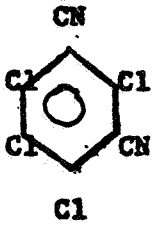
REHey:scd 5/18/67

Evaluation of Pesticide Petition Number 7F0599
For Tetrachloroisophthalonitrile "Daconil"
Submitted by Diamond Alkali Company
Filed May 1, 1967

INTRODUCTION

The chemical structure for the fungicide tetrachloroisophthalonitrile "Daconil 2787" is as follows:



The name of the product is Daconil 2787 W-75. The formulation is as follows:

Tetrachloroisophthalonitrile	75.0%
[redacted]	

Diamond is proposing the following tolerances:

PPM	CROP
15.0	Celery
7.0	Bean, (snap)
5.0	Broccoli, brussel sprouts, cauliflower
5.0	Cabbage
5.0	Carrots
5.0	Cucumbers, squash (summer)
5.0	Melons: Honeydew, muskmelon, water melon, pumpkin, cantaloupes, and squash (winter)
5.0	Tomatoes
1.0	Beans (Lima)
1.0	Corn (sweet)
0.1	Peanut
0.1	Potatoes (white)
0.1	Sugar beets

DIRECTIONS FOR USE

Snap beans - 3 lbs./A (2.25 lbs. A/A) - apply at early bloom and repeat at weekly intervals. Seven day PHI. Do not feed treated plant parts to livestock.

Cabbage, broccoli, brussels sprouts, and cauliflower - 1.5 lbs./A (1.125 lbs. A/A) - apply to transplants of up to transplant size plants at 7 to 10 day intervals.

Carrot - 2 lbs./A (1.5 lbs. A/A) at sign of disease at 7 to 10 day intervals.

Cucumbers - 3 lbs./A (2.25 lbs. A/A) at first true leaf stage at seven day intervals.

Cantaloupe, muskmelon, honeydew, watermelon, squash, and pumpkin - 3 lbs./A (2.25 lbs. A/A) at first true leaf stage at seven day intervals.

Celery - 3 lbs./A (2.25 lbs. A/A) when transplants are set in field at seven day intervals.

Corn (sweet) - 2 lbs./A (1.75 lbs. A/A) - at 4 to 7 day intervals. Do not feed treated forage to livestock.

Lima bean - 2 lbs./A (1.75 lbs. A/A) - at early bloom - 4 to 7 day intervals. Do not feed treated plant parts to livestock.

Peanuts - 1.5 lbs./A (1.125 lbs. A/A) at 10 to 14 day intervals. Do not feed treated plant parts to livestock.

Potatoes - 1.5 lbs./A (1.125 lbs. A/A) when plants are six inches high at 7 to 10 day intervals.

Sugar beet - 2 lbs./A (1.75 lbs. A/A) - at 10 to 14 day intervals. Do not feed treated sugar beets to livestock.

Tomatoes - 3 lbs./A (2.25 lbs. A/A) - at 7 to 10 day intervals.

Do not graze on treated areas or feed plant refuse to livestock.

ANALYTICAL METHOD

A gas chromatographic method with microcoulometric detector and electron capture detectors. Method modified from previous method because of the different crops.

DISCUSSION OF DATA

Metabolism - compound is excreted in feces of rats and dogs. About 90% remains unchanged. No metabolites have been found in plants or soil.

Soil studies - very short 1/2 life in high organic soils, about one week. Georgia turf treated at 4 oz. has a 1/2 life of 54 days while Mississippi soil has a 1/2 life of 26 days.

Crop residue data. Residue data is not acceptable; therefore, it is not listed.

1. Residue data are insufficient to support the proposed uses.

2. Residue data are insufficient as to analyses of macerated samples.

3. Residue data are needed for watermelon vine, sugar beet tops, and peanut hulls.

4. Feeding caution for sugar beet tops and lima and snap beans is impractical as processing mill will not be able to distinguish between treated and untreated crops. This would also apply to peanut hulls.

RECOMMENDATIONS

An unfavorable opinion is given. The reasons for this opinion are stated in above section listed as crop residue data.

