

122800, 121001
SHAUGHNESSEY NO.

15
REVIEW NO.

EEB REVIEW

DATE: IN 6-17-86 OUT 7/10/86

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PETITION OR EXP. NO. _____

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. J. Housenger (41)

PRODUCT NAME(S) Fusilade 2000/Poast

COMPANY NAME State of North Carolina

SUBMISSION PURPOSE Proposed Section 18 for use on peanuts

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
<u>122809</u>	<u>Fluazifop-P-butyl</u>	<u>13.0%</u>
	<u>OR</u>	
<u>121001</u>	<u>Sethoxydin (Poast)</u>	<u>18.0%</u>

Fluazifop-P-butyl
butyl (R)-2-[4-[[5-(trifluaromethyl)-2-pyridinyl]oxy]phenoxy]
propanoate

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

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Proposed Section 18 Specific Exemption to use Fusilade 2000 or Poast Herbicides to control escaped annual grasses in peanuts in North Carolina.

100.2 Formulation and Information

Fusilade 2000

Fluazifop-P-butyl	13.0%
Inert Ingredients	87.0%

Poast

2-[1-(ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one	18.0%
Inert Ingredients	82.0%

100.3 Application Methods, Directions, Rates

(A) Poast Herbicide

1. Sites to be treated:

The sites to be treated include any peanut field in the 14 counties (see Table 7) which as an economic infestation of broadleaf signalgrass, fall panicum, Texas panicum, large crabgrass, and goosegrass.

2. Method of application:

Poast herbicide shall be applied post-emergence overtop of peanuts and annual grass when the annual grasses are in the growth stage specified for treatment on the proposed label (attached).

3. Rate of application:

The rate of application shall be 1 pint per acre (0.1875 pounds active ingredient per acre).

A second application of the same rate shall be applied, if needed to control grasses emerging after the first application. No more than 2.5 pints per acre (0.46875 pound of active ingredient) shall be applied during the 1986 growing season.

4. Total acreage to be treated:

The total acreage to be treated shall not exceed 110,425 acres.

5. Total amount to be used.

The total amount to be used on peanuts in North Carolina in 1986 shall not exceed 34,500 gallons of product (51,750 pounds of active ingredient).

6. Qualifications of applicators:

Poast is not a restricted use pesticide in other currently labelled crops and all available data suggest the use of this herbicide in peanuts according to all label directions and precautions will not pose an unacceptable risk to the applicator or to the environment. No special applicator qualifications are necessary.

(B) Fusilade 2000 Herbicide

1. Sites to be treated:

The sites to be treated include any peanut field in the 14 counties (see Table 7 of the request) which as an economic infestation of broadleaf signalgrass, fall panicum, Texas panicum, large crabgrass, and goosegrass.

2. Method of application:

Fusilade 2000 herbicide shall be applied post-emergence overtop of peanuts and annual grass when the annual grasses are in the growth stage specified for treatment on the proposed label (attached).

3. Rate of application:

The rate of application shall be 1 pint per acre (0.1875 pounds active ingredient per acre) except where goosegrass is the only grass present. If only goosegrass is present, the

rate of application shall be 1.0 pint per acre (0.125 pounds of active ingredient per acre). A second application of the same rate shall be applied, if needed to control grasses emerging after the first application. No more than two applications or 4 pints per acre (0.5 pounds of active ingredient) shall be applied during the 1986 growing season.

4. Total acreage to be treated:

The total acreage to be treated shall not exceed 110,425 acres.

5. Total amount to be used.

The total amount to be used on peanuts in North Carolina in 1986 shall not exceed 55,200 gallons of product (55,200 pounds of active ingredient).

6. Qualifications of applicators:

Fusilade 2000 is not a restricted use pesticide in other currently labelled crops and all available data suggest the use of this herbicide in peanuts according to all label directions and precautions will not pose an unacceptable risk to the applicator or to the environment. No special applicator qualifications are necessary.

100.4 Target Organisms

The annual grasses of major concern are fall panicum (Panicum dichotomiflorum Michx.), broadleaf signalgrass [Brachiaria platyphylla (Griseb.) Nash], Texas panicum (Panicum texanum Buckl.), large crabgrass [Digitaria sanguinalis (L.) Scop.], and goosegrass [Eleusine indica (L.) Gaertn.].

100.5 Precautionary Labeling

The precautionary labeling for both herbicide products bear the following environmental hazards statements.

- (A) Fusilade 2000 - "This product is toxic to fish. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of waste. Do not apply when weather conditions favor drift from target area."
- (B) POAST - "Do not apply directly to lakes, ponds, or streams. Do not contaminate water by cleaning of equipment or disposal of wastes."

