



**INSTITUTE OF FOOD AND  
AGRICULTURAL SCIENCES**  
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**FLORIDA  
COOPERATIVE  
EXTENSION SERVICE**

## **PACKINGHOUSE NEWSLETTER**

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### CITRUS PACKINGHOUSE DAY

Will Wardowski  
Citrus Research & Education Center  
Lake Alfred

This Citrus Packinghouse Day scheduled Thursday, September 10, 1992 at Lake Alfred promises to be interesting and valuable. Mac McLaughlin will share with you how a small investment returned nearly 300% per year in his citrus packinghouse. This one tip alone could pay for ten people from your packinghouse to spend a day at Lake Alfred. The speakers, and two exhibits for the morning program, are listed below. We also expect to have over 20 commercial exhibitors who specialize in citrus packinghouses.

**Pre- and Postharvest Practices to Extend the Season of Florida Navel Oranges**  
Mohamed Ismail, DOC, CREC, Lake Alfred

**Fruit Damage Assessment in Oranges**  
Jackie Burns and William M. Miller, CREC, Lake Alfred

**Grade Lowering Defects of Indian River Grapefruit**  
William M. Miller and Jackie K. Burns, CREC, Lake Alfred

**Quick Change... Quick Savings Reducing Idle Time Between Variety Changes in the Packinghouse**  
L. F. McLaughlin, Quality Fruit Packers of Indian River Inc., Vero Beach

**Improving Packing Efficiency by Implementing Computer Control in a Florida Tomato Packinghouse**  
Steven A. Sargent, Jeffrey K. Brecht, Horticultural Sciences Dept., IFAS, Gainesville, Richard A. Gilbert, Chemical Engineering Dept. and William A. Miller, Dept. of Industrial & Management Systems Engineering, University of South Florida, Tampa

**Lack of Postharvest Treatments for Decay Control -- An Impending Crisis?**  
G. Eldon Brown, Florida Department of Citrus, CREC, Lake Alfred

**Response of Grapefruit to High-Temperature Forced Air as a Quarantine Treatment**  
Miller, E. J. Mitcham, R. E. McDonald, USDA, ARS, SAA, USHRL, Orlando

**Estimated Cost of Packing Florida Citrus**

Ron Muraro and Will Wardowski, CREC, Lake Alfred

EXHIBITS

**Effects of Different Wax Coverages on Quality of Citrus Fruit**

Robert D. Hagenmaier and Robert A. Baker, USDA, ARS, Winter Haven

**The Chilling Facts: An Expert System to Diagnose Chilling Injury on Fresh Fruits and Vegetables**

K. A. Bergsma, J. K. Brecht, S. A. Sargent, and R. M. Peart, Horticultural Sciences Department, IFAS, Gainesville

BOOK REVIEW

Bill Grierson, Professor Emeritus  
Citrus Research and Education Center  
Lake Alfred

Associated Publications of Bartow (publishers of The Citrus Industry Magazine) have published *Citri-facts* Professor Tom Mack's columns in book form (see Available Publications). This 135-page book includes 102 *Citri-facts* columns and numerous black and white illustrations.

The emphasis throughout is very largely historical, sometimes on the worldwide history and origins of citrus fruits. More often, these spirited little columns deal with the people, places and events involved in the history and development of the Florida citrus industry from the days of the Conquistadors up to the present.

Tom Mack's major retirement project is setting up Florida Southern College's Citrus Archives, which will be the single repository of all collectible records (writings, photos, slide tapes) on the history of the Florida citrus industry. He is donating any profits from *Citri-facts* to this worthy project.

Anyone with more than a superficial interest in Florida's citrus industry will find much to enjoy in *Citri-facts* and in the Citrus Archives.

ERRATUM: FRESH CITRUS FRUITS

Bill Grierson, Professor Emeritus  
Citrus Research and Education Center  
Lake Alfred

Re. Figure 2.2 on page 44 of *Fresh Citrus Fruits* (1)

A constant dread of responsible science writers everywhere is that of having some egregious error enter into a publication that thereafter remains on library shelves for the foreseeable future. This has happened with regard to Figure 2.2 on page 44 of our textbook *Fresh Citrus Fruits* (1). Unfortunately, I further compounded the error by citing this figure in a recent article (2). The relationship between Florida and OECD (European) grapefruit standards in Figure 2.2 did not agree with that in the publication cited (3).

I am involved both as author and as editor; it happened this way. Soon after contributing my material for Chapter 2, I left on a long overseas assignment. In my absence, a cooperator redrafted and expanded Fig. 2.2, incorporating not only the original data from Fig. 3 in the Grierson and Ting paper (3), but also data from Fig. 2D in the same publication. Unfortunately this combined two sets of data which are related, but do not mix. Fig. 3 showed legal minimum juice standards under the Florida Citrus Code (4), but Fig. 2D showed average actual juice yields as reported by the Florida Crop and Livestock Reporting Service for the five seasons from 1973-74 to 1977-78. Season-long average actual juice yields are, obviously, very much higher than the legal minimum yields enforced at the beginning of each season. I failed to note this unfortunate error.

