

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

11-18-76
File 1871

SUBJECT: PP#6G1871 - Chlorothalonil (Daconil) in citrus at
0.5 ppm; proposal for a tolerance

DATE: NOV 18 1976

FROM: David L. Ritter
TOX/RD WH-567

David Ritter 11/17/76
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TO: D. Stubbs
SRS/RD WH-567
and
CHM/RD WH-567

Diamond Shamrock
Cleveland, Ohio

The toxicity of daconil has been defined for tolerance purposes
and tolerances have been established for residues in crops pursuant
to 40 CFR 180.275.

I recommended favorably for tolerances in my review of PP#61749/6E1761,
7/15/76, on the basis that we had a chronic NEL of 60 ppm in dogs and
that there were no TOX data deficiencies at that time.

Recommendation:

We recommend that the proposed tolerance for residues of chlorothalonil
be established, CHM considerations permitting. The tolerance may be set
to include the 4-OH metabolite if needed.

We defer the question of secondary residues in meat, eggs and milk to CHM.

- 1.0 Introduction
- 1.1 Bravo, Daconil, Forturf
- 1.2 Percent Active: 39% ai
4 lbs ai/gallon
- 1.3 Citrus fruits as an abscission aid.
- 1.4 Other environmental reviews:

677-313 6/22/76, 4/21/76
677-EUP 3/04/76
1F1024 5/04/71

2.0 Directions for Use

- 2.1 Do not reuse empty container. Bury it or triple rinse and incinerate it.
- 2.2 Sweep alone does not cause abscission. Sweep exerts a synergistic effect when used with Release and/or Acti-Aid.

2.3 Specific Use Directions

Read and follow all label directions for SWEEP, RELEASE and ACTI-AID. Use only in Florida on oranges for processing.

	Application Rate* (See note below.)		
	<u>Sweep</u>	<u>Release</u>	<u>Acti-Aid</u>
	(Quarts/500 gal.)		
Early and Mid-season varieties	1/2 to 2 (1/2 to 2 lbs ai)	plus 1/4 to 1	plus 1/8 to 1/2
Valencia	1 (1 lb ai)	plus 1 to 2	plus 1/4

	<u>Sweep</u>		<u>Acti-Aid</u>
	(Quarts/500 gallons)		
Early and Midseason Varieties	2 (2 lbs ai)	plus	1/2 to 3/4
Valencia	NOT RECOMMENDED		

	<u>Sweep</u> (Quarts/500 gallons)		<u>Release</u>
Early and Midseason Varieties	1	plus	3/4 to 1-1/4
Valencia	1 (1 lb. a1)	plus	2 to 2-1/2

***Note:** Important considerations for maximum fruit loosening:

- A. Apply all treatments with 2 quarts of Ortho X-77 per 500 gallons.
- B. Use SNEEP with the lower concentrations of the indicated rate range of abscission chemical(s) when temperatures are above 50°F with early and midseason varieties and during the early and late part of the Valencia harvest. Also use when harvesting by hand or with shaker-catch frame or limb shaker mechanical harvesting.
- C. Use SNEEP with the higher concentrations of the indicated rate range of abscission chemical(s) when temperatures are below 50°F, and during the middle of the Valencia harvest when fruit are less responsive to abscission chemicals. Also use when air harvesting or harvesting when preharvest fruit drop is desirable.
- D. Keep the ratio of quarts of ACTI-AID (Component A) to quarts of SNEEP at 1 to 4 when the two are used in combination with RELEASE for maximum fruit loosening.

2.4

Application Volume and Equipment

Make application 4 to 7 days prior to anticipated harvest. Apply 500-1000 gallons per acre with equipment that has been properly calibrated and nozzles properly arranged to obtain uniform fruit coverage. Coverage of leaves and fruit is important for maximum effectiveness, especially in the tops of tall trees. Gallonage per tree varies from 5 to 10 gallons depending on tree shape, size, foliage and spacing.

2.5 When to Harvest

Fruit will begin to loosen two to three days after application. The desired fruit removal force of about 6 pounds or less will be reached 4 to 7 days after application depending on the variety and the environmental conditions. More rapid loosening is obtained under high temperature and humidity conditions.

2.6 General Use Precautions

DO NOT APPLY:

1. On fresh market oranges.
2. When rain is predicted within 24 hours, although a light, misty rain 6 to 8 hours after application should not greatly reduce effectiveness.
3. On trees following heavy dew until the moisture has dried from the fruit and leaves.
4. Within 2 weeks following a freeze.
5. In wind conditions that favor drift.
6. In combination with ACTI-AID alone on Valencias.
7. More than once per season.

Trees under stress conditions such as drought, insect or disease infestations, etc., produce more ethylene in the absence of abscission chemical treatment. Application of abscission chemicals containing SWEET to trees under stress may cause additional leaf drop.

3.0 Summary

For an experimental use permit, only hydrolysis and aerobic soil metabolism studies are needed. There is adequate data on file to concur with the proposed use under the EUP.

4.0 Recommendations

We concur with the proposed use under the EUP.

RE May 10/26/76

**Ronald E. May, Jr. 10/14/76
Nancy Dodd 10/14/76
Environmental Chemistry Section
Efficacy and Ecological Effects Branch**

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