

Proceedings
of the
FLORIDA STATE
Horticultural Society
1987

Volume C

Printed August 1988

CONTENTS

Officers for 1987	II
Officers for 1988	III
U.S.-Metric Conversion Table	IV
Editorial Policy	IV
Presidential Gold Medal Award	VIII
Awards for Outstanding Papers	VIII
Council Memorial Tomato Research Award	VIII
President's Industry Award	VIII
List of Honorary Members	IX
Honorary Membership Awards	X
Presidential Address, Richard F. Matthews	XVI
Principal Address, Jules Janick	XVIII
Florida State Horticultural Society: The First 100 Years, Herman J. Reitz	XXI

HANDLING AND PROCESSING SECTION

Handling & Processing Section, FSHS Role in the Florida Fresh Fruit and Vegetable Industries, W. F. Wardowski, W. Grierson and R. K. Showalter	1
Gamma Irradiation as a Quarantine Treatment for Florida Grapefruit Infested With Caribbean Fruit Fly, <i>Anastrepha sus- pensa</i> , (Loew), D. L. von Windeguth and M. A. Ismail	5
Effectiveness of Various Postharvest Treatments for Mango Decay Control, R. T. McMillan, Jr., D. H. Spalding and W. F. Reeder	7
Influence of High-Temperature Conditioning on Peel Injury and Decay of Waxed or Film Wrapped Florida Grapefruit After Low-Temperature Storage, W. R. Miller, D. Chun, L. A. Risse and T. T. Hatton	9
Effects of Harvest Date and Type of Film Wrapping on Keeping Quality of Florida Grapefruit, Huang Shu, L. G. Albrigo and P. J. Fellers	13
Biological Basis for Postharvest Uses of Formulated Quarternary Ammonium Compounds (Quats), B. A. Dave	18
Effect of Experimental Bacterial Disinfectants Applied to Oranges on Postharvest Decay, G. Eldon Brown	20
Seasonal Trends in the Population Dynamics of Fungi, Yeasts, and Bacteria on Fruit Surface of Grapefruit in Florida, D. Chun and R. E. McDonald	23
Bridging the Technology Gap Between Research and Fresh Citrus Packing, W. I. Wenda and J. L. Kelly	25
Influence of Various Conditioning Times and Temperatures and Intermittent Warming on Chilling Injury and Decay of Non- wrapped and Film Wrapped Peppers, L. A. Risse and D. Chun	29
Citrus Wax Drying Evaluation Via Infrared Thermometry, Wil- liam M. Miller and William L. Verba	32

The Florida State Horticultural Society and the Citrus Processing Industry, Richard F. Matthews	35
Stability of Prepared Carrot Sticks in Storage, J. H. Bruemmer ...	36
Firmness and Mealiness of Selected Florida-Grown Tomato Cul- tivars, M. Joseph Ahrens, Donald J. Huber and John W. Scott	39
Effect of Freeze Damage and Processing Variables on the Juice Color of Several Florida Orange Cultivars, S. M. Barros, D. R. Petrus, R. D. Carter and P. J. Fellers	42
Nonconventional Treatment of Citrus Juice Extractor Residue, L. Wicker, M. E. Parish and R. J. Braddock	44
A General Purpose Tristimulus Colorimeter for the Measure of Orange Juice Color, B. S. Buslig, C. J. Wagner, Jr. and R. E. Berry	47
Changes in Sugars and Acids of Citrus Fruits During Storage, Ed Echeverria and Mohamed Ismail	50
Evaluating Panelist Bias From Grapefruit Juice Hedonic Scores, Russell L. Rouseff, John E. Davis, S. Faye Martin and Sandy M. Barros	53
Pack or Juice? A Look at Packout Rates, Richard Beilock and W. F. Wardowski	55

