



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

AUG 17 1988

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP#OF2389 (RCB # 2162). Permethrin on Alfalfa.  
Evaluation of Amendment dated 6/22/88

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 2  
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)

The petitioner, FMC Corporation, has now submitted an amendment to PP#OF2389 concerning the proposed tolerances for residues of permethrin and its metabolites on alfalfa and animal commodities. The amendment consists of revised Sections F and G and a cover letter dated 6/22/88.

Summary of Deficiencies Remaining to be Resolved

None

Recommendations

If TOX and EAB considerations permit, RCB recommends that the following permethrin tolerances be established in 40 CFR 180.378 for alfalfa and animal commodities as a result of the proposed use:

(b) \* \* \*

| <u>Commodity</u> | <u>Parts per million</u> |
|------------------|--------------------------|
| Alfalfa, fresh   | 25.0                     |
| Alfalfa, hay     | 55.0                     |

\* \* \* \* \*

(c) \* \* \*

| <u>Commodities</u>                           | <u>Parts per million</u> |
|----------------------------------------------|--------------------------|
| Cattle, fat                                  | 3.0                      |
| Cattle, meat                                 | 0.25                     |
| Cattle, mbyp                                 | 2.0                      |
| Eggs                                         | 1.0                      |
| Goats, fat                                   | 3.0                      |
| Goats, meat                                  | 0.25                     |
| Goats, mbyp                                  | 2.0                      |
| Hogs, fat                                    | 3.0                      |
| Hogs, meat                                   | 0.25                     |
| Hogs, mbyp                                   | 3.0                      |
| Horses, fat                                  | 3.0                      |
| Horses, meat                                 | 0.25                     |
| Horses, mbyp                                 | 2.0                      |
| Milk fat (reflecting 0.25 ppm in whole milk) | 6.25                     |
| Poultry, fat                                 | 0.15                     |
| Poultry, meat                                | 0.05                     |
| Poultry, mbyp                                | 0.25                     |
| Sheep, fat                                   | 3.0                      |
| Sheep, meat                                  | 0.25                     |
| Sheep, mbyp                                  | 2.0                      |

Detailed Considerations

Deficiency

The petitioner had been requested to submit a revised Section F.

Petitioner's Response to the Above Deficiency

The petitioner has submitted the following revised Section F:

It is proposed that tolerances 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] 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, m-phenoxybenzyl alcohol and 3-phenoxybenzoic acid in or on the following raw agricultural commodities:

| <u>Commodity</u>                                    | <u>Parts Per Million</u> |
|-----------------------------------------------------|--------------------------|
| Fat of cattle                                       | 3.0                      |
| Fat of goats and sheep                              | 3.0                      |
| Fat of horses and hogs                              | 3.0                      |
| Meat of cattle and horses                           | 0.25                     |
| Meat of sheep, goats, and hogs                      | 0.25                     |
| Meat by-products of cattle, goats, horses and sheep | 2.0                      |
| Milk fat (reflecting 0.25 ppm in whole milk)        | 6.25                     |
| Fat of poultry                                      | 0.15                     |
| Meat by-products of poultry                         | 0.25                     |

RCB's Discussion/Conclusion

The petitioner has proposed the appropriate tolerances for covering permethrin residues in fresh alfalfa and alfalfa hay. Also, he has properly amended the present tolerances (40 CFR 180.378) for covering permethrin and its metabolites in animal commodities resulting from the proposed use on alfalfa. Therefore, RCB now concludes that all deficiencies have been resolved for the proposed use of permethrin on alfalfa and recommends for establishing the tolerances in 40 CFR 180.378 as listed above under Recommendations.

Other Considerations

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

Attachment 1: International Residue Limit Status Sheet

cc: N. Dodd (RCB) , PP#0F2389, E. Eldredge (ISB/PMSD),  
Circulation (7), RF, TAS-Arne  
RDI: J.H. Onley:8/11/88:R.D.Schmitt:8/11/88  
RCB:TS-769:RCB:CM#2:RM800:N.Dodd:8/15/88:vg

# INTERNATIONAL RESIDUE LIMIT STATUS

*J. Kues*  
8/9/88

CHEMICAL permethrin

CODEX NO. 120

CODEX STATUS:

☐ No Codex Proposal  
Step 6 or above

Residue(if Step 8):  
permethrin (sum of isomers)

PROPOSED U.S. TOLERANCES:

Petition No. OF2389

RCB Reviewer N. Dodd

Residue: permethrin and its  
metabolites\*

| <u>Crop(s)</u>                                                | <u>Limit<br/>(mg/kg)</u> |
|---------------------------------------------------------------|--------------------------|
| alfalfa fodder                                                | 100 dry wt.              |
| meat of cattle, pigs<br>and sheep <sup>1/</sup>               | 1 (fat of<br>the meat)   |
| poultry meat                                                  | 0.1                      |
| edible offal (cattle, goats, horses, and sheep) <sup>2/</sup> | 0.1 <sup>3/</sup>        |
| sheep, edible offal of                                        | 0.1 <sup>3/</sup>        |
| edible offal of pig                                           | 0.1 <sup>3/</sup>        |

CANADIAN LIMITS:

☐ No Canadian limit

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

| <u>Crop(s)</u> | <u>Limit<br/>(mg/kg)</u> |
|----------------|--------------------------|
| cattle         | 0.1 <sup>4/</sup>        |
| poultry        | 0.1 <sup>4/</sup>        |

| <u>Crop(s)</u>                                    | <u>Limit<br/>(mg/kg)</u> |
|---------------------------------------------------|--------------------------|
| alfalfa, fresh                                    | 25.0                     |
| alfalfa, hay                                      | 55.0                     |
| fat of cattle, goats, hogs,<br>horses, and sheep  | 3.0                      |
| fat of poultry                                    | 0.15                     |
| meat of cattle, goats, hogs,<br>horses, and sheep | 0.25                     |
| meat of poultry                                   | 0.05                     |
| mbyr of cattle, goats, horses,<br>and sheep       | 2.0                      |
| mbyr of hogs                                      | 3.0                      |
| mbyr of poultry                                   | 0.25                     |

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

<sup>1/</sup> It is proposed that this be revised to "meat"; <sup>2/</sup> It is proposed that this be revised to

INTERNATIONAL RESIDUE LIMIT STATUS

CHEMICAL permethrin

CODEX NO. 120

CODEX STATUS:

☒ No Codex Proposal  
Step 6 or above

Residue(if Step 8): \_\_\_\_\_

permethrin (sum of isomers)

| <u>Crop(s)</u>        | <u>Limit<br/>(mg/kg)</u>                   |
|-----------------------|--------------------------------------------|
| <u>milk</u>           | <u>0.1 <sup>3/4</sup> F <sup>4/1</sup></u> |
| <u>eggs (poultry)</u> | <u>0.1</u>                                 |

PROPOSED U.S. TOLERANCES:

Petition No. OF 2389

RCB Reviewer W. Dodel

Residue: permethrin and its  
metabolites\*

| <u>Crop(s)</u>                               | <u>Limit<br/>(mg/kg)</u> |
|----------------------------------------------|--------------------------|
| <u>milk fat (0.25 ppm in<br/>whole milk)</u> | <u>6.25</u>              |
| <u>eggs</u>                                  | <u>1.0</u>               |

CANADIAN LIMITS:

☒ No Canadian limit (on milk or eggs)

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

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

MEXICAN LIMITS:

☒ No Mexican limit

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

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

NOTES:

<sup>4/1</sup> Negligible residue type limits.

<sup>5/1</sup> F just means fat soluble, but limit is whole milk basis -