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EFF. 9/4/92 DE-498 SF

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

MAR 10 1992

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#1G4006 (CBTS #8560; Barcode #D168583). DE-498 and Trifluralin on Soybeans. Formulation XRM-5313. (No MRID #).

FROM: Nancy Dodd, Chemist *Nancy Dodd*
Tolerance Petition Section II
Chemistry Branch I- Tolerance Support
Health Effects Division (H7509C)

THRU: Debra Edwards, Ph.D., Acting Chief *Debra Edwards*
Chemistry Branch I- Tolerance Support
Health Effects Division (H7509C)

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

DowElanco has requested an Experimental Use Permit (EUP) for XRM-5313 on soybeans. DowElanco has submitted a label and proposed experimental program for XRM-5313 on soybeans. XRM-5313 contains two active ingredients, DE-498 and trifluralin. DE-498 is N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo-[1,5a]-pyrimidine-2-sulfonamide. Trifluralin is α,α,α-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine. A petition for a temporary tolerance of 0.05 ppm for DE-498 on soybeans and corn is in reject status (N. Dodd, March 1992). A tolerance of 0.05 (N) ppm is established for trifluralin on seed and pod vegetables (40 CFR 180.207).

No tolerances for DE-498 have been established. A crop destruct Experimental Use Permit (62719-EUP-13) for XRM-5019 (an end-use product containing DE-498) was issued by EPA on 3/8/91.

A meeting was held on 2/23/90 to discuss residue data requirements for products containing XRD-498 (now called DE-498) in combination with trifluralin, metolachlor, and clopyralid. A formulation containing two active ingredients is acceptable provided that each active ingredient is registered and the proposed use of the formulation is consistent with the use patterns of the individually registered active ingredients.

The proposed experimental use permit for XRM-5313 (containing the active ingredients DE-498 and trifluralin) would allow use on soybeans during the 1992 and 1993 growing seasons (ie. 3/1/92 to 12/1/93).

A total of 333.8 gals. XRM-5313 (1134.92 lb trifluralin active ingredient and 83.45 lb DE-498 active ingredient) will be used on 1190 acres of soybeans in 1992.

A total of 775.8 gals. XRM-5313 (2637.72 lb trifluralin active ingredient and 193.95 lb DE-498 active ingredient) will be used on 2775 acres of soybeans in 1993.

In both 1992 and 1993, applications to soybeans will be made in the following states: AL, AR, CO, DE, FL, GA, IL, IN, IA, KS, KY, LA, MD, MI, MN, MS, MO, NE, NJ, NY, NC, ND, OH, OK, PA, SC, SD, TN, TX, VA, and WI.

Conclusions

1. A formulation containing two active ingredients is acceptable provided that each active ingredient is registered and the proposed use of the formulation is consistent with the use patterns of the individually registered active ingredients.

2. No temporary or permanent tolerance is established for DE-498 on soybeans. The petition requesting a temporary tolerance is in reject status. (See PP#1G4006, N. Dodd, March 1992.)

3. The proposed use rate for trifluralin in the proposed XRM-5313 formulation must be revised to be consistent with registered trifluralin labels. The two EPA approved trifluralin labels discussed below under Detailed Considerations indicate that broadcast rates range from 0.5-1.25 lb ai/A, depending on soil texture and percent organic matter. Most of the formulations which do not have geographic limitations have a range of application rates starting at 0.5 lb ai/A. The proposed XRM-5313 label, however, indicates that trifluralin will be applied at the rate of 0.85-0.96 lb ai/A depending on soil type. These directions are not equivalent. The petitioner should therefore revise his label directions for XRM-5313 to be consistent with currently registered labels for trifluralin.

4. Residue data for emulsifiable concentrate (EC) formulations is transferrable to an oil flowable (OF) formulation for preplant application. (This conclusion is derived from the memo of R. Loranger dated 5/20/91 entitled "Residue Data Requirements for New Formulations".)

5. CBTS defers to Registration Division concerning whether the inerts in XRM-5313 are cleared under 40 CFR 180.1001.

Recommendation

CBTS recommends against the proposed EUP for the formulation XRM-5313 containing DE-498 and trifluralin on soybeans for the reasons given in Conclusions 2, 3 and 5 above.

Notes to PM:

The following reports should be reviewed by Registration Division (Bipin Gandhi) since they involve Product Chemistry of formulations: MRID #'s 419938-03, 419938-04, and 420033-01). (These were returned to Steven Robbins by Nancy Dodd on 2/5/92.)

CBTS is not commenting concerning the directions on the label for rotational crops. That part of the label should be reviewed by the Environmental Fate and Effects Division.

DETAILED CONSIDERATIONS

Formulation

XRM-5313 is an oil flowable (OF) formulation containing 36.35% trifluralin active ingredient (ai), 2.67% DE-498 active ingredient, and 60.98% inerts. XRM-5313 contains 3.4 lb./gal. trifluralin ai and 0.25 lb./gal. DE-498 ai.

A confidential statement of formula for XRM-5313 has been submitted. (See Attachment 1.) The impurities in XRM-5313 are those in Trifluralin Technical and DE-498 Technical. CBTS defers to Registration Division concerning whether the inerts in XRM-5313 are cleared under 40 CFR 180.1001.

Proposed Use

Apply XRM-5313 as a preplant soil incorporated treatment 0 to 30 days before planting. Apply to soybeans at the rate of 2.0 or 2.25 pints XRM-5313/A (0.85-0.96 lb ai/A trifluralin and 0.062-0.07 lb ai/A DE-498) depending on soil type. The rate is 2.0 pints XRM-5313/A for coarse and medium soils and 2.25 pints XRM-5313/A for fine soils. Apply in a spray volume of 10-40 gals/A. Incorporate into the top 2-3 inches of soil within 24 hours. With most equipment and methods of application, a second incorporation is required any time before planting.