CITRUS SECTION

Glufosinate (Ignite): A New Promising Postemergence Herbicide for Citrus, Megh Singh and D. P. H. Tucker	58
Growth of Young 'Hamlin' Orange Trees Using Standard and Controlled-Release Fertilizers, T. E. Marler, J. J. Ferguson and F. S. Davies	61
Screening Sweet Orange Citrus Cultivars for Relative Susceptibility to Phytophthora Foot Rot, G. S. Smith, D. J. Hutchison and C. T. Henderson	64
Seed and Budwood Source Effects on the Incidence of Citrus Blight Among 14-Year-Old 'Valencia' Orange Trees, R. R. Pelosi, A. B. Gould, M. Cohen and R. M. Sonoda	66
Relationship of Citrus Blight to Tree Size of 'Valencia' Orange on Rough Lemon Rootstock, A. B. Gould, R. S. Ferriss, M. Cohen, R. R. Pelosi and R. M. Sonoda	68
The Effect of Withholding Fe, Zn, and Mn Sprays on Leaf Nutri- ent Levels, Growth Rate and Yield of Young 'Pineapple' Orange Trees, H. K. Wutscher and T. A. Obreza	71
Citrus Tristeza Virus and Vectors: Regulatory Concerns, C. L. Schoulties, L. G. Brown, C. O. Youtsey and H. A. Denmark ..	74
Citrus Canker—The Role of Enzymes and Xanthan Gum in Infec- tion and Spread of the Pathogen, P. G. Webb, R. H. Biggs and J. E. Gander	77
Current and Future Trends in Budwood Dissemination and Rootstock Planting, C. O. Youtsey	78
Survey of Florida Citrus Nurseries for <i>Phytophthora</i> spp., S. E. Zitko, L. W. Tmmer and W. S. Castle	82
Root System Development in Field- and Container-Grown Young Citrus Trees, William S. Castle	85
Growth of Bare-Rooted and Container-Grown 'Hamlin' Orange Trees in the Field, Thomas E. Marler and Frederick S. Davies	89
Citrus Survey and Citrus Mapping Microcomputer Programs, Thomas W. Oswalt	93
Grove Management With Computer Aided Photointerpretation, George J. Edwards, Bryan Beasley, Ted Carey and Don L. Goolsby	95
The Post-Freeze U. S. Grapefruit Industry From a Florida and Texas Perspective, Gary F. Fairchild and Paul W. Teague	99
Freeze Protection Methodology Reviewed in the Light of Depen- dence on Weather and Climate Information, J. David Martsoff	103
Microclimate of Young Citrus Trees Protected by Microsprinkler Irrigation During Freeze Conditions, Mark Rieger, Larry K. Jackson and Frederick S. Davies	109

Low Temperature Killing Points of Citrus Leaves During the 1984-85, 1985-86 and 1986-87 Low Temperature Periods in Florida, W. J. Wiltbank and T. W. Oswalt	113	Effect of Rates, Form, and Application Date of Nitrogen on Growth of Potatoes, D. R. Hensel and S. J. Locascio	203
Observations of Cultural Problems With the 'Sunburst' Mandarin, L. G. Albrigo, C. W. McCoy and D. P. H. Tucker	115	Nitrogen Crop Nutrient Requirement Demonstrations for Mulched Pepper in Florida, George J. Hochmuth, Ken D. Shuler, Rick L. Mitchell and Phyllis R. Gilreath	205
The 'Fallglo' Citrus Hybrid in Florida, C. J. Hearn	119	Icebox Watermelon Fruit Size and Yield as Influenced by Plant Population, P. R. Gilreath, R. L. Brown and D. N. Maynard ..	210
Effect of an Artificial Windbreak on Rind Blemish and Yield of Hamlin Orange, A. J. Rose	122	Improving Stand Establishment of Direct Seeded Vegetables in Florida, D. J. Cantliffe, M. Elballa, A. Guedes, G. B. Odell, P. Perkins-Veazie, J. R. Schultheis, D. N. Seale, K. D. Shuler, I. Tanne and J. T. Watkins	213
Water Management for Citrus Production in the Florida Flatwoods, Elizabeth A. Graser and L. H. Allen, Jr.	126	Field Survey for the Pepper Weevil, <i>Anthonomus eugenii</i> , on Nightshade, R. J. Patrock and D. J. Schuster	217
Effects of Soil Series on Shallow Water Table Fluctuations in Bedded Citrus, B. J. Boman	137	Effect of Magnesium on the Toxicity of Copper to Pepper/Tomato Leaf Spot Bacteria, <i>Xanthomonas campestris</i> <i>pv.</i> <i>vesicatoria</i> , S. S. Woltz, J. B. Jones	221
Manufacturing Variation of Microirrigation Emitters, B. J. Boman	141		

