File

10-23-95

DP Barcode : D217210, D219765
PC Code No : 129081
EEB Out :

To: Joanne Miller/Dianne Morgan
Product Manager 23
Registration Division (7505C)

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

Attached, please find the EEB review of...

Reg./File # : 000279-GRUO
Chemical Name : Sulfentrazone (methanesulfonamide)
Type Product : Herbicide
Product Name : Sulfentrazone Technical
Company Name : FMC Corporation
Purpose : Toxicity data - new chemical

Action Code : 101 Date Due : 10/10/95
Reviewer : William Erickson Date In : 10/05/95

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)			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)	433559-01	S	72-3(d)			123-1(a)	433454-11 437836-01	Y
71-4(b)	433559-02	S	72-3(e)			123-1(b)	433454-12 437836-02	Y
71-5(a)			72-3(f)			123-2	433454-13	Y
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)

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

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Sulfentrazone: data reviews for plants and avian reproduction

FROM: Anthony F. Maciorowski, Chief
Ecological Effects Branch
Environmental Fate and Effects Division (7507C)

TO: Joanne Miller/Dianne Morgan
Product Manager 23
Registration Division (7505C)

FMC Corporation, princeton, NJ submitted the studies cited below to support registration of sulfentrazone. EEB has reviewed these studies, and the DERs are attached.

Chetram, R.S. 1992. Tier 2 seed germination/seedling emergence nontarget phytotoxicity study using F6285 technical. Conducted by Pan-Agricultural Laboratories, Inc., Madera, CA. Lab. Report No. BL91-473. MRID Nos 433454-11 (report) and 437836-01 (raw data).

Comments: The study is Core for seedling emergence. Lettuce, with an EC_{25} of 0.010 lb ai/acre for plant dry weight, was the most sensitive of the 10 species tested. The seed germination information is supplemental, because the Agency no longer requires seed germination testing.

Chetram, R.S. 1992. Tier 2 vegetative vigor nontarget phytotoxicity study using F6285 technical. Conducted by Pan-Agricultural Laboratories, Inc., Madera, CA. Lab. Report No. BL91-474. MRID Nos 433454-12 (report) and 437836-02 (raw data).

Comments: The study is Core. Cucumber, with an EC_{25} of 0.00052 lb ai/acre for plant dry weight, was the most sensitive of the 10 species tested.

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Blasberg, J.W., S.L. Hicks, and L.M. Stuerman. 1994. Acute toxicity of F6285 to *Selenastrum capricornutum* Printz. Conducted by ABC Laboratories, Inc., Columbia, MO. Lab. Report No. 40574. MRID No. 433454-13.

Comments: The study is Core. The 120-h EC_{50} is 0.031 ppm.

Pedersen, C.A. and D.R. DuCharme. 1994. Toxicity and reproduction study with F6285 technical in bobwhite quail. Conducted by Bio-Life Associates, Ltd., Neillsville, WI. Lab. Report No. BLAL 112-005-07. MRID No. 433559-01.

Pedersen, C.A. and D.R. DuCharme. 1994. Toxicity and reproduction study with F6285 technical in mallard ducks. Conducted by Bio-Life Associates, Ltd., Neillsville, WI. Lab. Report No. BLAL 112-006-08. MRID No. 433559-02.

Comments: The avian reproduction studies with the bobwhite quail and mallard are Supplemental, because the highest test concentration was less than the anticipated environmental residue (EEC) for application on turf and lawn. Female body-weight gain of bobwhite quail dosed at 100 ppm was significantly less than the weight gain in the control group.

The studies support the proposed use in soybeans but not the proposed use on turf and lawn, where an unlimited number of applications can be applied. Sulfentrazone is highly persistent in the environment (aerobic soil metabolism half-life = 534-555 days) and can be expected to accumulate. The EEC for one 0.25 lb ai/acre application is 60 ppm. A second application would produce an EEC of about 120 ppm. Therefore, to support the turf and lawn use, the studies should be repeated using higher test concentrations. Alternatively, the currently proposed uses can be supported by these studies if the turf/lawn label specifies that no more than two applications can be made annually.

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