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

R.F.

DEC 28 1992

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM:

SUBJECT: New Chemical Review: PP#8F3607: Glufosinate-Ammonium (IGNITE) in or on Soybean Seed, Apples, Grapes, Field Corn (Grain, Forage, Fodder, and Silage), Nuts, and Almond Hulls. Amendment of October 22, 1992. MRID Nos.: 432523-01, 02, and 03. DP Barcode D184007. CBTS No. 10799

FROM: Joel Garbus, PhD., Chemist *Joel Garbus*
Tolerance Petition Section III
Chemistry Branch Tolerance Support (H7509c)

THROUGH: Debra Edwards, PhD, Chief *Debra Edwards*
Chemistry Branch Tolerance Support
Health Effects Division (H7509c)

TO: Joanne Miller / Jesse Mays, PM-23
Registration Division

Hoechst-Celanese has petitioned for permanent tolerances for the herbicide glufosinate-ammonium (Ignite), monoammonium 2-amino-4-(hydroxymethylphosphinyl) butanoate, and its metabolite, 3-methylphosphinicopropionic acid, expressed as 2-amino-4-(hydroxymethylphosphinyl) butanoic acid, in or on soybean seed, apples, grapes, field corn (grain, forage, fodder, and silage), and nuts at 0.05 ppm and in or on almond hulls at 0.50 ppm.

At present, there are conclusions manifesting unresolved deficiencies. Below we shall restate the outstanding deficiencies by combining and paraphrasing the pertinent conclusions of our memos regarding glufosinate.

Deficiency 1.

The proposed label should not carry a restriction on the feeding and grazing of treated corn forage as this conflicts with the request for a tolerance on corn forage and with Agency's policy regarding field corn forage and fodder feeding restrictions.



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Petitioner's Response

The petitioner has removed the use of glufosinate on corn and soybeans from the label and has withdrawn the request for tolerances from Section F for these commodities.

Comment

As the issue is now moot, the deficiency is satisfactorily resolved.

Deficiency 2

The use of terbacil (Sinbar 80W) in tank mixes for apples, grapes and nuts should be removed from the label as it only registered for use on apples and pecans among these commodities.

Petitioner's Response

The revised label restricts the use of terbacil in tank-mixes to apples and pecans.

Comment

The deficiency is satisfactorily resolved.

Deficiency 3

The label implies that glufosinate can be used on any tree or vine crop. The label should make the use explicit for tree nuts, apples, and grapes.

Petitioner's Response

The revised label states that the herbicide may be used only for general weed control with apples, grapes, specified tree nuts, and non-crop areas.

Comment

The deficiency is satisfactorily resolved.

Deficiency 5

Section F needs to be revised to express the chemical name of glufosinate as a racemic mixture utilizing IUPAC or CA nomenclature. Tolerances should be revised for almond nutmeats to 0.10 ppm or the entire nut group can be raised to this level. Tolerances are needed for potential secondary residues in animal commodities occurring as the result of feeding treated rac's, especially corn and soybean commodities.

Petitioner's Response

The petitioner has submitted a revised section F addressing these issues. The chemical description of glufosinate is now given as a racemate in accordance with CA nomenclature. A revised tolerance of 0.1 ppm is proposed for the nut crop grouping and tolerances are proposed for animal commodities.

Comment

With the removal of field corn and soybeans from the list of crops for which registration has been asked, the potential for secondary residues has been considerably lessened. However, almond hulls, with a proposed tolerance of 0.5 ppm, can be feed at up to 25% of beef cattle diets. Based on the submitted animal studies and our calculation of the maximum dietary burden that could be imposed on animals fed glufosinate treated commodities, the proposed secondary residue tolerances (i.e. 0.05 ppm, the limit of detection of the animal tissue analytical method) of the revised Section F is appropriate.

The deficiency is satisfactorily resolved.

Deficiency 6

The petitioner will need to submit revised analytical methods for glufosinate for plant and animal tissues and provide evidence that the methods have been independently validated.

Petitioner's Response

The petitioner has provided copies of analytical methods incorporating the suggestions of the Agency's Analytical Laboratory. The petitioner has also submitted a report of the independent validation of the methods.

Comment

The deficiency is satisfactorily resolved.

Conclusion and Recommendation

With the satisfactory resolution of all outstanding deficiencies, CBTS can now recommend for the registration of glufosinate for apples, grapes, and tree nuts and for the following tolerances:

Almond Hulls	0.50 ppm
Apples	0.05 ppm
Cattle, fat	0.05 ppm
Cattle, meat	0.05 ppm
Cattle, mbyp	0.10, ppm

Eggs	0.05 ppm
Goats, fat	0.05 ppm
Goats, meat	0.10 ppm
Goats, mbyp	0.05 ppm
Grapes	0.05 ppm
Horses, fat	0.05 ppm
Horses, meat	0.05 ppm
Horses, mbyp	0.10 ppm
Milk	0.02 ppm
Nuts*	0.10 ppm
Poultry, fat	0.05 ppm
Poultry, meat	0.05 ppm
Poultry, mbyp	0.10 ppm
Sheep, fat	0.05 ppm
Sheep, meat	0.05 ppm
Sheep, mbyp	0.10 ppm

* Includes all of the commodities in the tree nut grouping of 40CFR 180.34 (f) (9) (xiv) (A).

cc: PP#8F3607, J. Kariya (SAB/HED), Reviewer, SF, RF, and Circ.

RDI:RAL:12/28/92

H7509C:jg:CBTS/HED:CM#2:RM805b:Garbus:(703)-305-5405:12/28/92