D164955
DPBARCODE (RECORD)
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SHAUGHNESSY NO

30
REVIEW NO.

EEB REVIEW MAR 26 1992
~~JUL 19 1991~~

DATE IN: 6-10-91 OUT: _____
ASSIGNED:
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DATE OF SUBMISSION 6-3-91

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MRID #(S) _____

DP TYPE 001

PRODUCT MANAGER, NO. LIBBY PEMBERTON 41 REBECCA COOL

PRODUCT NAME(S) ES FENVALERATE

TYPE PRODUCT INSECTICIDE

COMPANY NAME TEXAS DEPT OF AGRICULTURE

SUBMISSION PURPOSE REVIEW PROPOSED SECTION 18 FOR USE OF ~~ES~~ FENVALERATE IN TEXAS ON SORGHUM

COMMON CHEMICAL NAME _____

REVIEWER: MIKE REXRODE

D 178035 Sect 18 on Sorghum
out 6/2/92

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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MAR 26 1992

MMEMORANDUM

SUBJECT: Possible Crisis Declaration by the State of Texas for the Use of ASANA XL on Sorghum D164955

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

TO: Becky Cool
Emergency Response and Minor Use Section
Registration Division

The Texas Department of Agriculture (TDA) is presently considering a Crisis Declaration for the use of ASANA XL to control sorghum midge (Contarinia sorghicola) and the corn earworm (Helcoverpa zea). Application rate (air or ground) is designated at 0.025 to 0.05 ai/A with two applications per season. The TDA has further estimated that 150,000 acres of sorghum should be designated for spraying in the following counties: upper Coastal Bend effective immediately (June 14, 1991) -- Refugio, Calhoun, Victoria, Jackson, Matagorda, Wharton, Brazoria, Fort Bend, Harris, Galveston, Liberty, Chambers, and Jefferson. Beginning on July 5, 1991, esfenvalerate is author- ized for use on sorghum in the following counties in the upper Blackland -- McLennan, Bosque, Hill, Navarro, Ellis, Johnson, Tarrant, Dallas, Kaufman, Rockwall, Hunt, Collin, Denton, Cooke, Grayson, Fannin, Lamar and Delta. Beginning on August 6, 1991, esfenvalerate is authorized for use on sorghum for seed purposes in the following counties in the High Plains -- Deaf Smith, Oldham, Hartley, Dallam, Sherman, Moore, Potter, Randall, Hansford, Hutchinson, Carson, Armstrong, Ochiltree, and Gray.

Presently, ASANA is registered for use on corn and cotton which amounts to a total of about 733,000 acres in these designated counties. An additional 250,000 acres to this total, amounts to a 34 percent increase in acreage over the registered use.

2

Since ASANA is persistent in the aquatic environment and highly toxic to aquatic life (LC_{50} = 0.005 to 2 ppb), EEB is concerned that the compound will impact nontarget aquatic organisms that may be exposed via drift or runoff. Spraying of ASANA in two of the designated regions, upper coastal bend and the upper Blackland, may result in an incremental risk to aquatic organisms. Exposure from runoff and drift in this area can result in an incremental risk to aquatic organisms (especially the shrimp industry adjacent to upper coastal bend). Exposure from runoff and drift in this area can result in residues of 0.03 and 0.154 ug/L, respectively, that exceed EEB's criteria for concerns of unacceptable risk to aquatic invertebrates.

At this time, EEB cannot complete a risk assessment for ASANA because relevant ecological effects data (mesocosm study) has not been reviewed. Until this assessment is completed, any expansion of the ASANA use could result in an incremental risk to aquatic organisms. If there are any comments, please contact Miachel Rexrode (305-5578).

Appendix I - EEC Calculations for ASANA Use on Sorghum

I. Ground Application

Assumptions:

0.1% runoff
10 acre drainage basin
0.05 lb ai/A of ASANA

(A) Runoff

0.05 lb ai/A x 0.001 x 10 A = 0.0005 lbs ai total runoff
EEC of 1 lb ai, direct application to 1 A pond, 6-ft deep = 61
Therefore, EEC = $\frac{61 \text{ ug/L}}{1 \text{ lb ai}} \times \frac{0.0005 \text{ lb ai}}{} = 0.03$ ug/L

II. Aerial Application

Assumptions

0.1% runoff
60% application efficiency
10 acre drainage basin
5% drift
0.05 lb ai/A of ASANA

(A) Runoff

0.05 lb ai/A x 06 x 0.001 x 10 A = 0.00003 lb ai found in total runoff

(B) Drift

0.05 ai/A x 0.05 = 0.0025 lbs ai in total drift

Therefore, EEC = $\frac{61 \text{ ug/L}}{1 \text{ lb ai}} \times \frac{0.0025 \text{ lb ai}}{1} = \frac{0.154 \text{ ug/L}}{}$