



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

PMSD/ISB  
2133

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MAR 4 1988

MEMORANDUM

SUBJECT: PP# OF 2389. (RCB #s 3321 and 3271). Permethrin on Alfalfa. Evaluation of Amendment dated 1/18/88. (No MRID#).

FROM: Nancy Dodd, Chemist *Nancy Dodd*  
Tolerance Petition Section II  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769C)

THRU: John H. Onley, Ph.D., Section Head *John H. Onley*  
Tolerance Petition Section II  
Residue Chemistry Branch  
Hazard Evaluation Division (TS-769C)

TO: George LaRocca, PM #15  
Insecticide - Rodenticide Branch  
Registration Division (TS-767C)

and

Toxicology Branch  
Hazard Evaluation Division (TS-769C)

This amendment, consisting of a cover letter dated 1/18/88 and a revised Section F, is submitted in response to RCB's 9/10/87 review of a January 18, 1988 amendment to PP# OF 2389.

Summary of Deficiencies Remaining to be Resolved

The petitioner should again revise Section F so that our records are accurate and also to ensure that the appropriate tolerances are put in the possible upcoming Final Rule (see RCB's Recommendations and RCB's Conclusions on Deficiency #5 that follow in this review).

### Recommendations

If TOX and EAB considerations permit, RCB will recommend for establishment of the proposed tolerances for permethrin and its metabolites on alfalfa, alfalfa hay, and animal commodities provided:

- (1) the tolerance expression for animal commodities is revised to include the metabolite 3-phenoxybenzoic acid,
- (2) the wording "a tolerance of 2 ppm" in the first line under Proposed Tolerances is changed to "tolerances" and
- (3) a single tolerance level of 3.0 ppm permethrin is proposed on the fat of cattle, goats, horses, and sheep.

### Detailed Considerations

The deficiency discussed in the 9/10/87 review of the amendment dated 2/6/87 is outlined below, followed by the petitioner's response and RCB's discussion/conclusion.

#### RCB's Deficiency #5

The revised Section F no longer contains proposed tolerances for goats, horses, and sheep commodities (meat, fat, and meat by-products). Since alfalfa forage and hay are feed items for these animals (i.e. 100% of the horse diet; 50 % of the sheep diet; 25 to 80% of the goat diet), the petitioner should submit a revised Section F including tolerances for goats, horses, and sheep.

#### Petitioner's Response to Deficiency #5

The petitioner has submitted a revised Section F as follows:

#### Proposed Tolerances

It is proposed that a tolerance of 2.0 ppm be established for residues of permethrin [(3-phenoxyphenyl) methyl

3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropane carboxylate]], and the sum of its metabolites, dichlorovinyl acid [3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropane carboxylic acid] and m-phenoxybenzyl alcohol [(3-phenoxyphenyl) methanol], calculated as permethrin, in or on the following raw agricultural commodities:

| <u>Commodity</u> | <u>Parts Per Million</u> |
|------------------|--------------------------|
| Alfalfa, Fresh   | 25.0                     |
| Alfalfa, Hay     | 55.0                     |

It is proposed that a new tolerance be established or a present tolerance be amended for residues of permethrin and the sum of its metabolites, dichlorovinyl acid and m-phenoxybenzyl alcohol, calculated as permethrin, in or on the following raw agricultural commodities:

| <u>Commodity</u>                                          | <u>Parts Per Million</u> |
|-----------------------------------------------------------|--------------------------|
| Fat of Cattle                                             | 2.5                      |
| Fat of Goats & Sheep                                      | 3.0                      |
| Fat of Horses                                             | 2.5                      |
| Meat of Cattle & Horses                                   | 0.25                     |
| Meat of Sheep & Goats                                     | 0.25                     |
| Meat By-Products of<br>Cattle, Goats, Horses<br>and Sheep | 2.0                      |
| Milk Fat<br>Reflecting 0.25 ppm<br>in Whole Milk          | 6.25                     |

#### RCB's Discussion/Conclusion on Deficiency #5

The petitioner has submitted a revised Section F raising the tolerances on goats, horses, and sheep commodities (along with cattle commodities) as requested. However, this tolerance expression for these animal commodities must include 3-phenoxybenzoic

acid and the petitioner should change the wording "a tolerance of 2 ppm" as shown in the first line under Proposed Tolerances to "tolerances".

RCB also notices that the revised Section F has a 3.0 ppm tolerance proposal on goat and sheep fat and a 2.5 ppm tolerance proposal on the fat of cattle and horses. RCB would prefer the petitioner to propose a single tolerance level of 3.0 ppm on the fat of cattle, goats, horses, and sheep.

#### Other Considerations

An International Residue Limits (IRL) Status sheet is attached to this review. Codex and Candian tolerances are not compatible with U.S. tolerances. No Mexican limits/tolerances are established.

Attachment 1: International Residue Limit Status Sheet

cc: RF., Circu., Reviewer-N. Dodd, PP# OF 2389, PMSD/ISB, PM #15, TOX

TS-769C:RCB/N. Dodd:MT:CM#2:Rm.800:557-1681:3/1/88

RDI:J. H. Onley; 2/25/88:R. D. Schmitt; 2/26/88

# INTERNATIONAL RESIDUE LIMIT STATUS

*J. Shes*  
*2/24/88*

CHEMICAL permethrin

CODEX NO. 120

CODEX STATUS:

☐ No Codex Proposal  
Step 6 or above

Residue(if Step 8):  
permethrin

PROPOSED U.S. TOLERANCES:

Petition No. OF2389

RCB Reviewer N. Gould

Residue: permethrin and its  
metabolites\*

| <u>Crop(s)</u>              | <u>Limit<br/>(mg/kg)</u> |
|-----------------------------|--------------------------|
| alfalfa fodder              | 100 (dry wt.)            |
| Meat of cattle, pigs, sheep | 1 (on the fat)**         |
| cattle, edible offal of     | 0.1                      |
| pig, edible offal of        | 0.1                      |
| sheep, edible offal of      | 0.1                      |

CANADIAN LIMITS:

☐ No Canadian limit

Residue: \_\_\_\_\_  
permethrin

| <u>Crop(s)</u> | <u>Limit<br/>(mg/kg)</u>       |
|----------------|--------------------------------|
| cattle         | 0.1<br>(negligible<br>residue) |

| <u>Crop(s)</u>                                             | <u>Limit<br/>(mg/kg)</u> |
|------------------------------------------------------------|--------------------------|
| alfalfa, fresh                                             | 25.0                     |
| alfalfa, hay                                               | 55.0                     |
| fat of cattle + horses                                     | 2.5                      |
| fat of goats + sheep                                       | 3.0                      |
| meat of cattle + horses                                    | 0.25                     |
| meat of sheep and goats                                    | 0.25                     |
| meat by-products of<br>cattle, goats, horses,<br>and sheep | 2.0                      |
| milk fat (reflecting 0.25<br>ppm in whole milk)            | 6.25                     |

MEXICAN LIMITS:

☒ No Mexican limit

Residue: \_\_\_\_\_

| <u>Crop(s)</u> | <u>Limit<br/>(mg/kg)</u> |
|----------------|--------------------------|
|----------------|--------------------------|

NOTES:

\*DCVA and 3-phenoxybenzyl alcohol for alfalfa;  
DCVA, 3-phenoxybenzyl alcohol and  
3-phenoxybenzoic acid for animal commodities

\*\* Revision is proposed which would expand to meat (fat basis) of all non-marine mammals.