US EPA ARCHIVE DOCUMENT

Shaughnessy No.:113201

Date Out of EAB: MAY 20 1985

To: Don Stubbs
Product Manager 41
Registration Division (TS-767)

From: Samuel Creeger, Chief
Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached, please find the EAB review of...

Reg./File # : 85-OR-03

Chemical Name: Vinclozolin

Type Product : Fungicide

Product Name : Ronilan 50W

Company Name : Oregon Department of Agriculture

Purpose : Section 18 emergency exemption: Use on Snap Beans

Action Code(s): 510

EAB #(s) : 5431

Date Received: 3/19/85

TAIS Code: 51

Date Completed: 5/20/85

Total Reviewing Time: 0.3 days

Deferrals to:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

1. CHEMICAL: Vinclozolin, Ronilan, 3-(3,5-dichlorophenyl)-5-ethenyl-methyl-2,4-oxazolidinedione

2. TEST MATERIAL: Ronilan 50W

3. STUDY/ACTION TYPE: Section 18 emergency exemption. Use on snap beans in the State of Oregon.

4. STUDY IDENTIFICATION: No new data were submitted.

5. REVIEWED BY:

Typed Name : Emil Regelman
Title : Chemist
Organization: EAB/HED/OPP

Signature: Emil Regelman
Date: 5/20/85

6. APPROVED BY:

Typed Name : Samuel Creeger
Title : Chief
Organization: Review Section #1
EAB/HED/OPP

Signature: Samuel M Creeger
Date: MAY 20 1985

7. CONCLUSIONS:

EF data are adequate to support the proposed Sec.18 use of vinclozolin (Ronilan 50W) on snap beans in Oregon.

8. RECOMMENDATIONS:

~~[illegible]~~. See Conclusions, above.

9. BACKGROUND:

A. Introduction

The State of Oregon has requested an emergency exemption to use the fungicide vinclozolin (Ronilan 50W) to control Gray Mold on snap beans.

Ronilan 50W is currently registered for use on a variety of row crops, including lettuce, raspberries, strawberries, and onions.

B. Directions for Use

About 40,000 pounds ai will be applied (2x) to about 20000 acres of beans by ground equipment between the period 6/1/85 and 9/15/85.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES:

A. Study Identification

None.

B. Materials and Methods (Protocols)

C. Reported Results

D. Study Author's Conclusions/Quality Assurance Measures

E. Reviewer's Discussion and Interpretation of Study Results

11. COMPLETION OF ONE-LINER:

No additional data were submitted.

12. CBI APPENDIX:

There is no CBI appendix.

From: OR/DOA/PD (EPX4675) Posted: Fri 15-Mar-85 19:33 EST Sys 63 (209)
Subject: RONILAN 50W FUNGICIDE
Acknowledgment Sent

March 13, 1985

Mr. Donald R. Stubbs, Section Head
Emergency Response Group (TS-767C)
Environmental Protection Agency
1921 Jefferson-Davis Highway
Arlington, VA 22202

Dear Mr. Stubbs:

The Oregon Department of Agriculture requests approval of this appli=-cation for a specific exemption under Section 18, FIFRA, as amended, in Part 166, Title 40, CFR 166, for use of Ronilan 50W (vinclozolin) fungicide for the control of Botrytis gray mold of snap beans.

The following is a brief summary of the items of information required in 40 CFR 166.3 (a):

(1) Gray mold of snap beans annually destroys as much as twelve percent of the Oregon bean crop, depending on the weather conditions and the planting date of the crop. In 1983 snap beans which were not treated with Ronilan averaged 25% loss plus one loss of 75% (crop not harvested). This loss occurs even though registered fungicides are used. Mold problems make the value of the crop less than the cost of harvesting and processing.

(2) The pest to be controlled is Botrytis cinerea, commonly known as gray mold.

(3) At present, registered pesticides are no longer providing effective control of Botrytis on snap beans. Registered fungicides include Benlate, Captan and Bravo. The existing population of Botrytis has developed a high degree of resistance to Benlate. Also, when Benlate is used to control white mold (Sclerotinia spp.), the Benlate causes measurable increases in gray mold infections. Captan may give 25 per=-cent control of mold with a minimum of two applications, but often the second application cannot be made in many fields due to extensive vine growth. Ronilan is the only fungicide for gray mold control in Oregon; the efficacy of Ronilan is 70-90%. The second best control is a combination of Benlate-Captan which may give up to 25% control. One field of beans that was treated with the Benlate-Captan combination sustained an 80% loss of crop. The efficacy of Bravo is poor and appears to be declining; fieldmen report Bravo is less effective than the Benlate-Captan combination.

Crop rotation and proper spacing of rows so as to avoid overcrowding will help reduce Botrytis damage, but cultural practices do not provide acceptable control. There are no significantly disease-resistant bean varieties available.

