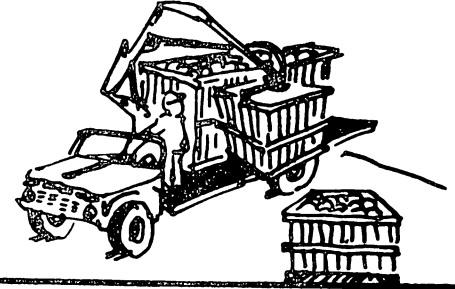




Florida Cooperative Extension Service

PACKINGHOUSE NEWSLETTER

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Packinghouse Newsletter No. 76

November 10, 1975

Key Word Index Abscission, Aflatoxins, Canada, Chilling Injury, Fumigation, OSHA, Railroads, Safety, Transportation.

AVOIDING LOSSES IN FRUITFLY FUMIGATION

On November 4 at the Florida State Horticultural Society's annual meeting, we presented a paper on the results of experiments on fumigation and simulated ocean shipment of grapefruit carried out cooperatively between the Florida Department of Agriculture and this Research Center. The major experiment (for which the fruit was donated by Seald-Sweet Sales) was set up to allow for statistical evaluation of various factors. The following results were mathematically "highly significant."

	<u>Chilling Injury</u>	<u>Decay</u>
Prefumigation Cooling	Increased	No effect
Diphenyl pads	Increased*	Decreased
EDB Fumigation	Increased	No effect
Inadequate Postfumigation } Ventilation }	Increased	Increased
Prompt vs. Delayed (24 hr) } Postfumigation Cooling }	Increased	Increased

It was apparent that when increases in decay occurred, they were due to fumigant burns in which decay started during the 30-day simulated ocean voyage.

Other observations, since these experiments were conducted, confirm the importance of very active air circulation through (not around) the load during fumigation, of ventilation after fumigation, and the increased susceptibility to chilling injury of fumigated fruit.

*This apparently unlikely effect is genuine and is being investigated in detail by Andy McCornack.

Bill Grierson
 AREC, Lake Alfred

FRESH FRUIT ABSCISSION AGENT?

Citrus packers and news reporters have been asking about recent advertisements for an abscission agent for fresh fruit. "Not adequately tested" were the responses by Dr. Bill Wilson, Florida Department of Citrus, Lake Alfred and Dr. Gordon Rasmussen, USDA, Orlando to inquiries on the new Federal approval for the use of Acti-Aid (cycloheximide) abscission of fresh citrus fruit. Extensive tests with Acti-Aid at higher rates on processing oranges consistently resulted in a peel injury rendering the fruit unfit for the fresh market. Therefore, extreme caution is in order for anyone wishing to try this product on fresh fruit.

Will Wardowski
Extension Service

OSHA BEEFS UP ENFORCEMENT

OSHA offices in Ft. Lauderdale and Tampa have virtually doubled their enforcement staff. OSHA has announced that agriculture is one of the target industries for this next year and have already stated they will make periodic inspections of housing facilities as a general rule and not wait until a complaint is lodged against the housing.

Florida Fruit & Vegetable Association
Activities Report, October 14, 1975

See Packinghouse Newsletter No. 69, January 1975 for addresses of the three Florida OSHA offices and a map showing their boundaries. Also see Available Publications, this issue for a good discussion of OSHA in agriculture.

Editor

AREC, LAKE ALFRED GAINS AN ENGINEER

Dr. Bill Miller has recently joined the Harvesting and Handling Section at the Agricultural Research and Education Center, Lake Alfred (ex-Citrus Experiment Station). Bill is an agricultural engineer who received his academic training at Penn State University. He has spent the last two years in a teaching/research capacity in Canada.

Bill's research will focus principally on the fresh fruit industry. He will be involved in the engineering aspects of more efficient handling and processing techniques, energy utilization and quality control. One of his initial endeavors will be in the solar energy packinghouse project demonstrated at Packinghouse Day, 3 September, 1975.

Bill Grierson, Head
Harvesting & Handling Section
AREC, Lake Alfred

MACHINERY COMPANIES MERGE

Two Orlando based machinery companies serving Florida citrus packers have announced that they will operate as one. American Machinery Corporation and Brogdex Company (Florida) plan to continue the products and services of both companies under the name of American Machinery Corporation.

Will Wardowski
Extension Service

QUEBEC REQUIRES LABELS IN FRENCH

Effective November 21, 1975, all packages and labels for products marketed in the Canadian province of Quebec must be printed in French or bilingual with the French copy at least as prominent as the other language used.