101.0 Hazard Assessment

101.1 Discussion

POAST Herbicide or Fusilade 2000 Herbicide will be applied to the same 14 counties, listed in the attachment, subjected to the infestation. The single application rates are identical, 1 pint per acre (0.1875 lbs. a.i. per acre). No more than two applications or 2.5 pints per acre (0.46875 lbs. a.i.) of POAST Herbicide will be applied during the season. No more than two applications or 4 pints per acre (0.5 lbs. a.i.) of Fusilade 2000 Herbicide will be applied during the season.

101.2 Likelihood of Adverse Effects on Nontarget Organisms

(A) Fusilade 2000 Herbicide

The EEB Chemical Profile dated 4/19/85, summarizes the available data on fluazifop-butyl. It is of low toxicity to birds and mammals and moderate to high in toxicity to aquatic organisms. This suggests a potential for hazard to aquatic organisms. This potential problem is examined by the EEB Chemical Profile in an aquatic EEC calculation of a runoff scenario in which an application rate of 0.5 lbs. a.i./acre is used. It indicated that there is no hazard to aquatic organisms from runoff. The proposed application at the rate of 0.1875 lb ai/A would make the aquatic EEC correspondingly lower, 0.138 to 0.023 ppm in a 0.5 to 3 ft. pond system scenario, respectively. A 5% runoff would indicate levels of 0.007 to 0.001 ppm in the same pond system. As a result, theoretical aquatic triggers are not within reach with these levels. Further, fluazifop-butyl breaks down rapidly under field conditions. A major degradate is low in toxicity to aquatic organisms. As a result, the low application rate and the environmental fate behavior minimizes the potential hazard to non-target organisms.

(B) Poast

Sethoxydin is considered practically non-toxic to mammals based on acute oral LD₅₀'s of over 2,000 mg/kg for rats and over 5,000 mg/kg for mice. Available data also indicate the chemical to be practically non-toxic to birds on an acute oral basis (LD₅₀ > 2,000 mg/kg for mallard duck). The dietary data also establish sethoxydin's low toxicity for both upland birds (LC₅₀ > 5,000 ppm for bobwhite quail) and waterfowl (LC₅₀ > 5,000 ppm for mallards). One application at the rate of 0.1875 lb ai/A, would result in approximate residues of 48 ppm in short rangegrass, 21.5 ppm in long grass, 24.5 ppm in leaves, and 12.5 ppm in forage. These residues would not

exceed lethal levels for nontarget fauna. The nature of the herbicidal properties of this product would pose potential exposure problems for non-target plants, including endangered plants.

Based on available laboratory data, sethoxydin is practically non-toxic to freshwater fish species (both rainbow trout and bluegill trout), and slightly toxic to Daphnia magna. The proposed application rate of 0.1875 lb ai/A will not pose any adverse problems to aquatic life. A direct application to a pond system 0.5 to 3 ft. would indicate a range of 0.138 to 0.023 ppm, respectively. Sethoxydin's environmental half-life is less than 4 days in soil and water (less than 1 day in direct sunlight). Available data indicate no potential for bioaccumulation. Risk to fish and wildlife from the proposed use is not expected to be significant because of the product's low toxicity, low application rate, and environmental fate behavior.

101.3 Endangered Species Consideration

No adverse effects on endangered/threatened species are anticipated from the proposed use. Sethoxydin is extremely toxic to members of the grass family but none of the listed species of grasses are found in the counties specified under the Section 18 request.

101.4 Adequacy of Producty Labeling

The product labels bears sufficient environmental hazards language.

101.5 Adequacy of Toxicity Data

No terrestrial effects chronic data is available on the degradate, fluazifop.

103.0 Conclusion

EEB has completed the review of the proposed emergency exemption for the use of Fusilade and POAST on peanuts in North Carolina. Based upon information derived from previous branch reviews, EEB concludes that use under the Section 18 is not expected to result in adverse effects on non-target organisms.

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TABLE 7. PEANUT ACREAGE IN NORTH CAROLINA EXPECTED TO HAVE AN ECONOMIC INFESTATION OF ANNUAL GRASSES DUE TO DROUGHT CONDITIONS.

County	Acres Planted	Acres With Expected Economic Infestation of Annual Grasses
Beaufort	600	0
Bertie	20,000	8,000
Bladen	3,600	400
Chowan	6,300	5,000
Columbus	1,000	260
Edgecombe	13,000	10,400
Gates	8,000	7,500
Halifax	25,000	22,500
Hertford	14,000	9,800
Martin	14,000	12,800
Nash	2,900	220
Northampton	28,000	27,000
Pender	900	225
Perquimans	2,800	2,520
Pitt	4,800	3,800
Total		110,425