Dry bulk fertilizer may be impregnated or coated with XRM-5313. For best results when applied impregnated on dry bulk fertilizers, XRM-5313 should be incorporated twice with the second incorporation 3-5 days after the first. Apply a minimum of 200 lbs./A of dry fertilizer impregnated with XRM-5313 at the recommended rate. Do not impregnate coated ammonium nitrate and/or limestone when used alone.

XRM-5313 may be tank mixed with Sencor, Lexone, Command, or Vernam for application as a preplant soil incorporated treatment.

General Restrictions:

"Do not apply XRM-5313 to soils that are wet or are subject to prolonged periods of flooding as poor weed control may result."

"Do not use XRM-5313 on any crop grown in Pecos county or Reeves county, Texas."

"Do not apply to areas where the soil pH is greater than 7.8 as this may result in decreased crop tolerance."

"Do not apply to areas where (both apply) the soil pH is less than 5.9 and organic matter is greater than 5%."

"Do not graze or feed treated soybean forage, hay, or straw to livestock."

"Do not aerially apply XRM-5313."

"Do not apply XRM-5313 through any type of irrigation system."

"Do not rotate to any crop other than soybeans for a minimum of 4 months after application of XRM-5313."

"The following rotational crops may be planted at the indicated interval following application of XRM-5313:

crop-[1/]	interval (months) by group-[2/]		
	Group 1	Group 2	Group 3
alfalfa	4	4	4
dry beans	4	4	4
peas	4	4	4
peanuts	4	4	4
wheat	4	4	4
rice	6	6	6
corn	8	8	18
oats	12	18	18
proso millet	12	18	18
grass	12	18	18
crop-[1/]	interval (months) by group-[2/]		
	Group 1	Group 2	Group 3
grain sorghum	18	18	18
sunflower	18	18	18
cotton	22	22	22
sugarbeets	22	22	22
rapeseed	22	22	22

1/ "Rotation to all other crops requires a successful field bioassay."

2/ Group 1: all states except groups 2 and 3
Group 2: MN, ND, and SD
Group 3: AZ, CA, CO, ID, MT, NV, NM, OR, UT, WA, and WY

Note to PM: CBTS is not commenting concerning the directions on the label for rotational crops. That part of the label should be reviewed by the Environmental Fate and Effects Division.

Registered Use for Trifluralin on Soybeans

Formulations and registered uses of trifluralin on soybeans were previously discussed in the Residue Chemistry Chapter dated 7/12/85 of the Trifluralin Registration Standard. Formulations included in the Registration Standard are granular and EC formulations. Most of the formulations which do not have geographic limitations have a range of application rates starting at 0.5 lb ai/A.

Two of the labels recently approved by EPA are for Treflan® EC and Treflan® MTF. Treflan EC and Treflan MTF each contain 4 lbs ai/gal. Treflan EC (EPA Reg. No. 62719-93, accepted with comments in EPA letter dated 6/19/91) and Treflan MTF (EPA Reg. No. 62719-116, accepted with comments in EPA letter dated 7/05/91) can be applied to soybeans as a preplant soil incorporated treatment in the spring. The formulations can also be applied in the fall. Broadcast application rates in the spring range from 1.0 to 2.5 pints Treflan MTF or EC/A (0.5-1.25 lb ai/A), depending on soil texture and % organic matter. Broadcast application rates in the fall range from 1.0 to 2.5 pints Treflan MTF or EC/A (0.5-1.25 lb ai/A), depending on soil texture, % organic matter, and state. "Special Use" directions on the Treflan EC and MTF label allow broadcast application rates up to 4.0 pints Treflan MTF or EC/A (2 lb ai/A).

CBTS concludes that the proposed use rate for trifluralin on the proposed XRM-5313 formulation must be revised to be consistent with registered trifluralin labels. The two trifluralin labels summarized above indicate that broadcast rates range from 0.5-1.25 lb ai/A, depending on soil texture and percent organic matter. Most of the registered formulations which do not have geographic limitations have a range of application rates starting at 0.5 lb ai/A. The proposed XRM-5313 label, however, indicates that trifluralin will be applied at the rate of 0.85-0.96 lb ai/A depending on soil type. These directions are not equivalent. The petitioner should therefore revise his label directions for XRM-5313 to be consistent with currently registered labels for trifluralin.

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Proposed Use of DE-498 on Soybeans

Refer to the review of PP#1G4006 by N.Dodd dated March 1992.

Attachment 1: Confidential Statement of Formula for XRM-5313

cc with Attachment 1: SF (for DE-498 and trifluralin), N. Dodd (CBTS), E. Haeberer (CBTS), PP #1G4006, PM#23, TOX (II), C Furlow (PIB/FOD).

cc without attachments: Circu. (7), RF

RDI:E. Haeberer:2/20/92:R. Loranger:2/25/92
H7509C:CM#2:Rm 800D:X55681:N.Dodd: nd:3/9/92

LIN # 4644-93 EFGW & Residue Chemistry Reviews for Flumetsulam (129016)

Page_____ is not included in this copy.

Pages 7 through 8 are not included.

The material not included contains the following type of information:

____ Identity of product inert ingredients.

____ Identity of product impurities.

____ Description of the product manufacturing process.

____ Description of quality control procedures.

____ Identity of the source of product ingredients.

____ Sales or other commercial/financial information.

____ A draft product label.

✓ The product confidential statement of formula.

____ Information about a pending registration action.

____ FIFRA registration data.

____ The document is a duplicate of page(s) _____.

____ The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.
