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PACKINGHOUSE NEWSLETTER

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Key Word Index Anthracnose, Degreening, Florida Citrus Packers, Peel Injury, Sooty Mold, Tangerines, TTC Dye, Washer Brushes, Washing

SOOTY MOLD REMOVAL FROM GRAPEFRUIT

"Sooty mold grows on excretions from whiteflies, black scale, brown soft scale, mealybugs and aphids. It is prevented by controlling these insects. Existing mold may be loosened by summer oil spray".¹-- Florida Citrus Spray Guide 1978 (available at your County Extension Office or see Available Publications list in this Newsletter).

These insects must be controlled in the grove to produce grapefruit, or other citrus fruits, free of sooty mold and easy to wash in the packinghouse. In actual practice much grapefruit, sometimes with 2 or 3 layers of sooty mold, is picked and delivered to the packinghouse. This is particularly true of fruit picked during the latter part of the season.

To remove this black film, it is necessary to wet down to the surface of the fruit. Special "sooty mold cleaners," using EPA approved materials, are available. The commonly used fruit washing detergents do not wet sooty mold readily. Sooty mold cleaners should be applied as soon as possible after the fruit are dumped from the pallet box and should not be rinsed off until after the fruit are washed. The longer the interval between wetting the fruit and the washer, the more effectively sooty mold can be removed. Increasing the time that fruit is wet before brushing is much more effective (and cheaper) than increasing the number of brushes in the washer.

Where sooty mold is apt to be a problem every year, arrangements should be made for additional wetting time. This is done by installing a slat conveyor, ahead of the washer. If elevations and transfers between equipment items are properly designed, this conveyor can be slowed down so that fruit pile up 3 or 4 deep with proportionate increase in wetted time.

It is important that fruit rotate on the washer brushes so that the entire surface of each fruit is brushed, particularly the area around the "button". Running grapefruit faster than the capacity of the washer tends to prevent fruit rotation. Tumbler or spiral brushes help to keep the fruit turning but if the washer is running at more than 80% capacity, these brushes lose their effectiveness.

Andy McCornack
Florida Department of Citrus
Lake Alfred

¹Summer oil can, however, severely retard degreening of fruit picked early in the season. Editor.

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DYE AS A TOOL TO DETECT CITRUS PEEL INJURY

A colorless dye, TTC², can be used as a tool to determine the amount and severity of fresh mechanical peel injuries which occur during picking, hauling, dumping, and handling during the packing operation. After dyeing, fresh bruises, scratches, etc. will be red. The amount of red on the fruit taken from different locations before or during packing can be compared to determine where and what types of mechanical injuries occur.

Suggested procedure for dyeing fruit in the packinghouse is to take 3 samples: 1. Unwashed after dumping (hand wash with a sponge or rag), 2. Washed fruit, after rinse and 3. Dried fruit before waxing. A few fruit from each location can be placed in small pans. Sufficient dye solution is added to each pan to cover half of each fruit, leaving the top half undyed for comparison. Leave fruit in the dye for 2 hours or longer, then remove and dry off excess dye.

Dye strength

1 level teaspoon (approximately 3.5 grams) of dye in 1 gallon of water. Weaker dye solutions can be used but the time fruit is in the dye should be increased.

Materials needed

1. TTC² dye available from Sigma Chemical Co.³, P. O. Box 14508, St. Louis, MO 63178.

Cost of dye--1977 prices (subject to change)

- 10 grams - \$4.90, 25 grams \$11.40, 50 grams \$21.00
2. Plastic pans with flat bottoms, approximately 10" x 12"
 3. Plastic gallon milk jugs to mix and store dye.

Dye solution can be used over and over again, so pour it back into jugs after use. Dyed fruit must be discarded as this material is not approved as a food additive.

Andy McCornack
Florida Department of Citrus
Lake Alfred

²2,3,5-triphenyl-2H-tetrazolium chloride

³Mention of a source of material is not intended to endorse that source in preference to others who can supply the same material.

TEST DEGREENING

Test degreening should be an early season standard practice, but it is omitted by too many packers. To test degreen, a representative sample of fruit should be selected (as is commonly done for maturity tests) from each crop or block before it is harvested. Those nearby can deliver small samples of fruit (in mesh bags, labeled with name, phone number and date) to this Center for test degreening in our packinghouse. Perhaps a more convenient neighboring packinghouse would allow samples to be placed in their degreening rooms if they start operating first. In any case, it is a good idea to test degreen each new variety as it approaches harvest maturity. Unless a crop will degreen to give an acceptable pack-out, the only way it will make money is by leaving it on the tree for additional development of natural color.

WARNING ON 'ROBINSON' TANGERINES. Always test degreen 'Robinsons'. If they take longer than 36 hours to degreen, anthracnose decay can cause catastrophic losses.

Will Wardowski
Extension Service

Bill Grierson
AREC, Lake Alfred

INTERESTING MEDICAL DISCOVERY:
HIGH PRICES MAKE PACKERS COLOR BLIND!

The same telephone conversation takes place every year, particularly with regard to 'Robinson' tangerines.

Packer: "We just can't understand it. This crop was picked with a good color-break, degreened to a beautiful color and we still have anthracnose, zebra skin, etc. etc.etc."

Research worker: "Have someone bring us a sample for examination."

In comes a sample of early tangerines with color that would be reasonable for grapefruit or even lemons. ".....but Doc, they're a beautiful color!"

Bill Grierson
AREC, Lake Alfred

EMERSON SELECTED BY PACKERS

James (Jim) E. Emerson has been named General Manager of the Florida Citrus Packers, P. O. Box 1113, Lakeland, FL 33802. Jim is a young man with valuable experience in agriculture. His two most recent positions as Staff Director-Agriculture and General Legislation Committee, Florida House of Representatives and before that as Director of Public Affairs (Lobbyist) with the Florida Farm Bureau, Tallahassee gave him valuable experience in legislative matters. This experience is likely to be useful for the fresh citrus industry's problems both in Tallahassee and Washington, DC. Welcome, Jim, to the fresh citrus industry and central Florida.

Will Wardowski
Extension Service
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AVAILABLE PUBLICATIONS

Available from Dr. W. Wardowski, AREC, P. O. Box 1088, Lake Alfred, FL 33850

"Florida Citrus Spray Guide 1978" Florida Cooperative Extension Service Circ. 393-D. January 1978.

"Residues of 2,4-dichlorophenoxyacetic acid herbicide (2,4-D) in Valencia oranges following post-harvest dip" by H. A. Moye and A. A. McCornack, Proc. Fla. State Hort. Soc. 90:13-14. 1977.

"Scared of cancer? Don't blame modern agriculture" by W. Grierson. Farm Chemicals 141(9):69,72,74,76. September, 1978.

Available from Mr. Earl K. Bowman, Handling & Facilities Research Unit, SEA, USDA, Gainesville, FL 32604

"Concept for employing automatic continuous-weighing equipment in mechanized citrus-packing operations: method and cost factors" by E. K. Bowman, USDA, ARS-S 183. September 1978.


Available from Mr. Joseph J. Whigham, Division of Fruit & Vegetable Inspection, Fla. Dept. of Agr. and Consumer Services, P. O. Box 1072, Winter Haven, FL 33880

"Close-up and microscopic multiple exposure techniques for horticultural photography" by J. J. Whigham, Proc. Fla. State Hort. Soc. 90:92-93. 1977.

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

"Performance of warehouse and exchange pallets made of six western woods" by E. G. Stern, VPI & SU Bulletin 156, March 1978.

"Evaluation of the improved stevedore pallet" by N. Franco. VPI & SU Bulletin 157, June 1978.


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