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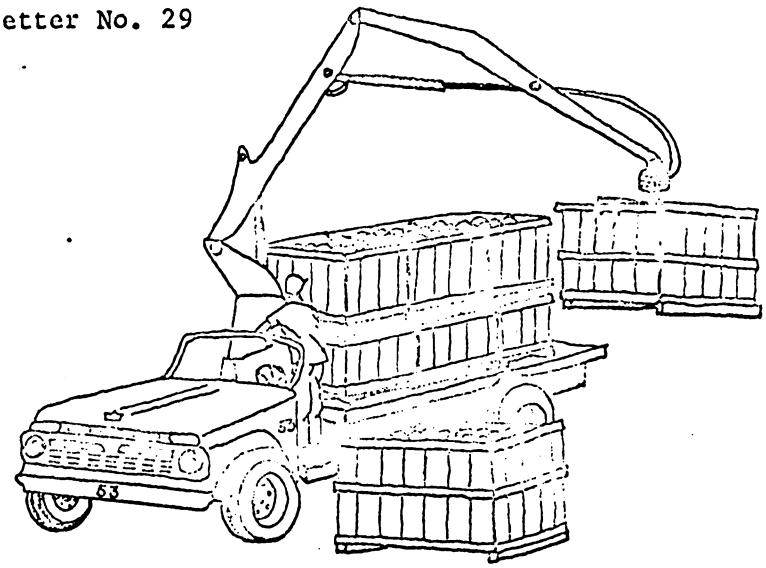

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Citrus Station Mimeo Report CES 70-22
February 20, 1970
750-WFW-Lake Alfred, Florida 33850

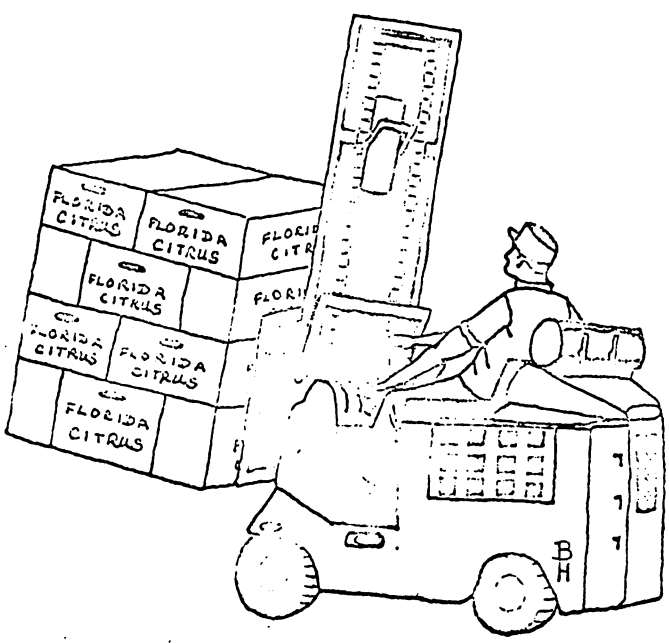
Editor: W. F. Wardowski
Harvesting and Handling Section*
University of Florida
Citrus Experiment Station
P. O. Box 1088
Lake Alfred, Florida 33850

Packinghouse Newsletter

UNIVERSITY OF FLORIDA INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

and

STATE OF FLORIDA, DEPARTMENT OF CITRUS



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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

COMMERCIAL USE OF THE FUNGICIDE, TBZ (MERTECT 260, THIABENDAZOLE)

This is a progress report on the effectiveness of TBZ as used in commercial packinghouses and is not intended as a recommendation of any particular method of application. Additional information on both industry survey and experimental results are being obtained. At the end of the packing season, these results will be given in the Packinghouse Newsletter.

TBZ is being applied commercially by three methods:

1. Recovery flood.--A water suspension of TBZ is flooded over washed fruit on a roller conveyor in sufficient volume to thoroughly wet the fruit as it passes under the suspension. The suspension drains into a reservoir and is recirculated.

2. Nonrecovery spray.--TBZ in a water suspension is sprayed over washed fruit which is rotating on soft brushes. Any excess is not recovered.

3. Water wax application.--Washed fruit is "fogged" with water wax containing TBZ in suspension. The waxed fruit is dried on slats or "dead" roller conveyors.

Samples.--Packinghouses using these TBZ treatments have permitted us to take samples to check the decay control obtained by their treatment. All samples, except those treated with water wax, were waxed at the Citrus Experiment Station with FMC Flavorseal #93, placed in 4/5-bushel cartons, and held at 70° F for three weeks. Three samples were taken each time consisting of two lots of untreated fruit and one lot treated with TBZ at the packinghouse. One untreated lot was handled as a check while the other was dipped in TBZ suspension at the Citrus Experiment Station in order that the effectiveness of commercial treatments could be compared with a common standard.

Strength of TBZ treatments.--All suspensions were made at an initial concentration of 1000 ppm. Suspensions were agitated by recirculation or mechanical stirring devices because TBZ is usually in suspension and settles out readily.