GARDEN AND LANDSCAPE SECTION

Helping Your Extension Agent Help You, Loretta B. Hodyss and Thomas M. Teets	144	Reduction in the Control of Common Nightshade (<i>Solanum americanum</i>) by Paraquat Due to Copper Fungicides, W. M. Stall, S. R. Kostewicz and R. L. Brown	222
A Landscape Design Created to Provide Low Maintenance, a Sense of Security, and Visual Quality, Susan V. Sprunt and George E. Fitzpatrick	145	Weed Control and Tolerances of Chinese Cabbage and Chinese Broccoli to Pre and Postemergence Herbicides on Mineral Soils, K. D. Shuler, W. M. Stall and S. J. Locascio	224
Landscape Lighting, Dewayne L. Ingram	148	Observations on Double-Cropping Bell Pepper and Control of Bacterial Leaf Spot in Palm Beach County, John N. Simons ...	226
Bamboo—An Emerging Plant for Interiors, Richard W. Henley and Richard T. Poole	149	Weed Control in Tomato Row Middles, J. P. Gilreath, W. M. Stall and S. J. Locascio	232
Gingers for Florida Gardens, Derek Burch, Ellen W. Demmy and Henry Donselman	153	Soil Solarization for Strawberries, A. J. Overman, C. M. Howard and E. E. Albregts	236
Street Trees for South Florida, Michael J. Cullen	155	Evaluation of Fusarium Wilt (Race 3)—Tolerant Tomato Lines, John Paul Jones and J. W. Scott	240
Palms Available for Landscaping in Southern Florida, Murray J. Corman	156	Eggplant Cultivar Evaluation in West-Central Florida, Spring 1986 and 1987, Teresa K. Howe and Will E. Waters	242
Tropical Daylilies: An Update, J. Wooten	159	Performance of Okra Cultivars in a High Management Cultural System, D. N. Maynard	246
Bromeliads for South Florida Landscape, Harvey R. Bullis, Jr. ...	161	Collard Cultivar Evaluation in Northwest Florida 1983-1987 Summary, J. M. Snell and S. M. Olson	249
Heliconia as a Pot Plant, Dexter Ball	163	The Potential for F ₁ Hybrid Icebox Watermelon Cultivars, J. M. Crall and Y. V. Barr	251
Success in Woody Plant Trials at Walt Disney World, D. Scott Shultz	165	Growth and Ripening of Strawberry Fruit Under Field Conditions, P. Perkins-Veazie and D. J. Huber	253
History of Turfgrass Production in Florida, Ralph W. White and Philip Busey	167	Lysimeters for Crop Water Use Determinations Under High Water Table Conditions, G. Vellidis, A. G. Smajstrla and F. S. Zazueta	256
Solarization of Small Volumes of Potting Soil for Disinfestation of Plant-Parasitic Nematodes, R. M. Giblin and S. D. Verkade	174	Use of Computer to Record, Transfer, and Analyze Data From a Packing House Grader Operation, D. E. Hensel and S. D. Reese	261
Propagation Techniques for Five Endangered Sand Scrub Species, Nancy J. Bissett	176	Fall Production of Watermelons: The Potential for Double Cropping and Markets, Timothy D. Hewitt and David Zimet	262
Major Florida Cut Foliage Crops Classified According to Floral Design and Landscape Usage, Robert H. Stamps	179		
Salt Tolerant Bedding Plants, B. Tjia and S. A. Rose	181		
Boron Nutrition in Florida Ornamentals, L. P. Griffith	182		
Fertility and Fertilizers, Howard C. Bardsley	184		
Desirable Features of Weed Control Programs in Residential Landscapes, Evert Burt, Wayne Currey and John Burt	186		
Flamingo Gardens: Metamorphosis Into a Botanical Garden, Davie A. Bar-Zvi	187		
Our Misunderstood Mahogany and Its Problems, Julia F. Morton	189		
Purslane: A Ubiquitous Garden Weed With Nutritional Potential, Daniel Kesden and Albert A. Will, Jr.	195		

