

Newsletter No. 15

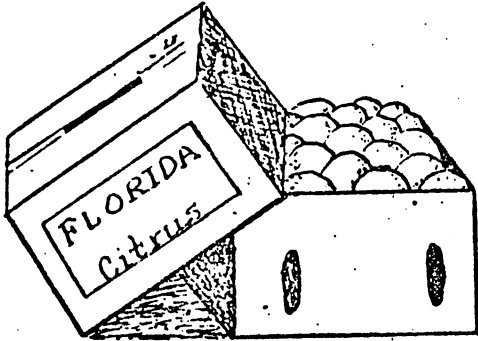
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Citrus Station Mimeo Report CES 68-31
June 13, 1968

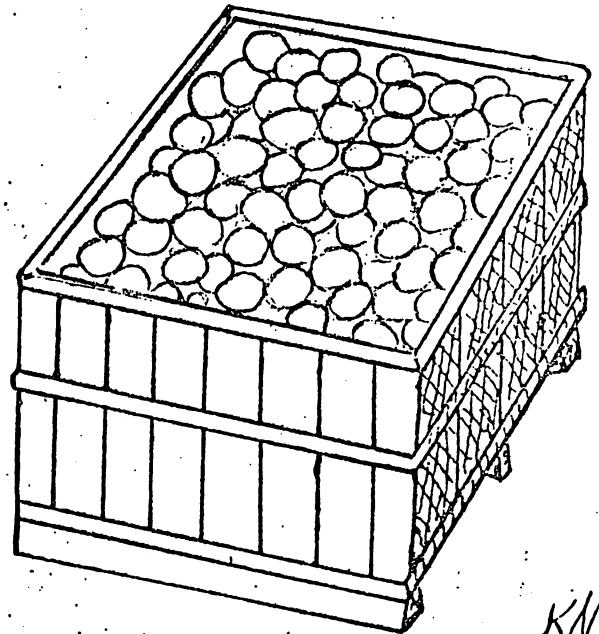
UNIVERSITY OF FLORIDA INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

and

FLORIDA CITRUS COMMISSION



Packinghouse Newsletter



Harvesting and Handling Section
University of Florida
Citrus Experiment Station
P.O. Box 1088
Lake Alfred, Florida, 33850

(Complimentary to members of the Florida Fresh Citrus Shippers Association.
Others wishing to receive this newsletter, send a dozen stamped preaddressed
envelopes to the above address.)

Harvesting and Handling Section

P A C K I N G H O U S E N E W S L E T T E R

REVIEW OF THE FRESH CITRUS FRUIT FUNGICIDE REGULATION

As far as we know, there will be no changes in the Florida Citrus Commission Regulation 105-1.43, which requires fungicidal treatment of all fresh citrus fruit shipped by registered packinghouses.

All diphenyl pads tested complied with the regulation, as did all samples of fruit treated with fungicidal water wax solutions. However, when other Dowicide A treatments were used, a number of low residue figures were encountered during the early part of the season. Practically all houses complied with the regulation by the middle of the 'Valencia' season.

Failure to meet the minimum fungicide requirement during the past season when using fungicide formulations containing Dowicide A (sodium o-phenylphenate) was observed to be usually due to either improper application of the fungicide or to insufficient exposure time. It is important that the fruit be thoroughly wet with this fungicide, whether applied as a water solution, foam, or with soap in a sudser. It is recommended that the fruit be wet with Dowicide A for at least 1-1/2 minutes. A 2-minute exposure time is better. (Exposure time is the time between the application of the fungicide to the fruit and the time it is rinsed off.) The manufacturer's recommendations should be followed, but in any case, exposure time should be not over 5 minutes, in order to avoid possible injury to fruit. Use wipe-out equipment where necessary, particularly on washers where some fruit may idle on the brushes for an extended time before rinsing.

A thorough rinse is necessary after treatment with Dowicide A (except in waxes) but do not rinse excessively. When Dowicide A-treated fruit is to be given a color-add application, it is particularly important that the fruit be rinsed thoroughly.

Double fungicidal treatments are unnecessary in most packinghouses. Usually the first application, when properly applied, gives good decay control, and the residue is well within the tolerance. When a wax is applied containing Dowicide A or Dowicide 1 to fruit already treated with Dowicide A, the residue may exceed the tolerance. Small sized oranges, tangerines, and other mandarin-type citrus are more likely to exceed the tolerance than other citrus fruit when given a double treatment.

Labeling.--Before ordering new shipping containers is a good time to take a look at the labeling, including the fungicide labeling. The Federal Food and Drug Administration requires that the chemical name of the fungicide, and why it is used, be stamped on the container (see Packinghouse Newsletter No. 6A, Harvesting and Handling Section, Citrus Experiment Station).

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DOWICIDE A-HEXAMINE APPLICATION TEMPERATURE

The fungicidal value of Dowicide A-hexamine applied at room temperature (70° to 78° F), 90° F and 100° F has been compared using seven varieties of citrus fruit this season. The same Dow-hex solution was used for the three temperature comparisons. Fruit given a 2-minute flood treatment at room temperature had the lowest decay and lowest Dowicide A residue. Comparable fruit given the same fungicidal treatment but at 100° F had the highest average decay and highest Dowicide A residue. Fruit treated at 90° F was intermediate between these two treating temperatures, both in decay control and residue.

These results point out that residue from the Dowicide A-hexamine treatment found in citrus fruit can be used to determine that the fruit has been treated with Dowicide A, but the residue figure has no direct relationship to the decay control that can be expected.

Application temperature.--Dowicide A-hexamine is more effective when applied between 70° and 78° than at 90° F or 100° F. When possible, apply this fungicide in the 70° to 78° F temperature range.

Fungicides - general.--For additional information on concentration and methods of application, see Packinghouse Newsletters 1, 6 or 6A, 10, and 13 or contact me at the Citrus Experiment Station, Lake Alfred.

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WOOD PRESERVATIVE FOR PALLET BOXES

We have had inquiries from both manufacturers and shippers as to what wood preservatives can be used for pallet boxes used in the grove. This matter is subject to the Federal Food, Drug and Cosmetic Act because such pallet boxes are "...wooden articles that are used...for...transporting or holding raw agricultural products..." (F.R., Feb. 25, 1965, Para. 121.2556). An effective wood preservative permitted for use without limitation as to residues in the wood is copper-8-quinolinolate. To check whether a wood preservative offered under a trade name contains an effective formulation of copper-8-quinolinolate, request assurance that it meets "Interim Federal Specification TT-W-00572a (AGR-FS) January 23, 1968, Para. 1.2 Classification D." (This specification is from the Forest Products Laboratory, Forest Service, U.S.D.A., Madison, Wisconsin.)

AVAILABLE PUBLICATIONS

"Nobody Likes a Green Orange" by John E. Rice from Armstrong Trap Magazine Vol. 37, No. 1, 1968. (This is a trade magazine story about the degreening room facilities at Lake Wales. We have a limited number of reprints.)

"Florida Scientist Advises: Communicate to Sell Citrus. Editorial from The Packer, Vol. LXXIV, No. 49, page 2D, December 30, 1967.

"Consumer Packaging of Citrus Fruits," W. Grierson, International Citrus Symposium, University of California, Riverside, March 1968. (Lithographed copies are available from the author. This is a review of consumer packaging research on citrus fruit including the work at Lake Alfred up to January 1968.)