US EPA ARCHIVE DOCUMENT

R.E. 2-7-89

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

FEB 7 1989

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

Memorandum

Subject: 89-FL-15. Section 18 Specific Exemption for the Use Vinclozolin (Ronilan[R] WP, EPA Reg. No. 7969-53) on on Blueberries.
No Accession Number / No MRID Number
DEB #4839

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The Florida Department of Agriculture and Consumer Services requests a Section 18 Specific Exemption authorizing application of the fungicide vinclozolin (Ronilan[R] WP, 8lbs/A/season wettable powder) on blueberries to control Botrytis cinerea (gray mold).

Tolerances are established (40 CFR 180.380a) for residues of the fungicide vinclozolin, 3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-2,4 oxazolidinedione, and its metabolites containing the 3,5-dichloroaniline moiety, in or on kiwi fruit, head lettuce, and strawberries (10 ppm). Numerous tolerances are pending ranging from 0.05 (cattle meat, milk, poultry meat, fat) to 75 ppm (food additive, dried prunes).

The proposed use includes multiple applications of Ronilan^{R} WP at 1 to 2 lbs/A (1/2 to 1 lbs ai/A) in 100 gallons of water for ground spraying or in 20 gallons of water for air spraying. The first treatment will be applied at 10% bloom with additional applications every 7-10 days or after frost protection or after heavy fogs or rains. The preharvest interval is 21 days. The application is not to exceed 8 lbs of Ronilan^{R} WP (4 lbs ai) per acre per season. Approximately 1,500 acres are to be treated between mid-January and mid-June 1989.

Based on studies using ^{14}C-vinclozolin, the metabolism includes decarboxylation, dealkylation and conjugation leading to 8 major metabolites containing the 3,5-dichloroaniline moiety (PP#1E2457, memo of 4/27/81, J. Onley). The parent compound together with these metabolites comprise the residues of concern.

The analytical method, BWC Agricultural Chemicals Method No. 25 F, was used to quantitate the residues of concern in blueberries. The residue data on blueberries was submitted with this Section 18. The analytical method has been described previously in PP#3F2934 (Accession #671761, MRID #129563). The method involves an alkaline hydrolysis converting the parent compound and all the metabolites to 3,5-dichloroaniline (DCA). DCA is then isolated by steam distillation. The DCA is extracted from the aqueous solution and derivatized with chloroacetyl chloride then analyzed by GLC using a Ni 63 electron capture detector. This method for blueberries has a limit of quantitation of 0.05 ppm of vinclozolin equivalents. Recoveries for analyses averaged 76 +/- 3% (N=5) for blueberries. Fortification with vinclozolin ranged from 0.50 ppm to 10.0 ppm.

Residue data from blueberries treated with Ronilan^{R} were submitted with this request. The residue data is summarized in the table on the next page.

Based on these data and for the purposes of this Section 18 <u>only</u>, we conclude that the residues of vinclozolin and its metabolites containing the 3,5-dichloroaniline moiety are not likely to exceed 10 ppm in or on blueberries as a result of the proposed use.

Blueberries are not an animal feed item; therefore, secondary residues are not a problem. Tolerances have yet to be established for meat and milk products.

Summary of Residue from Blueberry Study

Application Rate (lb ai/A)	PHI (days)	Residue (ppm vinclozolin equivalents)	State
0.5(2x)	84	0.66	ME
0.5(3x)	74	1.9	ME
0.75(3x)	74	0.56	ME
1.0	84	0.74	ME
1.0(2x)	6	0.38	NC
1.0(2x)	7	1.6	WA
1.0(2x)	35	0.79	CT
1.0(2x)	84	0.64	ME
1.0(3x)	18	0.64	NJ
1.0(3x)	18	0.76	NJ
1.0(3x)	38	0.82	MI
1.0(3x)	74	1.3	ME
1.0(4x)	6	0.67	WA
1.0(4x)	7	0.79	MI
2.0(2x)	6	1.1	NC
2.0(2x)	7	1.7	MI
2.0(2x)	7	3.1	WA
3.0(2x)	6	1.3	NC
3.0(2x)	7	3.7	MI
3.0(2x)	7	8.2, 9.2	WA

Conclusions

(1) The residues of concern are the parent, vinclozolin, and metabolites containing the 3,5-dichloroaniline moiety.

(2) Analytical methods are available for enforcement of the proposed 10 ppm tolerance (BWC Agricultural Chemicals Method No. 25F). MRID No. 129563.

(3) For the purposes of this Section 18 only, we conclude that residues of vinclozolin and its metabolites containing the 3,5-dichloroaniline moiety will not exceed 10 ppm as a result of the proposed use.

(4) Blueberries are not an animal feed item; therefore, secondary residues in milk, eggs, and meat will not occur based on the proposed use.

(5) Analytical reference standards are available from the Pesticide and Industrial Chemicals Repository.

Recommendations

DEB has no objections to this Section 18. An agreement should be made with the FDA regarding the legal status of the treated commodities in commerce.

cc:RF, Circ, Section 18 F, PMSD/ISB, Stanton (SACB), JSmith
RDI:ARathman:02/07/89:RDSchmitt:02/07/89
TS-769:DEB:JSmith:Rm803a:CM#2:02/07/89