

121001
SHAUGHNESSY NO.

REVIEW NO.

EEB REVIEW

DATE: IN 05/02/86 OUT JUL 9 1986

FILE OR REG. NO. 7969-58

PETITION OR EXP. PERMIT NO. _____

DATE OF SUBMISSION 02/28/86

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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 Chemical Division

SUBMISSION PURPOSE Proposed registration of strawberries and raspberries

SHAUGHNESSEY NO.	CHEMICAL & FORMULATION	% A.I.
<u>121001</u>	<u>2-[1-(ethoxyimino)butyl]-5-[2-</u>	<u>18</u>
_____	<u>(ethylthio)propyl]-3-hydroxy-2-</u>	_____
_____	<u>cyclohexen-1-one</u>	_____
_____	_____	_____

Sethoxydim

121001

100.0 Submission Purpose and Label Information100.1 Submission Purpose and Pesticide Use

Proposed addition of use on strawberries and raspberries to the label.

100.2 Formulation Information

Active Ingredient:

2-[1-(ethoxyimino)butyl]-5-[2-(ethylthio)
propyl]3-hydroxy-2-cyclohexen-1-one*

18%

Inert Ingredients: 82%

* Equivalent to 1.53 pounds per gallon.

100.3 Application Methods, Directions, Rates

Poast may be applied by air or ground equipment at up to 2.5 pints product (.48 lb ai) per acre. Not more than 7.5 pints (1.4 lb ai) per acre may be applied in one season. See attached label for complete information.

101.0 Hazard Assessment101.1 Discussion

Poast is currently registered for use on soybeans, cotton, sugar beets, nonbearing food crops, and ornamentals.

The proposed amendment would add strawberries and raspberries to the label. Approximately 40,000 acres of strawberries and 10,000 acres of raspberries are grown annually in the United States.

101.2 Likelihood of Adverse Effects to Nontarget OrganismsTerrestrial

Sethoxydim is practically nontoxic on both an acute and subacute basis to avian species (mallard LD₅₀ > 2000 mg/kg, LC₅₀ > 5000 ppm; bobwhite quail LC₅₀ > 5000 ppm).

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Data from the Toxicology Branch report an acute oral LD₅₀ for the rat of 2676 to 3125 mg/kg, mouse LD₅₀ 5600 to 6500 mg/kg, and rabbit LD₅₀ 4600 mg/kg.

Assuming an application of 2.5 pt/A (.45 lb ai/A) the following maximum expected residues would result: short range grass 115.2 ppm, long grass 52.8 ppm, and leaves/leafy crops 60.0 ppm. These values are significantly below the LC₅₀ values for the mallard duck and bobwhite quail.

Based on data available, the addition of strawberries and raspberries to the label does not pose a significant acute threat to avian or mammalian species.

Aquatic

Data indicate that sethoxydim is practically nontoxic to bluegill sunfish and rainbow trout (96-hour LC₅₀ 265 ppm and 170 ppm). The chemical is slightly toxic to Daphnia magna (48-hour LC₅₀ 78.1 ppm).

Sethoxydim photodegrades rapidly in soil and water ($t_{1/2} = < 1$ day); however, the chemical is fairly stable to hydrolysis ($t_{1/2} = 40$ days). Available data indicate no potential for bioaccumulation (levels in catfish are not expected to exceed 1X according to EAB).

Using the maximum application rate of 2.5 pt/A (.48 lb ai), a pond 6 feet deep receiving a direct application would have residues of .029 ppm. These levels are significantly below the LC₅₀ values for aquatic organisms.

Based on available data, the proposed addition of strawberries and raspberries to the label does not pose a significant increase in hazard to nontarget aquatic organisms.

101.3 Endangered Species Considerations

The proposed amendment should not pose a significant increase in adverse effects to endangered avian and aquatic species because of the low order of toxicity.

Since sethoxydim controls essentially all annual and perennial grasses, endangered grasses growing in the vicinity of strawberry and raspberry plantings receiving applications could be adversely affected. However, based on information available to EEB, no currently

identified endangered grasses are growing in close proximity to strawberry and raspberry plantings.

101.4 Adequacy of Toxicity Data

No new data were submitted with this amendment. All data in EEB files have been previously reviewed. Studies on the technical for avian single dose LD₅₀, avian dietary LC₅₀ (two species), aquatic invertebrate acute toxicity, and freshwater finfish (cold and warmwater species) are acceptable and fulfill the Guideline requirement.

101.5 Adequacy of Labeling

No label changes are required at this time.

102.0 Classification: Unclassified.

103.0 Conclusions

EEB Has completed a review [3(c)(7)] for the proposed amendment which adds use on strawberries and raspberries to the label. This use will enlarge the total acreage exposed to the chemical, however based on data available, does not significantly increase the hazard to nontarget organisms.

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