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

OCT 28 1993
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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Trifluralin Reregistration. Registrant's Response to
CBRS Review of Corn Grain Processing Study.
CBRS No. 12616. DP Barcode No. D195423.
MRID Nos. 42917800 and 42917801. Chemical No. 036101.
Reregistration Case No. 0179.

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TO: Lois Rossi/Walter Waldrop [PM-71]
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Under a cover letter dated 9/2/93 (MRID 42917800) DowElanco has submitted additional data (MRID 42917801) to support previously submitted trifluralin corn grain processing data (MRID 42403201) which were reviewed by CBRS and deemed adequate pending the submission of sufficient evidence of the phytotoxicity of trifluralin to corn plants when applied at rates greater than 5 lb ai/A (memo B. Cropp-Kohlligian dated 2/8/93).

Conclusions/Recommendations

CBRS deems the current data submission (MRID 42917801) adequate to support the previously submitted corn grain processing data (MRID 42403201). No additional trifluralin corn grain processing data are required. No food/feed additive tolerances are needed for the residues of trifluralin in the processed commodities of corn grain.

Detailed Considerations

In the conduct of the previously submitted trifluralin corn grain processing study (MRID 42403201), trifluralin was applied at 5 lb ai/A (5X the maximum use rate) as a single postemergence broadcast spray to corn plants which were approximately 31 inches in height resulting in nondetectable (<0.05 ppm) residues in/on the harvested corn grain and its processed commodities. Since the exaggerated application rate used in the processing study (5X) was substantially less than the maximum theoretical concentration factor for corn oil (25X according to CBRS memo entitled, "Maximum Theoretical Concentration Factors", prepared by S. Hummel, dated 1/93), CBRS required adequate evidence that application of trifluralin at rates greater than 5 lb ai/A would prove phytotoxic to corn plants.

In the current submission the registrant has stated that the 5 lb ai/A application rate was selected for the trifluralin corn grain processing study because DowElanco biologists were certain that higher rates of application would likely result in totally unacceptable injury to the crop based on the results of previous studies conducted to meet Plant Protection data requirements (Tier I - Guidelines 122-1(a) and 122-1(b) and Tier II - Guidelines 123-1(a) and 123-1(b), MRIDs 41934501 and 41934503, respectively). The summaries of the results of these studies as provided by the registrant in the current submission (MRID 42917801) demonstrate that application of trifluralin to corn seed at 8 lbs ai/A is likely to result in severely stunted and swollen corn plant shoots and roots and that a single postemergence spray treatment of trifluralin at 2 lb ai/A to corn plants 29-30 cm tall (having 4 leaves) is likely to result in moderate stunting of the plants, crinkled leaves and some slightly twisted plants. CBRS accepts these data as adequate evidence that applications of trifluralin at rates significantly greater than 5 lb ai/A would likely prove injurious to the growth of the corn plants and adversely affect the yield of corn grain.

No additional trifluralin corn grain processing data are required. Since the trifluralin corn grain processing study (MRID 42403201), which was conducted at the highest practical exaggerated application rate (5X), resulted in nondetectable residues (<0.05 ppm) in the processed commodities of the trifluralin-treated corn grain, then no food/feed additive tolerances are required.

cc: BLCKohlligian (CBRS), Trifluralin Reg. Std. File, Trifluralin SF, RF, Circulate.

RDI: WJHazel:10/25/93 MMetzger:10/26/93

7509C:CBRS:BLCKohlligian:CM#2:Rm 805:703-305-7462:10/21/93.