TS-769-C)

Douglas J. Urban *Douglas J. Urban* 2/4/87
Head - Section III
Ecological Effects Branch
Hazard Evaluation Division (TS-769-C)

M. Slimak 2/4/87
Michael W. Slimak
Chief
Ecological Effects Branch
Hazard Evaluation Division (TS-769-C)

11
202