R. E. Ney

To: William Stokes, Assistant to the Director
BSSE, Food and Drug Administration
Department of Health, Education, and Welfare

From: Harry W. Hays, Director

Subject: Pesticide Petition Number 7F0599 requesting tolerances for tetrachloroisophthalonitrile, submitted by Diamond Alkali Company, and filed May 1, 1967.

We have completed our examination of the residue data, analytical methods employed, and other pertinent information contained in this petition for tolerances of 15.0 parts per million (ppm) in or on celery, 7.0 ppm in or on bean (snap), 5.0 ppm in or on broccoli, brussels sprouts, cabbage, carrots, cauliflower, cucumber, melons (cantaloupe, honeydew, muskmelon, and watermelon), pumpkin, squash (summer), squash (winter), and tomatoes, 1 ppm in or on bean (lima) and corn (sweet), and 0.1 ppm in or on potatoes (white) and sugar beets for tetrachloroisophthalonitrile. In accordance with the requirements of Public Law 518, 83rd Congress, we herein offer an opinion as to whether the proposed tolerances reasonably reflect the amounts of residues likely to result when this pesticide chemical is used as proposed.

An unfavorable opinion is given on all crops for the following reasons:

1. The analytical method is not satisfactory. Many of the crops were only surface extracted, and the percentage of recovery is not consistent.

2. There are insufficient residue data.

3. The caution against feeding lima bean plant parts is unrealistic.

cc: D. W. Dean

ARS:PR:RENey:scd 5/22/67

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RSPA

MAY 16 1967

OPINION
DRAFT FOR CHEMISTS

JW

TO : ~~Frank J. McFarland~~, Assistant to the Director
BPS, Food and Drug Administration
Department of Health, Education, and Welfare

FROM : ~~Justus C. Ward~~, Director, Pesticides Regulation Division
ARS, U.S. Department of Agriculture

SUBJECT : Pesticide Petition No. 7F0599 requesting (~~s~~) tolerance(s) for (1), submitted by Diamond Alkali Company, and filed May 1, 1967.

We have completed our examination of the residue data, analytical (~~method~~ - methods) employed, and other pertinent information contained in this petition for (~~a~~) (~~tolerance~~ - tolerances) of 15.0 part(s) per million (ppm) ~~for~~ (2) ~~in or on~~ .

In accordance with the requirements of Public Law 518, 83rd Congress, we herein offer an opinion as to whether the proposed (~~tolerance~~ - tolerances) reasonably (reflect - ~~reflects~~) the (~~amount~~ - amounts) of (~~residue~~ - residues) likely to result when this pesticide chemical is used as proposed.

It is the opinion of this Department that the proposed (tolerance - tolerances) reasonably (reflect - reflects) the (amount - amounts) of (residue - residues) likely to result.

(1) tetrachloroisophthalonitrile

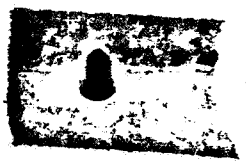
(2) in or on celery, 7.0 ppm in or on bean (snap), 5.0 ppm in or on broccoli, brussel sprouts, cabbage, carrots, cauliflower, cucumber, melons (cantaloupe, honeydew, muskmelon and watermelon), pumpkin, squash summer, squash winter, tomatoes, 1 ppm in or on bean (lima), 0.2 ppm (sweet) and 0.1 ppm in or on potatoes (white) and sugarbeets

tetrachloroisophthalonitrile.

An unfavorable opinion is given to ~~for~~ all crops ~~because of~~ the following reasons:

1. There are ~~Insufficient~~ analytical ~~data~~ ~~from~~ macerated ~~samples and residue data~~ to support ~~the~~ proposed uses.
2. There is ~~Insufficient~~ residue data, particularly on watermelon rind, ~~sugarbeet tops~~ and peanut hulls.
3. The ~~Caution against~~ feeding sugarbeet tops and lima and snap bean plant parts is unrealistic ~~unrealistic~~, the processing mills could not distinguish between treated and untreated plants. This would also apply to peanut hulls. The Food and Drug Administration has found that peanut hay and shells are being fed to livestock.

