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EEB REVIEW

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. D. Stubbs (41)

PRODUCT NAME(S) Sethoxydin

COMPANY NAME State of California

SUBMISSION PURPOSE Proposed Section 18 for Use on Dry

Beans to Control Johnson Grass

SHAUGHNESSY NO. CHEMICAL & FORMULATION % AI

_____	_____	_____
_____	_____	_____
_____	_____	_____

EEB REVIEW

Pesticide Name: Sethoxydim (Poast)

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The California Department of Food and Agriculture request a specific exemption to use Poast on dry beans to control Johnson grass.

100.2 Formulation Information

ACTIVE INGREDIENT:

Sethoxydim 18.0%

INERT INGREDIENTS: 82.0%

(contains 1.5 lb ai/gal)

100.3 Application Methods, Directions, Rates

See attached label.

100.4 Target Organisms

Rhizome Johnson grass postemergent in dry beans.

100.5 Precautionary Labeling

The section 18 label states: "All applicable directions, restrictions, and precautions on the EPA registered label and this label must be followed."

The registration label (revised July 31, 1986) states:

ENVIRONMENTAL HAZARDS

Do not apply directly to water.

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

Endangered Species Concerns

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.

101.0 Hazard Assessment

101.1 Discussion

The proposed emergency exemption would allow the use of Poast herbicide in some 32,000 acres of dry beans in the Sacramento-San Joaquin Valleys of California. According to Mr. Phil Osterli, Stanislaus County Farm Advisor (Personal Communication, July 29, 1987), the Johnson grass infestation is not localized or limited to specific areas within the central valleys; rather, the emergency exists throughout and the herbicide may potentially be used anywhere in the Sacramento-San Joaquin Valleys (a total of 19 counties).

Poast is to be applied at 1.5 to 2.5 pints product (0.28 to 0.47 lb ai) per acre. A total of 4 pints of product may be applied per season; the label directs that the initial application should be at the higher rate. Application may be made by ground or air.

101.2 Likelihood of Adverse Effects to Nontarget Organisms

Terrestrial

The available toxicity data show that sethoxydim is practically nontoxic to mammals based on acute oral LD₅₀ values of > 2000 mg/kg for rats and > 5000 mg/kg for mice. Sethoxydim may be characterized as practically nontoxic to birds based on an acute LD₅₀ of > 2000 mg/kg for the mallard and dietary LC₅₀ values of > 5000 ppm for the bobwhite quail and mallard duck.

Due to this lack of toxicity to avian and mammalian species, the use of sethoxydim should not result in any adverse effects to these species. With a half-life of < 4 days in soil and water (< 1 day in direct sunlight), repeat applications would not result in any potential for chronic effects.

Aquatic

Sethoxydim is practically nontoxic to freshwater fish, with LC₅₀ values of greater than 100 ppm. It is, however, slightly toxic to aquatic invertebrates, with an LC₅₀ of 75.5 ppm to Daphnia magna. Assuming a direct application to water at the highest application rate of 0.47 lb ai, the resulting concentration in 6 acre-feet of water would be 29 ppb. This level is well below any level that could result in adverse effects to aquatic organisms. Furthermore, with a half-life of < 4 days in water, repeat applications would not result in any potential for chronic effects to aquatic organisms.

101.3 Endangered Species Considerations

No impact is expected to any endangered or threatened species of animal from the proposed emergency use of Poast herbicide because of the minimal toxicity, low application rate, and lack of persistence. However, sethoxydim is phytotoxic to grasses. The following two grass species occurring in the State of California are currently listed as endangered:

Solano grass (Orcuttia mucronata)
Eureka Dune grass (Swallenia alexandrae)

The Eureka Dune grass is restricted to Inyo County and is therefore outside the area in which exposure could occur. The Solano grass, however, occurs in the Sacramento Valley and is in the area of proposed use. A Biological Opinion received October 12, 1983 from the Office of Endangered Species (OES) involved pesticide use on major crops (the crop cluster). Another Opinion received May 18, 1983 concerned pesticide use on corn. Both Opinions cited the Solano grass as being a species that could be impacted by the use of pesticides, since it occurs in an area of intensive agriculture.

In order to avoid jeopardy to the Solano grass, Poast herbicide should not be used in the vicinity of Olcott Pool, Solano County. Reasonable and prudent alternatives recommended by OES in the two Biological Opinions cited above are prohibition of the pesticide within the following sections: T5N R1E S.1 through 3,

10 through 15, and 25 through 27. These prohibitions should be followed for this proposed use.

101.4 Adequacy of Toxicity Data

The data are adequate to perform a hazard assessment.

101.5 Adequacy of Labeling

The Environmental Hazards labeling should read as follows:

Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes).

