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

MAY 17 1994

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

MEMORANDUM:

SUBJECT: 45639-EUP-049: Diuron/Thidiazuron (GINSTAR EC).  
Amended Label to Reduce Plant-Back Intervals for  
Rotational Crops. DP Barcode D197251 CBTS No.  
12901

FROM: Joel Garbus, PhD., Chemist *Joel Garbus*  
Tolerance Petition Section III  
Chemistry Branch Tolerance Support (H7509C)

THROUGH: P. Errico, Section Head *P. Errico*  
Tolerance Petition Section III  
Chemistry Branch Tolerance Support  
Health Effects Division (H7509C)

TO : J. Miller / D. Kenny, PM 23  
Registration Division (H7505)

NOR-AM Chemical Co., Wilmington, DE, proposes to revise the label for its EUP for GINSTAR EC, (a mixture of the active ingredients diuron and thidiazuron) used as a cotton plant defoliant. The present label requires a 1 year interval before planting all rotational crops except cotton, soybeans, corn, and grain sorghum. The latter crops can be planted in the Spring following harvest.

The revision requested by the registrant would allow for the planting of small grain cereals, corn, sorghum, legumes (including alfalfa), leafy vegetables (except lettuce), and root crops (except onions and carrots) at two months after harvest. Carrots could be planted after three months; onions after four months; and lettuce at two months if the ground was cultivated by deep-plowing, or at nine months if cultivation was by surface-soil discing. Immature crops cannot be used for food or feed.



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### Conclusions

1. The concentration of diuron in GINSTAR is 1/20th that in KARMEX, a diuron-based cotton herbicide with a plant back interval of 1 year.
2. The requested plant back intervals are similar to those in place for thidiazuron when used by itself as a cotton defoliant at 4.5 times the concentration in GINSTAR.
3. There was no evidence of phytotoxicity at the requested plantback intervals.

### Recommendation

CBTS can recommend for the revised label for the EUP only. For permanent registration, the petitioner will need to provide actual rotational crop residue data to support suggested plantback intervals for the various crops.

### Background

GINSTAR cotton defoliant consists of two active ingredients, diuron (6% at 0.5 lbs ai/gallon) and thidiazuron (12% at 1 lb ai/gallon). Diuron as KARMEX (80% ai) is used as a pre- and post emergence herbicide for cotton at 1-1.25 lbs ai/A. This use has a two year restriction on replanting. Thidiazuron as DROPP (50% ai) is used as a preharvest cotton defoliant at a maximum of 0.6 lbs per season. This use has a 2 week replant interval for small grains, sorghum, corn and root crops and a 2 month plantback interval for legumes, alfalfa, and leafy vegetables.

In the absence of actual rotational residue crop data and considering the differences in the concentration of the active ingredients between the individual formulations and the mixture, CBTS (L. Propst, memo, 7/17/87) recommended for a plantback interval of 1 year. The petitioner wishes to reduce the interval to those cited above.

The experimental data that the registrant presents in support of the label revision is the absence of visible phytotoxicity at the suggested plant-back intervals for the representative commodities alfalfa, broccoli, cauliflower, garlic, safflower, spinach, sugar beets, tomatoes, wheat, lettuce, carrots, and onions. These crops were planted after the use of GINSTAR EC to defoliate cotton prior to harvest at the maximum rate (0.2 lbs ai/A = 0.133 lbs thidiazuron and 0.067 lbs diuron per acre). These trials were conducted in California and Arizona.

Comment and Conclusion

Considering that the concentration of diuron in GINSTAR is 1/20th that in KARMEX, that the requested plant back intervals are similar to those in place for thidiazuron used by itself at 4.5 times the concentration in GINSTAR, and that there was no evidence of phytotoxicity at the requested plantback intervals, CBTS can recommend for the revised label for the EUP only.

For permanent registration, the petitioner will need to provide actual rotational crop residue data to support suggested plantback intervals for the various crops.

cc: R.F.; Circ.; Garbus; S.F.

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