5-26-92

D177991
RECORD NO.

113201
SHAUGHNESSEY NO.

REVIEW NO.

EEB REVIEW

DATE: IN 05-13-92 OUT 5-26-92

FILE OR REG. NO. 92 NY 0006

PETITION OR EXP. NO.

DATE OF SUBMISSION 04-22-92

DATE RECEIVED BY EFED 05-12-92

RD REQUESTED COMPLETION DATE 06-11-92

EEB ESTIMATED COMPLETION DATE 06-11-92

RD ACTION CODE/TYPE OF REVIEW 510

TYPE PRODUCT(S) Fungicide

DATA ACCESSION NOS.

PRODUCT MANAGER NO. Rebecca Cool (41)

PRODUCT NAME(S) Ronilan (Vinclozolin)

COMPANY NAME New York State

SUBMISSION PURPOSE Proposed Sec. 18's for use on snap beans

SHAUGHNESSEY NO.	CHEMICAL AND FORMULATION	%ai
113201		

DP Barcode : D177991
PC Code No : 113201
EEB In : 05.13.92
EEB Out :

To: Rebecca Cool
Product Manager 41
Registration Division (H7505C)

From: Douglas J. Urban, Acting Chief
Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 92 NY 0006
Chemical Name : Vinclozolin
Type Product : Fungicide
Product Name : Ronilan
Company Name : New York State Dept. of Environmental Conservation
Purpose : Proposed Section 18 for use on snap beans

Action Code : 510 Date Due : 06.11.92
Reviewer : C. Laird

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
P=Partial (Study partially fulfilled Guideline but additional information is needed
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

DP BARCODE: D177991

CASE: 283556
SUBMISSION: S416731

DATA PACKAGE RECORD
BEAN SHEET

DATE: 05/11/92
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: EMERGENCY EXEMP ACTION: 510 SEC18-OC F/F USE
CHEMICALS: 113201 Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidine %

ID#: 92NY0006
COMPANY:
PRODUCT MANAGER: 41 REBECCA COOL 703-305-7717 ROOM: CM2 720
PM TEAM REVIEWER: LIBBY PEMBERTON 703-305-5309 ROOM: CM2 716A
RECEIVED DATE: 04/22/92 DUE OUT DATE: 06/11/92

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 177991 EXPEDITE: N DATE SENT: 05/11/92 DATE RET.: / /
CHEMICAL: 113201 Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione (9C
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: 06/10/92 CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	05/12/92	/ /
BRAN: EEB	05/13/92	/ /
SECT:	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

* * * DATA REVIEW INSTRUCTIONS * * *

New counties added since 1989 Vaughan review. Any new endangered species concerns?

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
177989	BAB	05/11/92	06/10/92	Y	N	N
177990	EAB	05/11/92	06/10/92	Y	N	N

3

EEB REVIEW

Chemical: Ronilan (Vinclozolin)

100 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The State of New York is requesting emergency exemptions (Section 18's) for the use of Ronalin fungicide to control gray mold on snap beans. No new data were submitted with this request.

100.2 Formulation Information

Active Ingredient (Ronilan 50W):
Vinclozolin: 3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione 50%
Inert Ingredients 50%

100.3 Application Methods, Directions, Rates

- New York: Application rate is 1.0 to 1.5 lb Ronilan 50W (0.5 to 0.75 lb ai) per acre, maximum of two applications. May be applied by air or ground.

100.4 Target Organisms

Target organism is gray mold, Botrytis cinerea.

101 Hazard Assessment

The State of New York is requesting emergency exemptions for the use of Ronilan (vinclozolin) to control gray mold in snap beans. Maximum application rate is 0.75 lb ai per acre, with two applications allowed. Total acreage to be treated is 12,000 acres in New York (Cattaraugus, Chautauqua, Erie, Genesee, Monroe, Oneida, Orleans, Wayne, Wyoming, Suffolk, Ontario, Yates, Niagara, Cayuga, Onondaga and Ulster Counties).

101.2 Likelihood of Adverse Effects on Nontarget Organisms

Terrestrial Organisms

Data previously reviewed in EEB indicates that vinclozolin is practically nontoxic to birds on both an acute oral basis and a dietary basis. The available data on rats suggest that the chemical also has a low mammalian acute toxicity. Thus, significant acute hazards to populations of nontarget terrestrial organisms are not anticipated from the proposed use at 0.75 lb ai/acre or less.

A number of partial reports and data tables have been submitted concerning the toxicity of vinclozolin to honey bees. Although none of the reports is sufficient to satisfy the data requirement, all the submitted data suggests that vinclozolin is no more than slightly toxic to honey bees.