Effectiveness of treatments.--Average results from 17 commercial samples comparing decay losses of TBZ-treated fruit with comparable check samples shows that all three application methods can give satisfactory decay control. Sufficient TBZ suspension must be applied to completely wet the surface of the fruit, including mechanical injuries and the area around and under the button.

Advantages and disadvantages.--The recovery flood system has the advantage that the fruit is thoroughly wet with the TBZ suspension. The disadvantages are that there is no fast way to determine the strength of the treating suspension and, at times, broken fruit, etc., may be a problem.

The advantage of the nonrecovery spray and water wax applications is that the strength of the treating suspensions is known. However, in a few instances, applicator nozzles have become clogged.

Residues.--The best evidence so far indicates that citrus fruit treated by any of the above methods are meeting the State (minimum residue) and Federal (maximum residue) regulations.

Labeling.--Remember that containers of TBZ-treated fruit must be labeled to comply with Food and Drug Administration regulations. Thiabendazole is the generic name of TBZ which must appear on bags and cartons containing TBZ treated fruit.

Andy McCornack
Florida Department of Citrus
Citrus Experiment Station

SOOTHING LETTERS ON PESTICIDES

Fungicides are required on Florida fresh citrus fruit, and (as is pointed out in the preceeding article) the law requires that containers be labeled with the name(s) of the fungicides used. We have a renewed national awareness of pesticides, pollution, and ecology. With increasing frequency, consumers have written to various citrus packers taking exception to the use of fungicides on their citrus as indicated by these necessary labels.

We like to think that "a soft answer turneth away wrath," and we have gained some experience in composing letters explaining why these fungicides are used and the precautions taken to protect the consumer.

If Florida citrus packers wish to forward to us letters from consumers relating to pesticides, we will answer the letters and supply a carbon copy to the packer.

W. Wardowski
Extension Service
Citrus Experiment Station

AVAILABLE PUBLICATIONS

Available from Harvesting and Handling Section, Citrus Experiment Station

Xerox copies of "A System for the Seventies" and "Systems Engineering and the Citrus Industry." California Citrograph, Volume 55, Number 4. February, 1970.

California Citrograph subscription information

Circulation Manager, California Citrograph Publishing Co., Ltd.
5380 Poplar Boulevard, Los Angeles, California 90032. Subscription rates--payable in advance. In the United States and possessions, $3.00 a year. All other countries, $5.00 a year.

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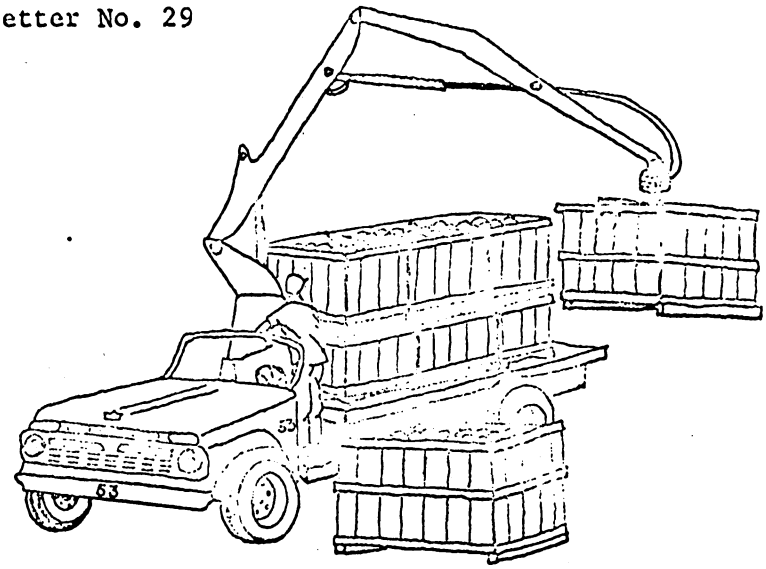

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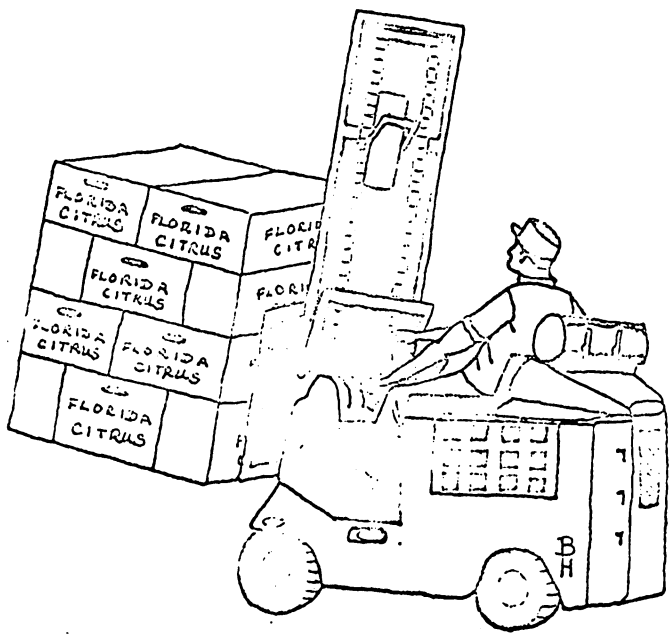

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