JUL 23 1985

BASF Wyandotte Corporation
100 Cherry Hill Road
P.O. Box 181
Parsippany, NJ 07054

Attention: Ms. Melinda M. Schluter

Gentlemen:

Subject: Poast Herbicide (Alfalfa and Soybean Forage)
Pesticide Petition No. 3F2904
EPA Registration No. 7969-58
Your Letter Dated February 28, 1985

This refers to Pesticide Petition No. 3F2904 which proposes the establishment of tolerances for the combined residues of the herbicide sethoxydim [2-(ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one and its metabolites containing the 2-cyclohexen-1-one moiety (calculated as the herbicide) in or on the raw agricultural commodities soybean hay at 10 parts per million (ppm), alfalfa hay and forage at 40 ppm and milk at 0.05 ppm.

The scientific review and evaluation of the residue chemistry information have been completed. The following are our conclusions and/or comments.

1. Based on the plant metabolism studies submitted, the nature of the residue in soybeans and alfalfa is adequately understood. The residue of concern consists of parent plus metabolites containing the 2-cyclohexene moiety (calculated as parent).

2. Based on the goat metabolism study submitted, the nature of the residue in ruminants will be adequately understood, provided additional raw data are submitted. We require reproductions of TLC's that were used to identify metabolites in liver and kidney. If these do not support the identification of metabolites, further studies may be needed.

3. The nature of the residue in poultry is not well understood.

   a. Of edible tissues, characterization was attempted only for liver, resulting in identification of 41 percent of this activity.

CONCURRENCES

SYMBOL ▶	TS-767C							
SURNAME ▶	VKWalker							
DATE ▶	7/23/85							

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b. Available methodology is capable of determining only 44 percent of the liver activity, 43 percent of the fat activity, and 64 percent of the muscle activity.

c. We require that additional attempts be made to characterize activity in poultry fat, muscle, and liver.

d. The extracted activity from fat and muscle should be subject of TLC, and the methanol soluble liver activity should be subjected to hydrolysis to release any polar conjugates.

e. Any released activity should be characterized.

f. The nature of the residue in eggs is adequately understood.

4. It has been demonstrated that methanol or methanol/water will extract 63 to 93 percent (average 83%) of the total radioactivity in soybeans, soybean hay and forage, and alfalfa hay and forage. Extraction of residues from weathered samples appears to be more difficult, but when figures are corrected for procedural losses, the recovery of radioactivity is 43 to 88 percent (average = 67%). This is an acceptable level of recovery.

5. It has been demonstrated that methanol is a suitable solvent for extracting residues from animal tissues, milk and eggs.

6. The deficiency concerning storage stability was resolved during the conference of April 4, 1984. The values for the stored samples were corrected for recovery and are therefore higher than those for the unstored samples which were not corrected for recovery.

7. You should indicate the type of application (ground or aerial) that was used in the already submitted residue experiments for both soybeans and alfalfa. Please note, we require both ground and aerial data reflective of the proposed use. If none of the submitted data reflect aerial application, then additional studies will be needed.

8. Because too few data reflect the proposed PHI, additional data are required for soybean forage that represent the maximum proposed rate and minimum PHI.

9. We agree that the alfalfa forage sample coded 503 (Illinois) will not be used for tolerance setting.

10. Until metabolism questions are resolved, we cannot make any conclusions concerning secondary residues in meat, milk, poultry, and eggs. Additional methodology and feeding studies could be required for poultry depending on the outcome of the additional study questions.

Further action will await reply to the above comments and completion of toxicology review.

Sincerely yours,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

RD/FHB:JOB:89854:Taylor:RD-47:Kendrick&Co:898-1270:7/15/85:Del:7/25/85:DKD