Endangered species labeling should read as follows:

In order to avoid jeopardy to the Solano grass, a Federally-listed plant species, the use of Poast herbicide is prohibited within the following sections (Solano County):

T5N R1E S.1 through 3,
10 through 15, and 25
through 27.

102.0 Conclusions

EEB has reviewed the proposed emergency exemption for the use of Poast herbicide to control Johnson grass in dry beans. Based upon available toxicity data and use information, EEB concludes that the proposed use will result in no adverse effects to nontarget animal species. The proposed use, however, may result in jeopardy to the Solano grass, an endangered plant species. In order to mitigate hazard to this species, the use prohibitions outlined in Section 101.5 are to be followed.

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DEPARTMENT OF FOOD AND AGRICULTURE

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July 17, 1987

Proposed

CALIFORNIA AUTHORIZATION FOR PESTICIDE USE UNDER EPA SECTION 18
SPECIFIC EXEMPTION FOR DISTRIBUTION AND USE ONLY WITHIN CALIFORNIA

Pursuant to authority granted under Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act and 40 CFR, Part 166, approval is granted to use the pesticide shown below to control specified emergency.

Product: Poast Reg. No.: 7968-58-AA
Location: Sacramento-San Joaquin Valleys including the Delta
Crop/Site/Commodity: Dry beans
Target Pest/Problem: Johnson grass

Dosage: Apply 1.5 to 2.5 pints of product per acre (4.5-7.5 ozs. active ingredient). Make initial application at higher rate.

Dilution Rate: Apply with 10-20 gallons of water per acre by ground rig.
Apply with 5-10 gallons of water per acre by aircraft.
Include 2 pints oil concentrate (only products registered in California and exempted from tolerance by CFR 40, Section 180.1001) per acre as directed by the federal label.

Method of Application: Ground rig or aircraft

Frequency/Timing of Application: Make initial treatment when Johnson grass is at least 4-10 inches tall. Maximum of 4 pints of product may be applied per growing season.

Worker Safety Reentry Interval: Do not enter treated area until spray residues have dried, not to exceed 24 hours.

Preharvest Interval: 30 days

Effective Date: August 17, 1987

Expiration Date: September 30, 1987

All applicable directions, restrictions, and precautions on the EPA registered label and this label must be followed.

This labeling must be in the possession of the user at the time of pesticide application.

The Department shall be immediately informed of any adverse effects resulting from the use of this exemption.

Please note that the EPA expects concerned growers or grower groups to work toward the registration of use patterns that may be needed on a continuing basis. It will, therefore, be necessary to require applicants wishing to renew emergency exemptions to provide a progress report on residue tolerance and registration along with requests for reissuance of an emergency exemption renewals. Without substantial progress in pursuing a tolerance and registration for the use in question, it will be difficult to obtain an emergency exemption for a second season. The pesticide manufacturer or Western Region IR-4 may be contacted regarding the initiation of a pesticide petition for residue tolerance.

A final report must be submitted by the county agricultural commissioner to Pesticide Registration, California Department of Food and Agriculture, within 45 days of the expiration date of this exemption. This report must include the following information:

- a. Amount of product used.
- b. Units (i.e., acres, trees, cattle) treated.
- c. Number of applications.
- d. Estimate of effectiveness.
- e. Any adverse effects noted.

Prior to use under this exemption, a permit must be obtained from the county agricultural commissioner. The permit shall state the maximum amount of acres to be treated, maximum amount of product that may be applied, and dealer from which the product may be purchased. Before sale or delivery of the product, the dealer must obtain a copy of the purchaser's permit or obtain a signed statement that he/she holds a valid permit to purchase, possess, and use the amount of the product purchased. The dealer shall maintain a record of each sale which shall be made available to representatives of the Department of Food and Agriculture or county agricultural commissioner upon request. Such records shall include the date of sale or delivery, permit number, identity and amount of product purchased, and the name of the purchaser. All applications of this material shall be made by or under the supervision of a certified applicator certified for this category of pest control. If this material is a liquid Category I pesticide, all applications will be made in accordance with California closed mixing system regulations. Applicators shall submit a pesticide use report to the county agricultural commissioner within seven days of each treatment. The county agricultural commissioner in cooperation with the Department of Food and Agriculture, will monitor the use of the product under this exemption and will prepare a written report describing any unusual or adverse effects attributable to this use.

This exemption does not constitute a recommendation of the Department of Food and Agriculture and will not prevent quarantine action if illegal residues are found in or on any crop. Neither the Department nor the county agricultural commissioner, manufacturer or formulator makes any warranty of merchantability, fitness of purpose, or otherwise, expressed or implied, concerning the use of a pesticide in accordance with these provisions. The user and/or grower acknowledges the preceding disclaimer and accepts liability for any possible damage or nonperformance resulting from this use.

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