Newsletter #61

Lake Alfred AREC Research Report CS74-2
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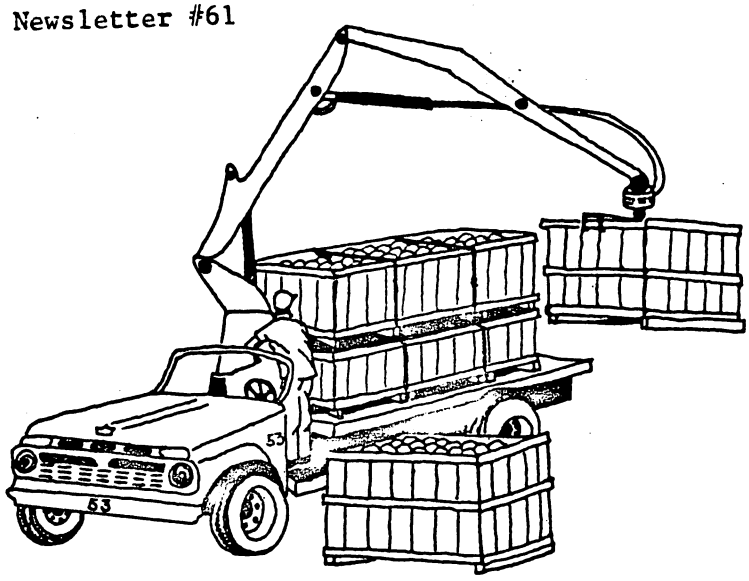
March 5, 1974



Editor: W. F. Wardowski
Harvesting and Handling Section
University of Florida
Agricultural Research and Education Center
P. O. Box 1088
Lake Alfred, Florida 33850

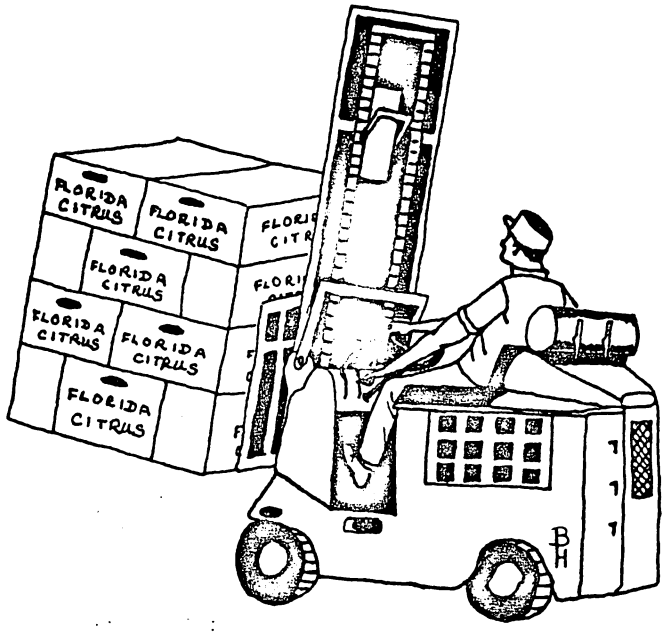
Packinghouse Newsletter

UNIVERSITY OF FLORIDA INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

and

STATE OF FLORIDA, DEPARTMENT OF CITRUS

*Anyone wishing to receive this newsletter may send a dozen stamped, preaddressed envelopes to the above address.



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Chilling Injury, Export, Fresh Fruit Shipments, Bagging Machines,

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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

CHILLING INJURY:LATE SEASON EXPORTS OF GRAPEFRUIT

Both commercial experience and laboratory experiments with various types of citrus have long indicated that there is a tendency for decay to increase with increasing maturity. It has usually been considered that the opposite condition prevails with regard to grapefruit's susceptibility to chilling injury. Very early pickings are so susceptible that temperatures under 60°F (16°C) may cause peel injury. As the season advances lower temperatures become safe down to 50°F (10°C).

