



INSTITUTE OF FOOD AND
AGRICULTURAL SCIENCES
UNIVERSITY OF FLORIDA

FLORIDA
COOPERATIVE
EXTENSION SERVICE

PACKINGHOUSE NEWSLETTER

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Packinghouse Newsletter No. 88
August 12, 1977

Key Word Index 2-Aminobutane, Benlate, Diphenyl, Ethylene Analyzer, Export, Packout, Pallets, Residue Tolerances, SOPP, Thiabendazole.

ETHYLENE ANALYZER ACCURACY TEST

The standard ethylene analyzer owned by most Florida citrus packers has proven to be a valuable tool. It is compact, accurate, inexpensive, saves enough ethylene to pay for itself and helps to maintain fruit quality. We will check the accuracy of an ethylene analyzer for any citrus packer who delivers his unit and two unused low range ethylene tubes to us. Be sure that your analyzer is clearly labeled with the owner's name and address. One-day turn around may be possible, but some cases, a week may be necessary.

Will Wardowski
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DETERMINATION OF FLEXURAL BEHAVIOR OF STRINGER-TYPE PALLET AND SKIDS: A PRELIMINARY APPROACH

Engineering principles are applied to the design of wooden pallets and skids with two to five stringers, in order to determine the flexural behavior of these assemblies under concentrated and uniformly distributed loads. Information is presented on principles of good pallet and skid construction. Formulae are advanced covering the strength and load-bearing capabilities of such pallets and skids. The importance of this information becomes obvious if consideration is given to the fact that the annual production of pallets in the USA has exceeded 200 million units which require 15 percent of all the timber cut.

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(See Available Publications)

CITRUS POSTHARVEST FUNGICIDE TOLERANCES

| Country | Diphenyl ^Z | SOPP ^Z | TBZ ^Z | Benomyl ^Z | 2AB ^Z |
|--|-----------------------|-------------------|------------------|----------------------|------------------|
| | | | | | |
| USA | 110 | 10 | 10 | 10 | 30 |
| Austria | 70 | 12 | 6 | 7 ^V | |
| Belgium ^Y | 70 | 12 | 6 | | |
| Canada | 110 | 10 | 10 | 10 | |
| Denmark ^Y | 70 | 12 | 6 | 10 | |
| Finland | 70 | 10 | 10 | | |
| France ^Y | 70 | 12 | 6 | 1.5 ^U | |
| Germany, West ^Y | 70 | 12 | 6 | 7 ^V | |
| Ireland ^Y | 70 | 12 | 6 | t | |
| Japan | 70 | 10 | 0 | 0 | |
| Italy ^Y | 70 | 12 | 6 ^X | 0.5 ^S | |
| Luxembourg ^Y | 70 | 12 | 6 | | |
| Netherlands ^Y (Holland) | 70 | 12 | 6 ^W | 3.5 ^V | |
| Norway | 70 | 10 | 6 | | |
| Portugal | | 12 | 6 | | |
| Spain | 0 | 12 | 6 | r | |
| Sweden | 110 | 10 | 6 | 10 ^Q | 30 |
| Switzerland | 70 | 12 | 6 | 7 ^V | |
| United Kingdom ^Y (Britain) | 70 | 12 | 6 | t | |

^zDiphenyl = biphenyl. SOPP = sodium o-phenylphenate or o-phenylphenol.
 TBZ = thiabendazole. Benlate = benomyl. 2AB = 2-aminobutane. sec-butylamine.

^yEuropean Economic Community (EEC).

^x3 ppm maximum allowed if used with other fungicides.

^w6 ppm is EEC tolerance and 10 ppm is official Netherlands tolerance.

^vExpressed as methyl 2-benzimidazolecarbamate (MBC).

^uIf treated with benomyl, treatment with another fungicide prohibited.

^tNo published official pesticide legislation.

^sRegistered for preharvest use only.

^rRegistered for preharvest use only with no published tolerance.

^qConsidered as a pesticide and is permitted as long as residues do not exceed 10 ppm.

