188714
RECORD NO.

109301
SHAUGHNESSEY NO. REVIEW NO.

EEB REVIEW

DATE: IN 02-12-87 OUT 25 FEB 1987

FILE OR REG. NO 87-CO-01

PETITION OR EXP. NO.

DATE OF SUBMISSION 01-14-87

DATE RECEIVED BY HED 02-09-87

RD REQUESTED COMPLETION DATE 02-24-87

EEB ESTIMATED COMPLETION DATE 02-24-87

RD ACTION CODE/TYPE OF REVIEW 510

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

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. D. Stubbs (41)

PRODUCT NAME(S) Fenvalerate

COMPANY NAME Colorado Dept. of Agriculture

SUBMISSION PURPOSE Proposed Section 18 for use in Colorado on Small Grains

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
109301	Fenvalerate	30%

EEB REVIEW

Fenvalerate

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The Colorado Department of Agriculture is requesting an emergency exemption (Section 18) for the use of fenvalerate to control pale western cutworm and army cutworm in small grains. No data were submitted with this request.

100.2 Formulation Information

Pydrin 2.4 EC, EPA Reg. Nos. 352-485 and 201-401.

Cyano(3-phenoxyphenyl)methyl-4-chloro-alpha-(1-methylethyl)benzeneacetate	30%
Inert ingredients	70%

This product contains 2.4 lb of Pydrin per gallon.

100.3 Application Methods, Directions, Rates

Description of program:

1) Quantity of pesticide to be applied:

   a) rate of application is 0.05 to 0.15 lb ai per acre with only one application
   b) applications will be made using a minimum of 2 gallons diluent per acre
   c) a maximum of 1.75 million acres may be treated
   d) if each acre were treated at the maximum rate, the total amount of fenvalerate applied would be 262,500 lbs.

2) Area of application: application is requested to small grains throughout the state.

3) Method of application: application by aerial equipment only is requested.

4) Duration of application: application will begin when a field is infested with 2 or more pale western cutworms per linear foot of drill row or 6 or more army cutworms per linear foot of drill row. Application period is from March 15 through June 15, 1987.

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100.4 Target Organisms

Pale western cutworm (Agrotis orthogonia)
Army cutworm (Euxoa auxiliaris)

100.5 Precautionary Labeling

Labels were not attached.

101 Hazard Assessment

101.1 Discussion

The State of Colorado is requesting an emergency exemption for the use of fenvalerate on small grains. Fenvalerate is currently registered for use on a number of crops such as cotton, corn, peanuts, and soybeans. The registered rates of application range from 0.05 to 0.15 lb ai per acre. Colorado is requesting a single application at the same range of rates. Application under this exemption may be made to small grains throughout the state. A maximum of 1.75 million acres may be treated.

101.2 Likelihood of Adverse Effects on Nontarget Organisms

Although fenvalerate is relatively nontoxic to birds, it is highly toxic to aquatic organisms (LC_{50}= 1.6 ppb for Daphnia, 6.2 ppb for rainbow trout, 0.42 ppb for bluegill sunfish.) The MATC for fry survival and egg production in fathead minnows was between 0.09 and 0.21 ppb.

Fenvalerate is already registered for use on a number of major crops. However, according to the 1982 Census of Agriculture, the combined acreage of these crops in Colorado does not begin to approach the potential 1.75 million acres of small grains which could be subject to fenvalerate application under the proposed exemption. Thus, use on small grains represents a significant increase in exposure of aquatic organisms and their habitats.

Based on the factors of high toxicity to aquatic organisms and the potential for application to extensive additional acreage, EEB believes that the proposed use may represent significant increased hazard to nontarget aquatic organisms in Colorado.*

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* It should be noted that this assessment is based on an incomplete data base, as the following data requirements are still outstanding: freshwater invertebrate life cycle test (72-4); estuarine invertebrate life cycle test (72-4); and simulated and/or actual aquatic field study.

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101.3 Endangered Species Considerations

Through its Cluster Approach, EEB has determined that application to small grains in Colorado will not result in exposure of endangered species of aquatic organisms or their habitats.

101.4 Adequacy of Toxicity Data

The registrant should be reminded that data from three tests, as outlined in the October 25, 1985, Data Call-In Notice for Fenvalerate, are still required (see footnote to Sec. 101.2, above).

103 Conclusions

The Ecological Effects Branch has completed review of the proposed emergency exemption for the use of fenvalerate on small grains in Colorado. This use represents a significant increase in exposure of nontarget aquatic organisms to fenvalerate. Thus, EEB concludes that use under the proposed Section 18 may result in adverse effects on aquatic organisms and their habitats in Colorado.

As noted above, a number of aquatic organism data requirements are still outstanding for this chemical. These requirements are listed in the footnote to Sec. 101.2.

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