Our major concern with vinclozolin is potential chronic hazard to avian species. Data on avian reproduction suggest that the chemical may affect egg fertility at a dietary concentration of 5 ppm.

Following an initial application at 0.75 lb ai/acre, estimated residues on avian food items would range from 5.25 ppm on fruit to 180 ppm on short grass. Although these residues are well below acute toxicity triggers for birds, they exceed reproductive effect levels. At 0.5 lb ai/acre, residues would range from 3.5 to 120 ppm, exceeding reproductive effect levels on most avian food items.

The registrant (BASF Wyandotte Corp.) is currently conducting a special avian reproduction study to more clearly assess chronic effects of vinclozolin in birds. Until this study is submitted and evaluated, EEB cannot assess avian reproduction hazard under the proposed exemptions. However, the following points apply:

1) On the basis of information already reviewed, there is significant potential for vinclozolin to affect reproduction in birds exposed to the chemical via residues on food items. Use under the proposed exemptions will result in residues which exceed the level at which effects on avian reproduction have been noted.

2) By way of mitigating the impact, maximum acreage to be treated under the exemptions is 12,000 acres. Also, use on bean fields does not represent a high exposure situation for birds.

Aquatic Organisms

Data from previous EEB reviews indicate that vinclozolin is no more than moderately toxic to freshwater fish (bluegill LC_{50} = 47.3 mg/L; rainbow trout LC_{50} > 18 mg/L and Daphnia magna was determined to be 3.65 mg/L, indicating moderate toxicity.

Rough calculation of an aquatic EEC (see attached) provides a value of 30.20 ppb in a pond one foot deep, residues being derived from drift and runoff. This EEC value is well below any hazard triggers for freshwater organisms. Thus, use under the proposed exemptions is not expected to adversely affect nontarget aquatic organisms.

101.3 Endangered Species Considerations

As noted above, the primary concern with vinclozolin relates to potential reproductive impairment in birds. EEB's Endangered Species files shows that the bald eagle is the only species listed for the subject counties in New York.

Hazard to these species should be negligible, as use on snap beans represents a minimal exposure situation for these species.

On the basis of toxicity data and estimated EEC's, hazard to listed non-avian species is not anticipated.

101.4 Adequacy of Toxicity Data

The existing database is not adequate to assess hazards to non-targets under the proposed exemption. Chronic hazard to birds cannot be assessed until the special avian reproduction testing is completed.

103 Conclusions

EEB has reviewed the proposed emergency exemptions for the use of Ronilan (vinclozolin) on snap beans. EEB concludes that the proposed use may represent a reproductive hazard to birds, although use on beans represents a low exposure situation. Hazard to other nontargets is not anticipated.

There are no federally listed endangered/threatened species in New York that will be adversely affected by the proposed use.

Curtis E. Laird 5-19-92
Curtis E. Laird
Ecological Effects Branch
Environmental Fate and Effects Division

Allen W. Vaughan 5.21.92
Allen Vaughan, Acting Head-Section 2
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Douglas J. Urban, Acting Chief 5/21/92
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Vinclozolin - snap beans

Attachment A

EEC CALCULATION SHEET

I. For un-incorporated ground application

A. Runoff

___lb(s) x 0.0_ (_% runoff) x 10 (A) (from 10 A. drainage basin) = _____lb(s) (tot.runoff)

EEC of 1 lb a.i. direct application to 1 A. pond 6-foot deep = 61 ppb

Therefore, EEC = 61 ppb x ____(lb) = _____ ppb

II. For incorporated ground application

A. Runoff

___lb(s) ÷ _____ (cm) (depth of incorporation) x 0.0_ (_% runoff) x 10 (A) (10 A d.basin) = _____lb(s) (tot.runoff)

Therefore, EEC = 61 ppb x _____(lbs) = _____ppb

III. For aerial application (or mist blower)

A. Runoff

0.75 lb(s) x 0.6 (appl. efficiency) x 0.01 (1% runoff) x 10 (A) (10 A. d.basin) = 0.045 lb(s) (tot.runoff)

B. Drift

0.76 lb(s) x 0.05 (5 % drift) = 0.0375 lb(s) (tot. drift)

Tot. loading = 0.045 lb(s) (tot. runoff) + 0.0375 lb(s) (tot. drift) = 0.0825 lb(s)

Therefore, EEC = 61 ppb x 0.0825 (lbs) = 5.0325 ppb

x 6 = 30.2 ppb (1' pond)

7