Postharvest fungicide tolerances for citrus used in various countries are listed as ppm (parts per million) in the above table. As changes occur in these tolerances, they will be listed in future issues of this newsletter. This list is a revision of one that appeared in Packinghouse Newsletter No. 70, February, 1975.

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 Extension Service
 Lake Alfred

Roy McDonald
 USDA/ARS
 Rotterdam
 The Netherlands

AVAILABLE PUBLICATIONS

Available from Barry Tugwell, South Australian Department of Agriculture, Box 1671
 G. P. O., Adelaide 5001, South Australia

"Practical control of citrus rind disorders" by Barry Tugwell and Kevin Gillespie. Dept. of Agr. & Fisheries, South Australia, Fact Sheet No. 96/77. June, 1977.

Available from Dr. S. P. Monselise, Department of Horticulture, Faculty of Agriculture,
 P. O. Box 12, Rehovot, Israel

"Organic acid composition of 'Shamouti' oranges at harvest and during prolonged postharvest storage" by Alegre Sasson and S. P. Monselise. J. Amer. Soc. Hort. Sci. 102(3):331-336. 1977.

"Electrical conductivity of 'Shamouti' orange peel during fruit growth and post-harvest senescence" by Alegre Sasson and Shaul P. Monselise. J. Amer. Soc. Hort. Sci. 102(2):142-144. 1977.

"Gas-liquid chromatography of organic acids in citrus tissues" by Alegre Sasson, Yair Erner and Shaul P. Monselise. J. Agric. Food Chem. 24(3):652-654. 1976.

Available from Dr. T. L. Davenport, AREC, 18905 SW 280th Street, Homestead, FL 33031

"Stylar-end breakdown: a pulp disorder in 'Tahiti' lime" by T. L. Davenport and C. W. Campbell. HortScience 12(3):246-248. 1977.

"Stylar-end breakdown in 'Tahiti' lime: aggravating effects of field heat and fruit maturity" by T. L. Davenport and C. W. Campbell. J. Amer. Soc. Hort. Sci. 102(4):484-486. 1977.

Available from Dr. R. C. Hooks, Food and Resource Economics Dept., IFAS, University of Florida, 1157 McCarty Hall, Gainesville, FL 32611

"Estimated costs of packing and selling fresh Florida citrus, 1975-76 season" by R. Clegg Hooks and Richard L. Kilmer. Economic Information Report 72. May, 1977.

Available from Dr. E. George Stern, Wood Research Laboratory, College of Agriculture Virginia Polytechnic Institute, Blacksburg, VA 24061

"Determination of flexural behavior of stringer-type pallets and skids, a preliminary approach" by Walter B. Wallin, E. George Stern and Jay A. Johnson. V.P.I. Engineering Experiment Station Bulletin No. 146. July, 1976.

"The William H. Sardo Jr. pallet and container research laboratory and the hardened-steel pallet nail" by John F. Hosner and E. George Stern, and a panel discussion. V.P.I. Engineering Experiment Station Bulletin No. 148. Feb., 1977.

"Mibant tests on pallet staples" by E. George Stern. V.P.I. Engineering Experiment Station Bulletin No. 149. April, 1977.

"Toughness of pallet nails" by E. George Stern. V.P.I. Engineering Experiment Station Bulletin No. 150. May, 1977.

Available from Mr. B. Abbitt, AREC, P. O. Box 1088, Lake Alfred, FL 33850

"Budgeting costs and returns: Indian River citrus production, 1976-77" by R. P. Muraro and Ben Abbitt. Economic Information Report 75, FRED. September, 1977.

"Budgeting costs and returns: central Florida citrus production, 1976-77" by R. P. Muraro and Ben Abbitt. Economic Information Report 73, FRED. June, 1977.

"Opportunity costs in citrus production: what are they?" by Ben Abbitt and Ken Townsend. Lake Alfred AREC Research Report CS77-1. August, 1977.

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This newsletter is published at a cost of \$86.70 or 7.8 cents per copy, to give the latest news to the packinghouse industry.