However, in simulated shipping experiments which include temperatures in the chilling injury range, usually 40°F (4.5°C), some unexpected results have been noted very late in the season. Last year a treatment which decreased chilling injury in early and mid-season harvests caused severe peel injury in our late picking. Going back over previous seasons' work, we note that peel injury problems tended to occur when very late pickings were involved.

The U.S.D.A., A.R.S. group at Orlando are also working on chilling injury, and Paul Davis tells us that they also have had similar cases of unexpectedly high amounts of chilling injury in very late pickings. We can find occasional evidence of such behavior in published papers up to 40 years ago.

It will take a great deal of experimental work to determine just what is involved. However, it does seem possible that this increased susceptibility to chilling injury may very well be connected with the post-bloom period. This year we have an abnormally early bloom and so it is possible that this chilling injury susceptible condition of grapefruit may occur earlier than usual.

The only recommendation that we can make at this time is to be very careful indeed that shipping temperatures in any part of a shipment do not go below 50°F for any late grapefruit exports (beginning now).

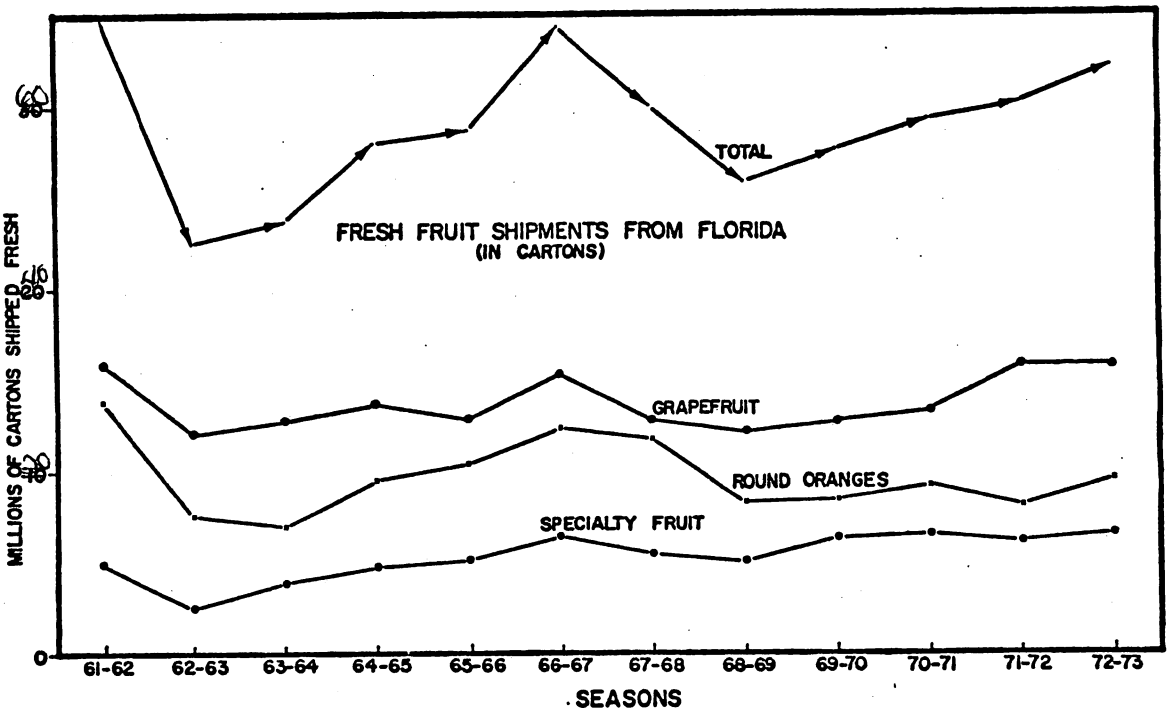
Shippers and buyers alike are reminded that our success in arriving at a better recommendation will be greatly accelerated by accurate and prompt reports from the market place. If grapefruit arrive with ugly, dark, sunken peel injuries please let us know, supplying all details of shipping conditions, brand name, transit temperatures, etc. Kodachrome pictures of the damaged fruit are particularly helpful. See available publications list for "Market Diseases & Blemishes of Florida Citrus Fruits" which includes a color photo of grapefruit chilling injury.

