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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg. No. 1471-35, 1471-116, 1471-120,
1471-143. Amended Registrations of Trifluralin
(Treflan®) on Alfalfa. Accession Numbers 255191,
255192

FROM: Leung Cheng, Chemist *L. Cheng*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Ph.D., Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

TO: Richard Mountfort, PM Team #23
Herbicide-Fungicide Branch
Registration Division (TS-767)

Elanco Products Company has requested amended registrations for its Treflan® products: EC (EPA Reg No 1471-35, 4 lbs/gal); MTF™ (1471-116, 4 lbs/gal); 5™ (1471-120, 5 lbs/gal) and 10™ (1471-143, 10% ai), all of which contain trifluralin [α, α, α -trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine] as the active ingredient. The Company would like to double the maximum application rate on alfalfa to 2 lbs ai per acre. A tolerance of 0.2 ppm trifluralin has been established on alfalfa hay [40CFR§180.207].

The proposed labels call for application of 2 quarts of EC, 2 quarts of MTF™, 1.6 quarts of 5™ or 20 lbs of 10™ to established alfalfa stands prior to weed emergence by ground application. Treflan 10™ may also be applied by air. To activate this herbicide, a single rainfall or overhead sprinkler irrigation of at least 0.5 inch within 3 days after application is needed. Otherwise, the soil should be thoroughly mixed using incorporation equipment. For crop rotation, only those crops for which Treflan can be applied as a preplant treatment should be planted.

Treflan EC, MTF™ and 5™ may also be used in combination with Butoxone®, Karmex®, Kerb®, Lexone®, paraquat, Princep®, Sencor® or Velpar®. Additional directions, restrictions and precautions on these labels are to be followed.

Method AM-AA-CA-RO23-AA-755, "Determination of Trifluralin in Agricultural Crops and Soil", was used to collect the submitted residue data. Methanol was blended with a sample and an aliquot of the supernatant was mixed with saline solution and methylene chloride. The organic phase was dried and evaporated. The residue was purified on a Florisil column and determined by GC/EC. This method is similar to Method II in PAM II. Limit of detection was reported at 0.008 ppm.

Validation data reflect 81-108% recoveries at 0.04 ppm fortification level. Samples fortified at 0.05 ppm trifluralin and then stored at -20°C for 3-26 days gave 96-112% recovery values.

Experiments were conducted in CA, KS and NM. Alfalfa was chemically treated by surface application or over-top-spray at dormant stage or 5 days after cutting. Samples were collected at first, second and third cuttings after 1.8 or 2 lbs ai per acre was applied. When sampled 30-195 days after treatment and analyzed within 35 days of sampling, the residue values on dried alfalfa hay were <0.008-0.028 ppm trifluralin. These values are on a 80% dry weight basis and have been corrected for recoveries. Representative chromatograms on control, standard and treated samples are judged adequate. We conclude that the 0.2 ppm tolerance is adequate to cover this proposed rate increase.

Conclusion and Recommendation

We conclude that the currently established 0.2 ppm tolerance level is adequate to cover this proposed rate increase. We recommend for this amended registration.

cc:Circu, S.F., R.F. Reviewer, Amended Use File
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TS-769:RCB:LC:edited by:bj:RM-810:CM#2: X557-7377: 11/30/84