Issued by the Solicitor General of Quebec, the labeling regulation is pursuant to Quebec's Official Language Act, Bill 22, which regulates all public display of language.

Unless changed by the national government, which is doubtful, the regulation will have the force of law anytime the Quebec government chooses to enforce it after November 21. It is feasible that non-conformance packages in the supply pipeline or inventory may be tolerated after this date, but companies marketing products in Quebec not labeled in French risk a \$5,000 fine. Any Quebec subject who sells a non-French labeled product could be fined \$500.

The PMA Report
Volume 7, No. 20
October 17, 1975

RAILROAD TRANSPORTATION STUDY

Improving the efficiency of transporting perishable products from farm to marketplace is the subject of a \$627,000 study to be prepared for the U.S. Department of Transportation's Federal Railroad Administration in cooperation with the National Bureau of Standards.

"America's perishable food products industry needs a distribution system that is flexible, efficient and inexpensive," said Federal Railroad Administrator Asaph H. Hall. "Current practices do not meet this need and are causing problems for farmers, distributors, carriers and receivers. We are hopeful that this report will develop workable recommendations for facilities, equipment and transportation alternatives."

Conducted by Manalytics, Inc. of San Francisco, California, "A Long-Term Study of Transportation and Distribution of Perishable Foods," is expected to take 18 months to complete. Logistics systems alternatives will be analyzed for fruits and vegetables in the states of California, Washington, Texas and Florida.

The four part report will include a summary of the chief characteristics of the perishable food products industry, with special emphasis on current production, marketing and distribution problems arising from the industry's structure and transportation requirements. Present and possible alternative food distribution patterns and their costs will be examined. In addition, an assessment will be made of available technology for handling and transporting these commodities and recommendations for the most cost-effective alternatives for perishable food distribution will be developed.

Department of Transportation News
Federal Railroad Administration
Washington, DC 20590

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products named and does not signify that they are approved to the exclusion of others of suitable composition.

AFLATOXIN HAZARD FROM CITRUS MOLDS? NO!

I raise the following points to support the Packinghouse Newsletter No. 75 article stating that aflatoxin contamination is not likely a food safety problem with citrus fruits.

1. If aflatoxin producers Aspergillus flavus and A. parasiticus are not dominating fungi, they can at best grow with other molds such as A. niger, and in such case, their toxigenicity could be significantly suppressed. It has been found that concurrent fungi would suppress rather than enhance aflatoxin biosynthesis by A. flavus or A. parasiticus.
2. Even if the toxigenic fungi managed to produce aflatoxins and the latter work their way into the juice, the acidity of the juice can convert aflatoxins to their hemiacetals and render them much reduced in toxicity.
3. As you pointed out, moldy and rotten oranges are normally rejected totally by consumers, thus exposure is largely avoided.

The above three natural phenomena would have to be altered simultaneously before aflatoxin contamination becomes a serious problem in citrus fruits.

Dennis Hsieh
Department of Environmental Toxicology
University of California
Davis, CA 95616

Dr. Hsieh is a recognized authority on naturally occurring toxins.

Editor

AVAILABLE PUBLICATIONS

Available from Leavitt S. White, Public Affairs Dept., DuPont Company, Wilmington, DE 19898. Phone - 302 - 774-7346.

"Food Consumption Poster" with a dramatic photograph illustrating the 2-1/2 tons of food the average American family of 4 consumes in a year. The poster also summarizes those elements in farm production and crop protection that make possible the remarkable output of the American farmer.

Available from Dr. Mina Schiffmann-Nadel, Agricultural Research Organization, The Volcani Center, Bet Dagan 50200, Israel.

"Reduction of chilling injury in grapefruit by thiabendazole and benomyl during long-term storage" by Mina Schiffmann-Nadel, E. Chalutz, J. Waks and M. Dagan. Journal Am. Soc. Hort. Sci. 100(3):270-272. May, 1975.

Available from Dr. Gary Erisman, Extension Safety Coordinator, Agricultural Engineering Dept., 9 Frazier Rogers Hall, IFAS, University of Florida, Gainesville, FL 32611.

"An agricultural discussion of OSHA" by Gary Erisman. Agricultural Engineering Extension Report 75-10. Oct., 1975.

This newsletter is published at a cost of \$81.85, or 8.2 cents per copy, to give the latest news to the packinghouse industry.

W. Wardowski
W. Wardowski, Editor
Associate Professor-
Extension Horticulturist