Everyone owning a copy of *Fresh Citrus Fruits* is requested to photocopy this figure and place it over Fig. 2.2 in the book. Mea culpa, mea culpa.

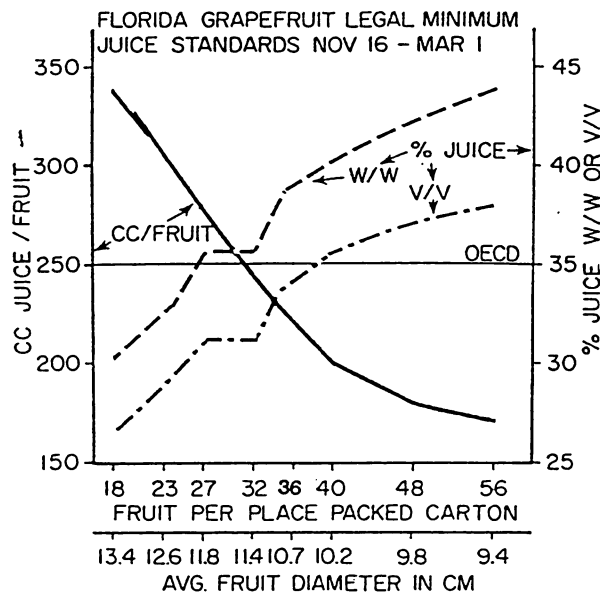


Fig. 2.2 Minimum juice requirements for Florida grapefruit for Aug. 1-Nov. 15 and Nov. 16-Mar. 1, expressed as cc juice/fruit, % by weight (w/w), and % by volume (v/v), for fruit of different sizes. Values are calculated based on oblate fruit with height:diameter ratio of 0.85; specific gravity of the fruit 0.88; and specific gravity of juice 1.04 (Nov. 16-Mar. 1). Fruit diameters and sizes are from Florida Dept. of Citrus Official Rules 20-34.06(2).

From Grierson and Ting (1978); Turrell (1946)

#### Literature Cited

1. Wardowski, W. F., S. Nagy and W. Grierson. Eds. 1986. *Fresh Citrus Fruits*. AVI Publishing Co., Westport, CT.
2. Grierson, W. 1990. Concerning pallet boxes. *Citrus Industry*. 71(10):54-56, October.

3. Grierson, W. and S. V. Ting. 1978. Quality standards for citrus fruits, juices and beverages. Proc. Int. Soc. Citriculture. Australia 1978:21-27.
4. Florida Department of Citrus, 1949, Chap. 601, Section 18. Florida Statutes, The Florida Citrus Code, as amended.
5. Florida Crop and Livestock Reporting Service. 1979. Citrus Summary. 1977-78.

#### AVAILABLE PUBLICATIONS

Available from Dr. W. Wardowski, CREC, 700 Experiment Station Road, Lake Alfred, Florida 33850

Impact Studies in Florida Citrus Packinghouses Using an Instrumented Sphere, by W. M. Miller and C. J. Wagner. 1991. Proc. Fla. State Hort. Soc. 104:125-127.

Ultrastructural Studies on the Ontogeny of Grapefruit Juice Vesicles (*Citrus paradisi* Macf. cv Star Ruby), by Jacqueline K. Burns, Diann S. Achor, and Ed Echeverria. 1992. Int. J. Plant Sci. 153(1):14-25.

Available from Prof. Thomas B. Mack, The Citrus Institute, Florida Southern College, 111 Lake Hollingsworth Drive, Lakeland, Florida 33801-5698

*Citri-facts* by Thomas B. Mack. Associated Publications Corp., Bartow, Florida. 136 pages, illustrated, paperback. NOTE: This book is a gift to anyone making a tax deductible donation of \$20.00 or more with a check to Florida Southern College designated to Thomas B. Mack Citrus Archives.

Available from B. Orihuel-Iranzo, Servicios Tecnicos Betelgeux, Betelgeux, S. A., Pol. Alcodar s/n, 46080 Gandia (Valencia), Spain

The Management of Quality in the Handling, Packing and Distribution of Fresh Fruits and Vegetables with Special Reference to Citrus, by B. Orihuel-Iranzo. 1991. Proc. Fla. State Hort. Soc. 104:219-224.

Available from Hirotohi Kitagawa, Faculty of Agriculture, Kagawa University, Miki-Cho, Kagawa-Ken, Japan

The Japanese Personality and the Use of Horticultural Produce. 1991. Chronica Horticulturae, Vol. 31, Number 2.

Some Recent Trends in Production and Importation of Citrus Fruits in Japan. 1992. Proc. Int. Soc. Citriculture (In Press).

Available from Robert D. Hagenmaier, U. S. Citrus and Subtropical Products Laboratory, Agricultural Research Service, U. S. Department of Agriculture, P. O. Box 1909, Winter Haven, FL 33883

Gas Permeability of Fruit Coating Waxes by Robert D. Hagenmaier and Philip E. Shaw. 1992. J. Amer. Soc. Hort. Sci. 117(1):105-109.