



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

11-21-83

NOV 21 1983

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

PP#3F2840 Iprodione on lettuce. Amendment of 9/27/83
Access. No. 071983

FROM: K. H. Arne, PhD., Chemist *K. H. Arne*
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

THRU: Charles L. Trichilo, Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *CLT*

TO: Henry Jacoby, PM Team No. 21
Registration Division (TS-767)
and
Toxicology Branch
Hazard Evaluation Division (TS-769)

In our initial review of this petition (memo of 7/1/83, K. Arne) we recommended against the proposed tolerance for iprodione on lettuce. For further consideration we required the following:

1. Additional residue data representative of the maximum proposed use and minimum PHI from major lettuce producing areas to include the Imperial Valley of California.
2. Residue data representing all types of lettuce or restriction of this use to those types of lettuce for which adequate residue data that support the proposed tolerance are available. Also, a tolerance should be proposed only for those types of lettuce on which use is intended.

With this amendment the petitioner has submitted additional residue data from eight experiments (three in Arizona, five in California) on winter grown lettuce in the Imperial Valley. Head lettuce was treated three times with 1.0 lb. a.i./A iprodione, the maximum proposed use, and harvested 7 (or 9) and 14 days later; the label stipulates a 7 day PHI. At harvest the obviously withered and dead leaves were discarded. The outer wrapper leaves (i.e., all but the 6 innermost wrapper leaves), the inner wrapper leaves, and the remaining head were placed in separate plastic bags then kept frozen until analysis. Rhone-Poulenc Analytical Method No. 151, which has been successfully tried out and is discussed in our review of PP#3G2801 (memo of 4/11/83, N. Dodd) was used to determine residues of parent (RP-26019), its isomer (RP-30228), and the regulated metabolite, 3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidine-carboxamide (RP-32490). The data for lettuce harvested at 7 and 9 days are summarized following:

Residues in lettuce treated with 3 applications of 1.0 lb a.i./A
and harvested after 7 or 9 days

Plant Part	Residue (ppm)			
	RP-26019	RP-30228	RP-32490	Total
head	0.27-1.3	<0.05	<0.05	0.37-1.4
inner wrapper leaves	22-34	0.11-0.26	0.10-0.14	22.2-34.4
outer wrapper leaves	5.9-31	0.05-0.17	<0.05-0.10	6.1-31.3

The combined wrapper leaves account for 30-40% of the weight and the head accounts for 60-70%. Thus, in terms of the potential for residues, a worst case situation would be one in which wrapper leaves, making up 40% of the weight, carried residues of 34 ppm and the trimmed head, making up 60% of the weight, carried residues of 1.4 ppm. The maximum residue is calculated as follows:

$$60\% \times 1.4 \text{ ppm} + 40\% \times 34 \text{ ppm} = 14.4 \text{ ppm}$$

The 14.4 ppm figure is somewhat exaggerated as the wrapper leaves tended to comprise less than 40% of the weight, especially when higher (wrapper leave) residues were uncovered. We consider these data to represent growing conditions (cool weather, little rainfall) that would maximize the potential for residues and to support a tolerance of 15 ppm for head lettuce, which the petitioner has proposed in a revised Section F. A tolerance of 5 ppm was proposed originally.

The petitioner has also submitted a revised Section B which limits this use to head lettuce. All RCB deficiencies concerning this petition have now been resolved.

Also submitted with this petition is a report dated July 6, 1983 and entitled "Iprodione Residue Data Rotational Situations." This study was undertaken to establish whether residues as a result of treating successive crops of lettuce would be of significance. Because the rates and PHI's in this study are exaggerated with respect to the proposed use it is of little use to us. It does not appear to have been intended for review by RCB.

Recommendation

Toxicological and EAB considerations permitting, we recommend for the proposed tolerance on lettuce.

TS-769:KHArne:KHA:CM-2:Room810:557-7377:11/19/83
CC - RF, Circ., KHA, Thompson, TOX, EAB, EEB, FDA, PP#3F2840
RDA - Nelson, 11/18/83, RDS, 11/18/83

INTERNATIONAL RESIDUE LIMIT STATUS

Arne

CHEMICAL Iprodione

PETITION NO 3F2840

CCPR NO: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide

11/15,

Codex Status

☐ No Codex Proposal
Step 6 or above

Residue (if Step 3): _____

Iprodione

Crop(s) Limit (mg/kg)

lettuce 10

Proposed U. S. Tolerances

Parent plus isomer (3-(1-methylethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide plus metabolite 3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide

Crop(s) Tol. (ppm)

lettuce 15 ppm

CANADIAN LIMIT

Residue: _____

Crop Limit (ppm)

none (on lettuce)

MEXICAN TOLERANCIA

Residue: _____

Crop Tolerancia (ppm)

none

Notes:

1/ Consideration needs to be given to whether the Codex definition of residue can be used, and if not why not.