VEGETABLE SECTION

Fertilizer Rate and Method of Application on Fruiting Strawberry, E. E. Albregts and C. M. Howard	198		
Banding Fertilizers for Improved Fertilizer Use Efficiency for Lettuce on Everglades Histosols, V. L. Guzman, C. A. Sanchez and R. E. Lucas	200		

KROME MEMORIAL SECTION

New Tropical Fruit Crops of 1887—A Blueprint for Today, and a Sweepstakes, R. J. Knight, Jr.	265
Commercial Fruit Production in Dade County 1900-1987, Wm. H. Krome and Seymour Goldweber	268
Postharvest Response of Carambolas to Storage at Low Temperatures, Craig A. Campbell, Don J. Huber and Karen E. Koch ..	272
Carambola Production in Malaysia and Taiwan, Joan G. Green ...	275
The Native Subtropical and Tropical Fruits in Yunnan, China, X. L. Hu	278
'Tikal', An Early-Maturing Sapodilla Cultivar, Carl W. Campbell, Simon E. Malo and John Popenoe	281
The Pollinators of the Yellow Passionfruit—Do They Limit The Success of <i>Passiflora edulis</i> F. <i>flavicarpa</i> as a Tropical Crop?, Lisa H. Hammer	283

Recovery of <i>Phytophthora cinnamomi</i> From Avocado Soils of South Florida, Randy C. Ploetz and Jorge L. Parrado	288
Effects of Flooding and Phytophthora Root Rot on Photosynthetic Characteristics of Avocado, Randy C. Ploetz and Bruce Schaffer	290
Effectiveness of Cross-Protection by a Mild Mutant of Papaya Ringspot Virus for Control of Ringspot Disease of Papaya in Florida, R. T. McMillan, Jr. and D. Gonsalves	294
Early-Flowering, Early-Ripening Blueberry Germplasm for Central Florida, Paul M. Lyrene	296
Soil Temperature and Flooding Effects on Young Rabbiteye Blueberry Plant Survival, Growth, and Ethylene Levels, Jonathan H. Crane	301
Muscadine Grape Seed Aroma Compounds, O. Lamikanra	305
In Vitro Shoot Micropropagation and Plant Establishment of 'Orlando Seedless' Grape and 'Tampa' Rootstock, D. J. Gray and C. M. Klein	308
Early Pruning of Muscadine and Bunch Grape Cultivars in North Florida, O. U. Onokpise and I. D. Inyang	310
Influence of Gibberellic Acid and Various Management Practices on Berry, Seed and Cluster Development in 'Orlando Seedless' Grape, M. C. Halbrooks and J. A. Mortensen	312
Yield and Fruit Quality Evaluations of Seven Peach Clones in Two Orchard Systems, L. G. McDermott, W. B. Sherman and T. E. Crocker	315
IR-4: Developing Pesticide Labels For The Tropical Fruit Crop Industry, C. W. Meister	319
Third Party Registration of Chemicals for Minor Use Crops in Florida, Daniel A. Botts	321
The Role of the Fruit & Spice Park in Popularization and Dissemination of Tropical Fruit in South Florida, Chris B. Rollins	323

