

US EPA ARCHIVE DOCUMENT

D175050
DPBARCODE (RECORD)
121601
SHAUGHNESSY NO

REVIEW NO.

EEB REVIEW

DATE IN: 3-10-92 OUT: MAR 30 1992
ASSIGNED: 3-11-92
CASE # : 194562 REREG CASE # : _____
SUB. # : S412454 LIST A, B, C, D
ID # : 10182-EUP-LU

DATE OF SUBMISSION 2-25-92

DATE RECEIVED BY EFED 3-3-92

SRRD/RD REQUESTED COMPLETION DATE 6-20-92

EEB ESTIMATED COMPLETION DATE 6-20-92

SRRD/RD ACTION CODE/TYPE OF REVIEW 400

MRID #(S) _____

DP TYPE 001

PRODUCT MANAGER, NO. JOANNE MILLER 23 JESSE MAYES

PRODUCT NAME(S) ACETOCHLOR

TYPE PRODUCT _____

COMPANY NAME ICI AMERICAS

SUBMISSION PURPOSE RESUBMISSION OF PREVIOUSLY REVIEWED

EUP IN RESPONSE TO ENDANGERED SPECIES

CONCERNS

COMMON CHEMICAL NAME _____

REVIEWER: MIKE DAVY



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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

MAR 30 1992

SUBJECT: Acetochlor EUP Endangered Species Concerns

FROM: Doug Urban, Acting Chief
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Doug Urban 3/30/92

TO: Joanne Miller, PM-23
Fungicide-Herbicide Branch
Registration Division (H7505C)

Introduction: The Ecological Effects Branch has reviewed the response from ICI Agricultural Products concerning EEB's concern for endangered species being effected by the EUP on Acetochlor (Shaughnessy No. 121601) for corn. This action is under D175050.

The registrant has reduced the number of states from 43 to nine. The EUP will take place in these following counties:

Minnesota.....Swift, Pipestone, Redwood, Renville, Martin, Faribault, Waseca, Dodge.

Iowa.....O'Brien, Kossuth, Mitchell, Howard, Butler, Tama, Carroll, Cass, Washington.

South Dakota...Spink, Deuel, Lake, McCook, Turner.

Nebraska.....Antelope, Cuming, Custer, York, Fillmore.

Kansas.....Thomas, Finney.

Missouri.....Worth, Audrain.

Ohio.....Franklin, Delaware, Hardin, Marion, Licking, Fayette.

Indiana.....Jasper, Elkhart, Fountain, Hancock, Jackson, Warren, Washington.

Illinois.....Whiteside, Bureau, La Salle, Jefferson, Champaign, Coles, Vermillion, McLean, Knox, Macoupin, Logan.

The acreage is 1632 and the total amount of active ingredients is 3264 pounds.

New Information

Since the previous EEB review (1/23/92), additional information has come to our attention. ~~The solubility is 0.0223 ppm which makes the herbicide insoluble and~~ acetochlor has minimal bioaccumulate potential (150X for whole fish with 2 to 33% depuration at 28 days).

MWD
1/23/92

Exposure

Terrestrial

Below are the maximum expected residues (ppm) on vegetation immediately after one application of 2.4 lb. ai/A (based on Hoerger and Kenaga, 1972).

range grass	grass	leaves & leafy crop	forage crop & insect	Pods with seeds	grain	fruits
576	264	300	139	28	24	16

Aquatic

~~With the solubility at 0.0223 ppm, the aquatic EEC changes to 0.015 ppm (10A x 2.4 lb ai/A x 1% runoff x 61 ppb) in 6 feet of water and 0.176 ppm in 6 inches of water for ground application. For aerial application, the aquatic EEC changes to 0.016 ppm (([10A x 2.4 lb ai/A x 60% application efficiency x 1% runoff] + [2.4 lb ai/A x 5% drift]) x 61 ppb) in 6 feet of water and 0.194 ppm in 6 inches of water.~~

SEE ON
EEC ON
1-23-92
REVIEW
MWD
1/23/92

Endangered Species Considerations

The endangered species triggers are as follows:

- Birds: 417 ppm (LC₅₀ 4171/10)
 - Mammals: * 1500 ppm (One-Day LC₅₀ 15000 ppm/10)
 - Fish: 0.02 ppm (LC₅₀ 0.38 ppm/20)
 - Aquatic Invertebrates: 0.41 ppm (LC₅₀ 8.2 ppm/20)
 - Plants: 1.43 ppb (EC₅₀ 1.43 ppb)
- * Based on the LD₅₀ of 1500 mg/kg for the female rat.

The following lists the endangered species that are in the requested counties for the EUP and describes the effect on them by acetochlor:

Higgin's Eye Pearly Mussel- Aquatic EEC for aquatic invertebrates is lower than the endangered triggers, therefore no hazard is expected.

Bald Eagle- Terrestrial EEC for birds is lower than endangered triggers and Acetochlor has minimal bioaccumulate potential, therefore no hazard is expected.

Indiana Bat- Terrestrial EEC for mammals is lower than endangered triggers and Acetochlor does not bioaccumulate, therefore no hazard is expected.

Whooping Crane- Terrestrial EEC for birds is lower than endangered triggers and Acetochlor does not bioaccumulate, therefore no hazard is expected.

Prairie Bush-Clover (Lespedeza leptostachya)- Information is not available for terrestrial plants, however aquatic plant information show acetochlor Selenastrum capricornutum has $EC_{50} = 1.43$ ppb (0.001 ppm). This indicates that use of ground or aerial application may adversely effect this endangered species.

Western Prairie Fringed Orchid (Platanthera praeclara)- Information is not available for terrestrial plants, however aquatic plant information show acetochlor Selenastrum capricornutum has $EC_{50} = 1.43$ ppb (0.001 ppm). This indicates that use of ground or aerial application may adversely effect this endangered species.

EEB has concerns that two endangered species may be adversely effected by the use of acetochlor. Prairie Bush-Clover and/ or Western Prairie Fringed Orchid are known to be located in the following counties:

Prairie Bush-Clover	Minnesota- Renville Iowa- Butler, Howard, Kossuth
Western Prairie Fringed Orchid	Iowa- Howard, Kossuth

EEB has concerns that Prairie Bush-Clover and Western Prairie Fringed Orchid may be adversely impacted by the use of acetochlor in the above listed counties of Minnesota and Iowa. Therefore, we requested that acetochlor not be used in this EUP in the above mentioned counties.

If you have any questions, please do not hesitate to contact Mike Davy at 305-7081.

NOTE to PM:

If the registrant wants to use the EUP in the counties of Renville, MN; Butler, Howard, Kossuth, IA; we need specific location within the county so that we can consult with USFWS as to whether the location of the EUP is near the endangered species.