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SHAUGHNESSY NO.

REVIEW NO.

EEB REVIEW

DATE: IN 04/25/88 OUT

FILE OR REG. NO. 7969-58

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION 03/04/88

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

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) Sethoxydim (Poast)

COMPANY NAME BASF Corporation

SUBMISSION PURPOSE Proposed new uses - apples, pears crabapples, quince

SHAUGHNESSY NO.	CHEMICAL & FORMULATION	% A.I.

EEB REVIEW

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Add use on apple, crabapple, pear, and quince 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

No fish and wildlife statements appear on the supplemental label.

101.0 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, nonfood crops, onions (SLN CA, NV), cucurbits (SLN CA), ladino clover (SLN CA), alfalfa (SLN CA, NV), garlic (SLN NV), fescue (SLN OR), daffodil (SLN CA), and carrots (SLN WA): NPIRS May 26, 1988.

This amendment will allow use of Poast on apple, crabapple, pear, and quince for control of grasses. This will add approximately 600,000 acres of cropland that could be exposed.

For broad-spectrum control of annual grasses 2 1/2 pints of Poast per acre (0.47 lb ai) are applied. Additional applications may be made if new growth occurs (maximum 7 1/2 pints per season; 1.4 lb ai).

Likelihood of Adverse Effects to Nontarget Organisms

Terrestrial

The toxicity data available suggest that sethoxydim is practically nontoxic to mammals based on an acute oral LD_{50} of > 2000 mg/kg for rats and > 5000 mg/kg for mice. With an LD_{50} of > 2000 mg/kg for the mallard duck, sethoxydim may be characterized as practically nontoxic on an acute oral basis. The chemical also has a low order of toxicity on a dietary basis for avian species (LC_{50} > 5000 ppm for bobwhite quail and mallard duck).

Following a single application at 0.47 lb ai/A (2 1/2 pints), maximum expected residues would range from 112.8 ppm on short rangegrass to 27.3 ppm on forage/insects. These values are significantly below mallard duck and bobwhite quail LC_{50} values.

With a half-life of < 4 days in soil and water (< 1 day in direct sunlight) any additional applications latter in the season to control newly emerged grasses should not pose any greater risk than the initial application.

Aquatic

Sethoxydim is practically nontoxic to freshwater fish, LC_{50} > 100 ppm, and slightly toxic to aquatic invertebrates, LC_{50} 75.7 ppm. Assuming a direct application to water at 0.47 lb ai, the concentration in 6 acre feet of water would be 28.7 ppb. This level is substantially below that necessary to adversely affect aquatic organisms.

Plants

Since the vapor pressure of Poast is 1.6×10^{-7} mm Hg @ 25 °C, volatility should not be a hazard to nontarget plants. EEB's current level of concern is a vapor pressure of $>10^{-5}$ mm Hg @ 25 °C.

The solubility of Poast is 0.0048 g/100 g water @ 25 °C (48 ppm), therefore movement from the site of application as a result of runoff is considered to be below the level requiring aquatic plant testing (a solubility of > 0.04 g/100 g @ 25 °C, or 400 ppm).

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101.3 Endangered Species Consideration

No significant impact is expected to any endangered or threatened animal from the use of Poast on apples, crabapples, pears, and quince because of the low application rate, minimal toxicity, and relatively short persistence.

The chemical would be expected to be phytotoxic to endangered grass species; however, no endangered plants have been identified with these uses.

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 following statement should be added to the label:

> Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes).
>
> Do not contaminate water when disposing of equipment washwaters or rinsate.

102.0 Classification

Unclassified, conditional registration (NPIRS May 26, 1988).

103.0 Conclusions

EEB has completed an incremental risk assessment [3(c)(7) finding] for the proposed registration of Poast on apples, crabapples, pears, and quince. This use will enlarge the potential acreage that could be exposed to the chemical; however, based on the data available, it does not increase the risks to nontarget organisms.

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A PETITION FOR POAST[R] HERBICIDE
FULL TOLERANCE AND REGISTRATION
FOR POMEFRUITS

SECTION B

AMOUNT, FREQUENCY AND TIME OF APPLICATION

The use pattern for Poast Herbicide involves postemergence application to Pomefruits and to grassy weeds at any early stage of their growth. Many annual grasses are controlled with an application of 1 1/2 to 2 1/2 pints per acre depending on weed size. All applications must include 2 pints of oil concentrate and may be made with ground equipment only.

For the suppression of perennial grasses, apply 1 1/2 to 2 1/2 pints per acre, depending on the weed species. Applications may be repeated as needed, up to a maximum of 7 1/2 pints in Pomefruits. As for annual grasses, all applications must include 2 pints of oil concentrate and may be made with ground equipment only.

For Pomefruits a 14 day preharvest interval is imposed.

Copies of proposed supplemental labels for Pomefruits follow.

CONVERSION TABLE

Pints	Lbs. ai/A
1/2	0.1
3/4	0.15
1	0.2
1 1/4	0.25
1 1/2	0.3
2	0.4
2 1/2	0.5
3	0.6

Sethoxydim ecological effects review

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The material not included contains the following type of information:

___ Identity of product inert ingredients

___ Identity of product impurities

___ Description of the product manufacturing process

___ Description of product quality control procedures

___ Identity of the source of product ingredients

___ Sales or other commercial/financial information

✓ A draft product label

___ The product confidential statement of formula

___ Information about a pending registration action

___ FIFRA registration data

___ The document is a duplicate of page(s) _____

___ The document is not responsive to the request

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.