W. Grierson, AREC, Lake Alfred
W. F. Wardowski, Extension Service

LABOR SEMINAR SCHEDULED

On Wednesday, March 6, 1974, 10:00 a.m. a joint Florida Fruit and Vegetable Association - Indian River Citrus League Labor Seminar, Vero Beach Women's Club, Vero Beach. Topics of the seminar will include: Wage & Hour Law, "Right to Work", Pending Legislation and Unemployment Compensation.

FRESH FRUIT SHIPMENTS FROM FLORIDA



Any clear cut understanding of the changes in volumes of fresh citrus shipped are habitually confused by the illogical custom of dumping Temples in with oranges (instead of with the other specialty fruit where they belong) and by occasional name changes such as from "Murcott Honey Orange" to "Honey Tangerine." The above graph shows fresh fruit shipments in 4/5 bushel cartons since 1961-62, taken from the Annual Reports of the Division of Fruit and Vegetable Inspection, but grouped as grapefruit, round oranges and specialty fruits. The latter group includes Temples, tangerines of all types and tangelos.

Several trends are apparent, such as:

1. Total fresh fruit shipments have increased steadily since 1968-'69.
2. Grapefruit and specialty fruits together constitute an increasing majority of fresh fruit shipments.
3. Although fresh fruit shipments of round oranges were down to approximately 7% of the total crop last season, total fresh fruit shipments of round oranges were, surprisingly, the highest since 1967-68

W. Grierson
AREC, Lake Alfred

This public document was promulgated at an annual cost of $201.60, or two and one-half cents per copy to inform county agricultural directors, ranchers, and growers of research results in harvesting and fresh fruit handling and marketing.

BAGGING MACHINE AT LAKE ALFRED

A sleeve-type bagging machine using "rope stock" is now in our packinghouse for tests and demonstrations. It is the Makfil Systems (International Staple) count and weigh model which was recently demonstrated at the United Fresh Fruit & Vegetable Association meeting in New Orleans. The machine is presently equipped with Vexar net rope stock and is to be demonstrated to the Florida Fresh Citrus Shippers Association, at their April 10, 1974 meeting (the business portion of this meeting is limited to FFCSA members).

Any Florida citrus packer interested in trying out this bagger should contact Dr. Bill Grierson or Dr. Will Wardowski, Agricultural Research & Education Center, P. O. Box 1088, Lake Alfred, Florida 33850 (Phone 813- 956-1151), for an appointment to use the equipment. You should be aware that a full day needs to be set aside for this trial and that three of your people should probably be present. Your mechanic and/or foreman could help to evaluate the system as you pack fruit.

W. Wardowski
Extension Service

AVAILABLE PUBLICATIONS

Available from W. F. Wardowski, AREC, P. O. Box 1088, Lake Alfred, Florida 33850.

"Market diseases and blemishes of Florida citrus fruits" by A. A. McCornack, G. E. Brown. Fla. Dept. of Citrus. 1973.

Available from Supt. of Documents, U.S.Govt. Printing Office, Washington, DC 20402

"The nature and extent of retail and consumer losses in apples, oranges, lettuce, peaches, strawberries, and potatoes marketed in greater New York". MRR 996. July 1973. Price: 40¢.

"What About Metric", 0303-01191, is an explanation of the metric system and what will be involved in changing the United States to metric measures. Price:80¢

Available from Metric Information Office, National Bureau of Standards, Washington,DC 20234

"Toward a Metric America", NBS LP 67, is a bibliography of available literature on the metric system.

Available from Volcani Institute of Agricultural Research, Rehovot, Israel

"Research Summaries 1971-1973, Division of Fruit and Vegetable Storage". An excellent 117 page book of abstract-like summaries for fruit, vegetable and flower postharvest research and list of publications by their staff members.

Available from U.S. Horticultural Research Center, USDA, 2120 Camden Rd., Orlando, FL 32804

"Compatibility of Fruits and Vegetables during Transport in Mixed Loads" ARS 51-48. Sept. 1972.