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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

Subject: 87-FL-05: Section 18 Emergency Exemption for Iprodione on Carrots. No Accession Number, RCB Number 1861.

From: Francis B. Suhre, Chemist
Special Registration Section II
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

Thru: Edward Zager, Section Head
Special Registration Section II
Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

To: D. Stubbs/J. Tompkins, PM-41
Registration Support and Emergency
Response Branch
Registration Division (TS-767)

And

Toxicology Branch
Hazard Evaluation Division (TS-769)

The Florida Department of Agriculture and Consumer Services has requested a Section 18 exemption to use iprodione on carrots to control Alternaria leaf blight.

Rovral® Fungicide, Manufactured by Rhone-Poulenc, Inc., is the commercial product intended for use; it is formulated as a wettable powder containing 50% 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide, iprodione, as its active ingredient.

Tolerances are established (40 CFR 180.399a) for combined residues of iprodione, 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide, its isomer 3-(1-methylethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide, and its metabolite 3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide in or on several raw agricultural commodities. Tolerances range from 0.1 ppm on garlic to 150 ppm on peanut forage and hay.

No permanent tolerances are established for carrots; however, a petition (PP#7E3474) for the establishment of tolerances for iprodione residues in or on carrots at 5.0 ppm is currently under review.

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The metabolic nature of iprodione in plants was discussed in RCB's review of PP#0G2402 (L. Propst, memo of 11/28/80). The residues of concern are those compounds identified in the tolerance expression, i.e.: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide (RP-26019); its isomer 3-(1-methylethyl)-N-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidine (RP-30228); and its metabolite 3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide (RP-32490).

Registered uses of Rovral Fungicide call for multiple application of 1.0 to 4.0 lbs. (0.5 to 2 lbs. a.i./acre). Treatment of stone fruit reflect the maximum registered use, with up to 5 applications per season at 1 lb. a.i./A (5 lbs. a.i./A/season) being made to control Fruit Brown Rot. The product may be applied up to the day of harvest (0 day PHI).

The Section 18 emergency exemption proposes multiple application of Roval fungicide (up to 8 per season) at rates of 1.0 to 2.0 lbs. (0.5 to 1.0 lbs. a.i.) per acre to control Alternaria blight on carrots. The maximum application rate proposed by this Section 18 request is 8 lbs. a.i./A with a 0 day PHI stipulated. 8,000 acres of carrots in Florida are to be treated with a maximum of 48,000 lbs. (24,000 lbs. a.i.) of Roval Fungicide.

The analytical method, described in PP#7E3474, is considered adequate for the purpose of this Section 18 emergency exemption; however, a final decision on the method must await completion of our review of PP#7E3474. The method (Method No. 151) utilizes gas chromatography and electron capture detection for its determinative step. The method's limits of detection are reported to be 0.05 ppm for all three compounds (RP-26019, RP-30228, and RP-32490). Recoveries are summarized below:

Spiking Level (ppm)	% Recovery (Mean) RP-26019	RP-30228	RP-32490
0.1 to 1.0	111.28 (N=6)	79.86 (N=5)	95.08 (N=5)
2.0 to 10	117.92 (N=6)		

Residue data on carrots were provided to the Agency in support of PP#7E3474 (currently under review). 10 field trials in Arizona (1), California (3), Florida (1), Michigan (1), New Jersey (1), Oregon (1), and Texas (2) were conducted during the period 1983 to 1985. These states represent the major carrot growing regions

of the United States; their harvest of carrots accounted for >92% of the 1983 U.S. harvest.

Total residues resulting from carrots treated with Roval at 1x (8 lbs. a.i./acre/season; 0 day PHI) and 2x (16 lbs. a.i./acre/season; 0 day PHI) ranged from 0.49 to 3.18 ppm and 0.91 ppm to 7.22 ppm, respectively.

Meat, Milk, Poultry and Eggs

Cull carrots may occasionally be used as a livestock feed item. This use, however, is not expected to significantly impact on secondary residues in meat, milk, poultry, and eggs, particularly compared to the high tolerances (150 ppm) established for peanut forage and hay.

Conclusions

1a. Tolerances are established (40 CFR 180.399a) for combined residues of (3,5-dichlorophenyl)-N-(1-methylethyl)-2, 4-dioxo-1-imidazolidinecarboxamide, its isomer 3-(1-methylethyl)-N-(3, 5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide, and its metabolite 3-(3,5-dichlorophenyl)-2,4-dioxo-1-imidazolidinecarboxamide in or on several raw agricultural commodities. Tolerances range from 0.1 ppm on garlic to 150 ppm on peanut forage and hay.

1b. No permanent tolerances are established for carrots; however, a petition (PP#7E3474) for iprodione residues in or on carrots at 5.0 ppm is currently under review.

2. The metabolic nature of iprodione in plants is adequately understood for the purpose of this emergency exemption. The compounds identified in 40 CFR 180.399a are the residues of concern.

3. The gas chromatography method described in PP#7E3474 is adequate for the purposes of this Section 18 exemption.

4. Data, provided in support of PP#7E3474, indicates that combined residues of iprodione (as defined in 40 CFR 180.399a) in or on carrots will not exceed 5.0 ppm as a result of this Section 18 request.

5. The levels of secondary residues in meat, milk, poultry, and eggs are not expected to exceed established tolerances.

6. Analytical standards for iprodione (RP-26019), its isomer (RP-30288) and its metabolite (RP-32490) are available from the Pesticide and Chemical Repository in RCP, NC.

Recommendation

TOX considerations permitting we have no objection to the issuance of this Section 18 request. An agreement with the FDA should be reached regarding the legal status of the commodity in commerce.

cc:R.F.,Circu,Reviewer,S.F.,Section 18,PMSD/ISB
RDI:EZ:2/3/87:RDS:2/3/87
TS-769:RCB:FBS:fbs:557-0934:CM#2:RM:814:2/4/87