

US EPA ARCHIVE DOCUMENT



PC 108201 R.F.

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

FEB 27 1996

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Memorandum:

SUBJECT: Diflubenzuron in/on Orange, Grapefruit, and Tangerine.
SLN 24(c). Amended Use. (No MRID #'s. CBTS# 16815, DP
Barcode# D222658).

FROM: Jerry B. Stokes, Chemist
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Health Effects Division (7509C) *Jerry B. Stokes*

THRU: Ed Zager, Acting Chief
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TO: D. Edwards/P. Schroeder, PM #18
Insecticide-Rodenticide Branch
Registration Division (7505C)

The state of Florida has issued a SLN 24(c) registration to increase the allowable label application for diflubenzuron per season. The proposed increase is from 20 oz to 60 oz (ground only) for the formulation MICROMITE®25W on orange, grapefruit, and tangerine. The proposed spray interval is 8 weeks. The present 21-day PHI remains unchanged.

Recommendation:

CBTS has no objection to this SLN 24(c) as long as the UNIROYAL Chemical Co., Inc. clarifies whether MICROMITE®25W is to be used on bearing and/or non-bearing trees. The residue data are adequate to support both uses. A revised label must be submitted.

Detailed Considerations:

Proposed Use:

The formulation MICROMITE®25W (a.i. 25% diflubenzuron) is identical to DIMILIN®25W. The Section 3 label for MICROMITE®25W allows application to control the citrus rust mite on orange, grapefruit, and tangerine at a maximum label rate of 5 oz a.i./A/season. The



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proposed SLN label is against a different pest Diaprepes abbreviatus and requests an 3X rate increase in comparison to the existing Section 3 label. The proposed SLN label lists "FOR USE ON CITRUS (in greenhouse, shadehouse, field grown nurseries, solid settings, and resets)." However the label also states " Do not apply MICROMITE®25W within 21 days of harvest. Thus, the proposed label use initially only lists non-fruit bearing trees, while the restriction is in reference to fruit-bearing trees. The RD package received by CBTS contains additional reference materials including a justification in which it clearly states that the purpose of this SLN is to control the citrus root weevil complex on fruit-bearing and non-bearing trees. The label is inadequate.

The label must be clarified to reflect the proposed use.

Magnitude of the Residue:

NOTE: This discussion below of the field trial residue assumes that the proposed label rate of 5 oz a.i./application for 3 applications/season with a spray intervals of 56 days will be used on fruit-bearing trees.

No new field data are submitted with this SLN request. Field trail data are available in PP#1F2507 in which diflubenzuron residues were sampled 0, 7, 14, 21, 28, 35, 42 and 56 days after 3 applications at 5 oz a.i. (1X proposed label rate) and 20 a.i. (4X proposed label rate). The spray intervals ranged from 90 to 120 days for these trials. The proposed spray interval is 56 days.

Site/ trial No.	Diflubenzuron Residues (in ppm) On Day Harvested						
	0	7	14	21	28	35(42)	56
5 oz a.i./A/application, 3 applications/season							
	0.18	0.24	0.15	-	0.26	-	0.22
FL/1447	0.24	-	-	0.20	0.11	-	0.25
FL/1441	0.07	-	-	-	<0.05	-	-
"	0.10	-	-	-	<0.05	-	-
FL/1443	0.19	-	-	-	0.08	-	-
"	0.10	-	-	-	0.07	-	-
FL/1445	0.15	-	-	-	0.07	-	-
"	0.19	-	-	-	0.11	-	-
FL/1449	0.16	-	-	0.18	-	-	-
"	0.16	-	-	0.10	-	-	-
FL/1450	0.35	0.20	0.29	0.22	0.41	0.14	-
"	-	0.06	0.20	0.10	0.11	0.21	-

Site/ trial No.	Diflubenzuron Residues (in ppm) On Day Harvested						
	0	7	14	21	28	35(42)	56
"	0.20	0.27	0.29	0.30	0.36	0.21	-
12/1451	0.14	-	-	0.09	-	-	-
"	0.07	-	-	0.15	-	-	-
FL/1439	0.16	-	-	0.13	0.21	-	-
FL/1442	0.10	-	-	0.10	-	-	-
"	0.14	-	-	0.13	-	-	-
FL/1444	0.09	-	-	<0.05	-	-	-
FL/1446	0.15	-	-	<0.05	-	-	-
"	0.11	-	-	0.13	-	-	-
FL/1452	0.07	-	-	<0.05	-	-	-
"	0.09	-	-	0.09	-	-	-
FL/1377I	-	-	-	0.28uw ¹			
				0.14w ²			
FL/1406	-	-	0.13uw				
			0.09w				
FL/1350	-	-	-	0.09uw			
				<0.05w			
20 oz a.i./A/application, 3 applications/season							
FL/1447	1.2	-	-	0.74	<0.05	-	0.44
FL/1441	0.21	-	-	-	0.14	-	-
"	0.23	-	-	-	0.26	-	-
FL/1443	0.23	-	-	-	0.06	-	-
"	0.38	-	-	-	0.15	-	-
FL/1445	0.21	-	-	-	0.14	-	-
"	0.44	-	-	-	0.40	-	-
FL/1449	0.27	-	-	0.35	-	-	-
"	0.76	-	-	0.49	-	-	-
FL/1451	0.56	-	-	0.34	-	-	-
"	0.18	-	-	0.73	-	-	-
FL/1439	0.62	-	-	0.40	0.32	-	0.91
FL/1442	0.31	-	-	0.54	-	-	-
"	0.46	-	-	0.59	-	-	-

Site/ trial No.	Diflubenzuron Residues (in ppm) On Day Harvested						
	0	7	14	21	28	35(42)	56
FL/1444	0.49	-	-	0.20	-	-	-
"	0.41	-	-	0.48	-	-	-
FL/1446	0.26	-	-	0.85	-	-	-
"	0.34	-	-	0.65	-	-	-
FL/1452	0.16	-	-	0.28	-	-	-
"	0.31	-	-	0.24	-	-	-
FL/1377I	-	-	-	0.34uw			
				0.33w			
FL/1406	-	-	0.35uw				
			0.26w				
FL/1350	-	-	-	0.19uw			
				0.17 w			

- 1 unwashed fruit
2 washed fruit

Although the residue data at the proposed 5 oz a.i./application at 3 applications/season were not conducted at a 56-day spray interval, but at longer spray intervals (i.e. 90 to 120 days for a major of the above field trail data), CBTS does not believe that measurable diflubenzuron residues on orange, grapefruit, or tangerine will exceed the established 0.5 ppm tolerance. The residue data for the 20 oz a.i./application data give additional support in that even the 4X exaggerated rate gave diflubenzuron residues less than the established 0.5 ppm tolerance, or less than twice <1.0 ppm) this 0.5 ppm tolerance in samples analyzed at the label 21-day PHI.

The residue data are adequate to support the proposed SLN label if diflubenzuron is applied to 1) fruit-bearing trees, harvested at a 21-day PHI, or 2) non-bearing trees.

cc: J. Stokes (CBTS); SLN 24(c) diflubenzuron; R.F.; Circu
RDI: EZager:02/27/96
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