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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: Thidiazuron (Dropp® 50WP; List D, Case 4092, Chemical 120301): Additional Rotational Crop Data for Lettuce and Label Amendment. DP Barcode No. D195583. CBRS No. 12640. MRID No. None.

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Thidiazuron, or 1-phenyl-3-(1,2,3-thiadiazol-5-yl)urea, is a herbicide used for the defoliation of cotton. Tolerances have been established (40 CFR §180.403) for the combined residues of thidiazuron and its aniline-containing metabolites in/on cottonseed (0.4 ppm), poultry and ruminant meat/fat/mby (0.2 ppm), eggs (0.1 ppm), and milk (0.05 ppm). A feed additive tolerance exists (40 CFR § 186.5600) for the same residue in/on cottonseed hulls (0.8 ppm).



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Conclusion and Recommendation

CBRS concludes that the information supplied on a rotational lettuce trial conducted in California supports a 9 month plantback interval for lettuce in cotton fields treated with thidiazuron provided the soil is deep plowed before planting. The proposed label amendment for lettuce is acceptable. This conclusion is based solely on phytotoxicity data supplied by the registrant; no information on residues in rotational crops is available.

CBRS reiterates the Phase IV EFGWB requirement for new confined rotational crop studies (GLN §165-1). The results of these studies may indicate a need for field rotational crop studies and/or rotational crop tolerances or modified plant-back restrictions.

Detailed Consideration

The current label directions (Dropp® 50WP, 45639-89) specify a maximum application rate of 0.3 lb. a.i./acre in two applications or a single application not exceeding 0.2 lb. a.i./acre. There is a restriction on feeding foliage or gin trash to cattle. The registrant now proposes an amended label with new rotational crop restrictions for lettuce. The plant-back intervals are as follows:

Crop	Treatment to Planting Interval ¹
Small grain	2 weeks
Sorghum	2 weeks
Corn	2 weeks
Root crops (except carrots)	2 weeks
Legumes	2 months
Alfalfa	2 months
Leafy vegetables (except lettuce and spinach)	2 months
Sugar Beets	4 months ²
Lettuce	9 months
Carrots	9 months
Onions	9 months ²
Spinach	9 months ²

¹ Do not use immature crops for food or feed.

² New intervals proposed to and found acceptable by the Agency.

The registrant previously presented field trial data consistent

with these intervals, except for lettuce (S. Funk, CBRS No. 11481, 07/20/93). The trial data consisted solely of qualitative information on certain crops rotated into cotton fields where the cotton had been defoliated with Dropp® 50WP. Tomatoes, peppers, cantaloupe, garlic, wheat, broccoli, alfalfa, and safflower showed no evidence of phytotoxicity with a one month or less plantback. This is consistent with the label restriction. Onions and carrots showed no damage at 9 months. This is consistent with the label restriction. Spinach showed slight damage at 5 months, and sugar beets showed no damage at intervals >3 months. These findings are consistent with the new label plantback intervals. Lettuce, however, showed serious damage with a 12 month interval. This is not consistent with the 9 month plantback, and such was noted in the previous review (S. Funk, CBRS No. 11481).

The registrant now reports the results of a 10/92 trial at the Nor-Am Field Station, Fresno, CA. Lettuce plantings were made 2, 4, 6, and 8 months after the harvest of cotton treated at 0.1, 0.2, or 0.3 lb.thidiazuron (a.i.)/acre. The ground was deep plowed (12 - 15 inches) before planting the lettuce. Moderate suppression of lettuce was noticeable in the 2 and 4-month plantbacks. There was light lettuce suppression for the 6-month plantback, compared to the control field which had been treated with tirbufos and deep plowed. There was no observable lettuce suppression with the 8-month plantback. There were no fresh weight reductions.

The registrant claims that this trial supports a 9 month plantback with deep plowing and proposes the following label amendment:

Do not plant lettuce "earlier than nine (9) months and only following deep plowing (12 - 15 inches)."

This amendment is acceptable to CBRS. However, CBRS reiterates the position that neither the information of this submission nor the information previously submitted (CBRS No. 11481, MRID 42660901) fulfills the need for confined rotational crop studies.

cc: Circ., RF, Thidiazuron List D File, Thidiazuron SF, S. Funk.

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H7509C:CBRS:S.Funk:305-5430:CM#2:RM803-A:SF(1093.15):10/26/93.