DATE IN: 3-10-92   OUT: MAR 30 1992
ASSIGNED: 3-11-92
CASE #: 194562   REREG CASE #: ______
SUB. #: 5412454   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/TYPD 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
MEMORANDUM

MAR 30 1992

SUBJECT: Acetochlor EUP Endangered Species Concerns

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

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.


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).

Exposure

Terrestrial

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

<table>
<thead>
<tr>
<th>range</th>
<th>grass</th>
<th>leaves &amp; leafy crop</th>
<th>forage crop &amp; insect</th>
<th>pods with seeds</th>
<th>grain</th>
<th>fruits</th>
</tr>
</thead>
<tbody>
<tr>
<td>576</td>
<td>264</td>
<td>300</td>
<td>139</td>
<td>28</td>
<td>24</td>
<td>16</td>
</tr>
</tbody>
</table>

Aquatic

With the solubility at 0.0223 ppm, the aquatic EEC changes to 0.016 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.

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:

Higgins'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 praecilera)- 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.