ORNAMENTAL SECTION

Media Temperature and Rooting Response of Azalea, W. J. Carpenter	328
Basamid and Methyl Bromide Compounds as Fumigants in Carnation and Chrysanthemum Production in Selected Propagation Media, Charles R. Semer IV	330
A Micropropagation Protocol Using Fraser Photinia for Mutation Induction and New Cultivar Selection, M. E. Kane, T. J. Sheehan and N. L. Philman	334
Container Size and Potting Medium Affect Growth Rate of Weeping Fig and Loquat, Dennis B. McConnell	337
Effect of Environmental Factors on <i>Dracaena</i> 'Massangena' During Shipping, R. T. Poole, C. A. Conover and P. G. Webb	340
Characterization of Wholesale Nurseries in Leon and Jefferson Counties, Gary W. Knox and David Zimet	341
Estimating Irrigation Requirements of Sprinkler Irrigated Container Nurseries, A. G. Smajstrla and F. S. Zazueta	343
The Center for Arthropod Systematics and the Center for Systematic Entomology, Inc., Howard V. Weems, Jr.	348
Migration, Survival, and Reproduction of Nematodes in Rockwool, P. S. Lehman	350
Response of Hibiscus to Soil Applied Nitrogen, E. F. Gilman	356
Effect of Potting Medium Temperatures on Release Curves of Slow-Release Fertilizers in the Presence of <i>Ficus benjamina</i> , C. A. Conover and R. T. Poole	357
Effect of Fertilizer Level on Severity of Fusarium Leaf Spot of <i>Dracaena marginata</i> , A. R. Chase	360
Foliar Applications of Benomyl and Mancozeb Do Not Affect Leatherleaf Fern Carbon Assimilation, Transpiration, Light	

Compensation Point or Vase Life, R. H. Stamps and A. R. Chase	362
Foliage Disease Management on Poinsettia Plants, Arthur W. Engelhard	364
Compatibility and Plant Safety of Fosetyl Aluminum Fungicide With Other Landscape Ornamental Pesticides, G. W. Simone and D. E. Short	369
Effect of Paclobutrazol and Uniconazole-P on <i>Hibiscus rosa-sinensis</i> , William L. Maus	373
Trials With Growth Retardants on Ornamental Foliage Plants, H. A. Mansour and R. T. Poole	375
Height Retardation of Easter Lilies Grown in Containers, Gary J. Wilfret	379
Efficacy and Phytotoxicity of Paclobutrazol and XE-1019 on Vinca, James E. Barrett and Terril A. Nell	382

CENTENNIAL WORKSHOP

Factors Affecting Trends in Citrus Production in Florida, Walter J. Kender	384
Current and Future Trends in New Citrus Plantings, James W. Todd	386
Current and Future Trends in Budwood Dissemination and Rootstock Planting, C. O. Youtsey	388
A Historical Perspective of the Citrus Nursery Industry, W. S. Castle	389
Current & Future Trends in Establishment of New Groves, L. K. Jackson	389
Processing Potential of Florida-Grown Fruits, R. P. Bates and C. A. Sims	389
Shrink-Film Technology for the Fresh Produce Market, Charles R. Barmore	394
Consumer Response to Citrus Juice Packaging Options, P. Mittal	394
Packaging Developments in Florida Fresh Fruit and Vegetable Industries, Lawrence A. Risse	394
Evaluating Packaging Materials and Their Interaction With Juice Products, Bruce Harte	395
Emerging Packaging Container Options for Florida Citrus Processors, J. Harvey	395
Factors Affecting Palm Transplant Success, Timothy K. Broschat and Henry Donselman	396
Root Pruning Broadleaf Trees Prior to Transplanting, Edward F. Gilman	397
Root Growth & Stimulation at Transplanting and Effects of Wire Baskets on Tree Roots, Glen P. Lumis	398
Progress in Nutrition of Florida Vegetables During the Past 100 Years, S. J. Locascio	398
Marketing Strategies for Florida-Grown Table Grapes, Robert L. Degner and Gary F. Fairchild	405
An Overview of Tropical Fruit Uses in Florida, B. A. Campbell and J. Smith	408

Sponsored Student Program	412
Constitution	418
By-Laws	418
Report of Executive Committee, 1987	420
Membership List	421
Index	430
Available Proceedings	Inside Back Cover