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File

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DP Barcode : D227217
PC Code No : 128810
EEB Out :

To: James Stone/John Bazuin
Product Manager 22
Registration Division (7505C)

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch/EFED (7507C)

Attached, please find the EEB review of...

Reg./File # : 10182-UNI ICIA5504 50WG
Chemical Name : Azoxystrobin
Type Product : Fungicide
Product Name :
Company Name : Zeneca Ag Products
Purpose : Data reviews for new chemical
Action Code : 100 Date Due : 6/30/96
Reviewer : William Erickson Date In : 8/11/95

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)	436781-08 436781-09	Y S	72-2(a)	436781-16	Y	72-7(a)		
71-1(b)			72-2(b)			72-7(b)		
71-2(a)	436781-10	Y	72-3(a)	436781-17	Y	122-1(a)	436781-56 436781-57	Y S
71-2(b)	436781-11	Y	72-3(b)	436781-19	Y	122-1(b)	436781-58 436781-59	Y Y
71-3			72-3(c)	436781-18	Y	122-2		
71-4(a)	436781-12	N	72-3(d)			123-1(a)	436781-60	Y
71-4(b)	436781-13	Y	72-3(e)			123-1(b)		
71-5			72-3(f)			123-2	436781-61 436781-62 436781-63 436781-64 436781-65	Y Y Y Y Y
72-1(a)	436781-14	Y						
72-1(b)			72-4(a)	436781-20	Y			
72-1(c)	436781-15	Y	72-4(b)	436781-21	Y	141-1	436781-66 436781-67	Y Y
72-1(d)							436781-68 436781-69 436781-70	S S S

Y=Acceptable (Study satisfied Guideline)/Concur
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Azoxystrobin (128810) data reviews; D227217
 FROM: Anthony F. MacIerowski, Chief ⁶⁻²¹⁻⁹⁶
 Ecological Effects Branch
 Environmental Fate and Effects Division (7507C)
 TO: Cynthia Giles-Parker/John Bazuin
 Product Manager 22
 Registration Division (7505C)

EEB has completed reviewing the ecotoxicity studies Zeneca Ag Products, Wilmington, DE submitted to support registration of the new fungicide azoxystrobin. The DERs are attached. The findings are summarized below.

Gdln no.	Test species	Toxicity value	Toxicity category	Classification (MRD No.)
71-1	bobwhite mallard	LD50 >2000 mg/kg LD50 >250 mg/kg	practically nontoxic	core (436781-08) suppl. ¹ (436781-09)
71-2(a) 71-2(b)	bobwhite mallard	LC50 >5200 ppm LC50 >5200 ppm	practically nontoxic	core (436781-10) core (436781-11)
71-4(a) 71-4(b)	bobwhite mallard	not determined NOEC = 1200 ppm	n/a n/a	invalid ² (436781-12) core (436781-13)
72-1(a) 72-1(c)	bluegill rainbow trout	LC50 = 1.1 ppm LC50 = 0.47 ppm	moderately toxic highly toxic	core (436781-14) core (436781-15)
72-2	water flea	EC50 = 0.259 ppm	highly toxic	core (436781-16)
72-3(a) 72-3(b) 72-3(c)	sheepshead min. Pacific oyster mysid shrimp	LC50 = 0.67 ppm EC50 = 0.056 ppm LC50 = 1.3 ppm	highly toxic very highly toxic moderately toxic	core (436781-17) core (436781-18) core (436781-19)
72-4(a) 72-4(b)	fathead minnow water flea	MATC = 0.168 ppm NOEC = 0.044 ppm	n/a n/a	core (436781-20) core (436781-21)
122-1(a) 122-1(b)	12 plant species 10 plant species	carrot and rape inhibited >25% <25% inhibition	n/a n/a	core (436781-56) suppl. (436781-57) core (436781-58,-59)

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Gdln no.	Test species	Toxicity value	Toxicity category	Classification (MRID No.)
123-1(a)	carrot, rape	EC25 = 0.59 lb ai/A	n/a	core (436781-60)
123-2	1 vascular 4 nonvascular	EC50 = 3.4 ppm EC50 = 0.1 ppm	n/a n/a	core (436781-65) core (436781-61,-62, -63,-64)
141-1	honey bee	LD50 > 200 µg/bee	practically nontoxic	core (436781-66,-67)
	earthworm carabid beetle	LC50 = 278 ppm no adverse affects at 0.22 lb ai/A	n/a n/a	suppl. (436781-68) suppl. (436781-69)
	hoverfly	adverse affects at 0.22 lb ai/A	n/a	suppl. (436781-70)

Based on these results, the following studies are outstanding:

71-4(a): A new bobwhite reproduction study must be submitted. The study submitted was invalid because of excessively high control mortality and lack of egg production.

72-4(a): An estuarine/marine fish chronic toxicity test is required, because the acute toxicity LC50 value of 0.67 ppm for the sheepshead minnow is less than 1 mg/l.

72-4(b): An estuarine/marine invertebrate chronic toxicity test is required, because the acute toxicity EC50 value of 0.056 ppm for the ~~Pacific oyster~~ *mysisid shrimp* is less than 1 mg/l.

72-5: Life-cycle toxicity testing may be required for freshwater and estuarine/marine fish. Preliminary estimates of aquatic concentrations of azoxystrobin indicate freshwater fish testing will be required; a determination will be made when the risk assessment is completed. The requirement for estuarine/marine fish will depend on results from the early life-stage testing (72-4b).

Although the acute oral toxicity test with the mallard was supplemental, because several birds vomited the test material and an LD50 could not be determined, the bobwhite study satisfies the guideline requirement. No additional acute oral testing is required.

Plant testing is not required for azoxystrobin, based on the proposed use sites (grapes, turf), method of application (ground

spray), or its solubility in water (6.7 ppm). Testing is required for fungicides only if solubility in water exceeds 10 ppm, if the pesticide will be applied by air or irrigation, if applications will be made to aquatic sites, or if other information indicates a potential problem. However, terrestrial and aquatic plant studies were submitted and reviewed and will be used in the risk assessment.

The studies submitted for the earthworm, carabid beetle, and hoverfly were not guideline studies but have been reviewed.

Contact Bill Erickson at 305-6212 or Harry Craven at 305-5320 if you have any questions.