(4) Ronilan 50W fungicide (EPA REG. NO. 7969-53) active ingredient: 3-(3, 5-Dichlorophenyl)-5-Ethenyl-5-Methyl-2, 4-Oxazolidinediione 50%, manufactured by BASF Wyandotte Corporation, Parsippany, New Jersey, is the pesticide intended to be used.

(5) Application Information

A. Rate of application is to be 1.0 pound of Ronilan 50W (0.5 lb. active ingredient) per application with a maximum of two applications. If two treatments are necessary a maximum of 40,000 pounds of active ingredient will be needed to treat an estimated 20,000 acres of beans. Applications of Ronilan 50W will be made in 40-100 gallons of water per acre using ground application equipment or in a minimum of 15 gallons of water when using aerial application equipment.

B. Applications of Ronilan 50W will be made when at least 2 percent of the bean plants have one bloom open. Depending on the planting date of the beans, this will necessitate spraying from June 1, 1985, to September 15, 1985. The preharvest interval will be nine days. Under heavy disease pressure, a second application will very likely be needed seven days after the first application.

Mechanical harvesters are used on snap beans in western Oregon. The beans are stripped from vines and a large portion of harvested vines is left in the field. When the harvested beans are transported to the processing plants, some stems and leaves are present. This "trash" plus trimmings and culls amount to 32-35% of the crop. The cost of hauling the waste either to growers' fields for discing under or to the dumps amounted to over $200,000 in costs for area processors in 1983. It is our understanding that in 1983 emergency exemptions were granted for the use of Ronilan in peanuts (North Carolina and Virginia) and that data indicated it was safe and feasible to feed peanut waste to animals. We are therefore requesting that there be no restriction on feeding of bean waste. (The 1984 specific exemption for this use allowed the feeding of bean waste. Waste was sampled and no residues of vinclozalin were found.) In 1984, the removal of a feeding restriction allowed one company to save an estimated $70,000 in refuse hauling; additionally, the use of waste as a feed supplement averted disposal and sewage problems.)

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(6) Economic information concerning snap beans in Oregon: Virtually all commercial snap bean production in Oregon is in the Willamette Valley. Most of the beans are grown under contract with processors, and the crop is frozen or canned.

Oregon has produced 20-25 percent of the U.S. snap bean crop for at least eighteen years. Value of this crop has been more than $19,000,000 since 1977. In 1984, Oregon had 23,900 acres of snap beans under contract. Processors estimate that there will be 22,500 acres of beans under contract in 1985.

A. Economic value of snap beans to Oregon for four years:

81	82	83	84	1981	1982	1983	1984
$22,815,000	$22,541,000	$19,660,000	$23,160,000				

B. Price received for beans for four years:

	81	82	83	84	1981	1982	1983	1984
$/Acre	833	877	874	957				
$/Ton	158	169	159	176-185				

C. Crop yields per acre for four years:

	1981	1982	1983	1984
Pounds	10,540	10,240	11,000	11,000-12,100

D. Crop production costs per acre for four years:

	1981	1982	1983	1984
$/Acre	684	766	804	848
$/Ton	130	148	146	153

(7) Economic benefits and losses expected: Bean growers, processors and Oregon State University Extension Service person=-nel are actively pursuing research leading to control of Botrytis in bean production. Benlate has been the only fungicide which has provided some protection in the past, but gray mold has developed resistance to this pesticide.In recent years Botrytis has affected from 4% to 25% of the crop depending on weather conditions. In 1983 about 90% of the fields needed to be treated for gray mold. This disease lowers the grade resulting in a loss which was estimated by processors to be about $3,000,000 for the 1982 crop. Some heavily infected fields were not harvested in 1981, 1982, and 1983. In 1984, the emergency use of Ronilan had a con=-siderable impact on yields and reduction in culls.

Oregon State University plant pathologists indicate that data show Ronilan will provide nearly perfect control of gray mold. Dr. Paul Koepsell of Oregon State has developed a risk assessment procedure for determining control needs for gray mold in snap beans. This scoring system takes into account pre-bloom spore sources, moisture conditions, plant canopy density and bean varieties. This scoring system is used by growers, extension agents and processor fieldmen to determine when to spray fungicides.

(8) Names and addresses of knowledgeable experts:

Dr. Paul Koepsell
Extension Plant Pathologist
Botany and Plant Pathology Dept.
Oregon State University
Corvallis, OR 97331
(503)754-3472

Your prompt consideration of this request will be appreciated.

Sincerely,

Leonard Kunzman

Director

(503) 378->4152

SEC18/86-89/#2
cc: Paul Koepsell
Kent Meline
Loyal Creswell
Duane Smith
Bill Kosesan

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