1 # The analytical ~~method~~ is not satisfactory ~~for enforcement purposes~~. Many of the crops were only surface extracted, and the percentage recovery runs from 50-100%




JUN 7 1967

OPINION
DRAFT FOR CHEMIST

To: William Stokes, Assistant to the Director
BSSE, Food and Drug Administration
Department of Health, Education, and Welfare

From: Harry W. Hays, Director

Subject: Pesticide Petition Number 7F0599 requesting (a) tolerance(s) for Tetrachloroisophthalonitrile (Daconil submitted by Diamond Alkali Company, and filed May 1st, 1962.

Please refer to our Memorandum of May 24, 1967.

Based on additional information and discussion with representatives of the petitioner, we now wish to revise our opinion as follows.

It is the opinion of this Department that the proposed tolerances reasonably reflect the amounts of residues likely to result. This revised opinion is subject to these comments:

1. Some of the proposed tolerances for crops within a group are higher than necessary. However, for the groups the tolerances would be reasonable

2. The caution against feeding

Lima bean pod [redacted] not realistic.

Attention is called to the enclosed letter from Diamond Alkali dated June 2, 1967. These data were requested to substantiate the reproducibility of the analytical method procedure. A favorable opinion is ~~now~~ given in that the analytical method is suitable.

ROUGH DRAFT

REney:scd 6/7/67

To: William Stokes, Assistant to the Director
BSSE, Food and Drug Administration
Department of Health, Education, and Welfare

From: Harry W. Hays, Director

Subject: Pesticide Petition Number 7F0599 requesting ~~x~~ tolerances for tetrachloroisophthalonitrile (Daconil) submitted by Diamond Alkali Company, and filed May 1, 1967.

Please refer to our memorandum of May 24, 1967.

Based on additional information and discussion with representatives of the petitioner, we now wish to revise our opinion on residues.

It is the opinion of this Department that the proposed tolerances reasonably reflect the amounts of residues likely to result.

This revised opinion is subject to these comments:

1. Some of the proposed tolerances for crops within a group are higher than necessary. However, for the groups the tolerances would be reasonable.

2. The caution against feeding lima bean parts is not realistic.

Attention is called to the enclosed letter and data from Diamond Alkali dated June 2, 1967. These data [redacted] substantiate the reproducibility of the analytical method. A favorable opinion is given in that the analytical method is suitable.

Enclosures

ROUGH DRAFT

REney:scd 5/17/67

To: William Stokes, Assistant to the Director
BSSE, Food and Drug Administration
Department of Health, Education, and Welfare

From: Harry W. Hays, Director

Subject: Pesticide Petition Number 7F0599 requesting tolerances for tetrachloroisophthalonitrile, submitted by Diamond Alkali Company, and filed May 1, 1967.

We have completed our examination of the residue data, analytical methods employed, and other pertinent information contained in this petition for tolerances of 15.0 parts per million (ppm) in or on celery, 7.0 ppm in or on bean (snap), 5.0 ppm in or on broccoli, brussel sprouts, cabbage, carrots, cauliflower, cucumber, melons (cantaloupe, honeydew, muskmelon, and watermelon), pumpkin, squash (summer), squash (winter), and tomatoes, 1 ppm in or on bean (lima) and corn (sweet), and 0.1 ppm in or on potatoes (white) and sugar beets for tetrachloroisophthalonitrile. In accordance with the requirements of Public Law 518, 83rd Congress, we herein offer an opinion as to whether the proposed tolerances reasonably reflect the amounts of residues likely to result when this pesticide chemical is used as proposed.

An unfavorable opinion is given on all crops for the following reasons:

1. ~~The~~ The analytical method is not satisfactory. Many of the crops were only surface extracted, and the percentage recovery ~~varies from 50 [illegible]~~ is not consistent

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2. There are insufficient residue data, particularly on watermelon vine and peanut hulls.

3. The caution against feeding sugarbeet tops and lima and snap bean plant parts is unrealistic. The processing mills could not distinguish between treated and untreated plants. This would also apply to peanut hulls. The Food and Drug Administration has proved that peanut hay and shells are being fed to livestock.

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