



Marco Nicovich

## Horticulture: Research for Everyone

Horticulture is defined by the Merriam-Webster's Dictionary as "the science and art of growing fruits, vegetables, flowers, or ornamental plants." As such, it is an area of agriculture that literally touches the lives of everyone.

The fruits and vegetables in our meals, the plants in our home lawns and public spaces and the fresh or dried flowers that decorate our homes are all thanks to the efforts of individuals involved in horticulture.

Almost every MAFES location conducts horticultural research, but it is a primary focus at the MAFES greenhouses on the Starkville campus, the Truck Crops Branch in Crystal Springs, the North Mississippi Research and Extension Center in Verona and the South Mississippi Branch in Poplarville.

Horticultural research is showcased at several events each year, including the Ornamental Horticulture Field Day at the

South Mississippi Branch, The North Mississippi Garden Expo at the North Mississippi Research and Extension Center and the Fall Flower and Garden Fest at the Truck Crops Branch.

Rows of vegetables, flowerbeds bursting with color, ornamental shrubs for the home lawn and the opportunity to talk with horticulturists help draw thousands of visitors to these events. What they don't see, however, is the hundreds or even thousands of hours of work in the laboratories and research plots used to develop or evaluate plants for Mississippi's growing conditions.

Throughout the year, MAFES scientists work with individuals involved in commercial production of fruit, vegetables and ornamental plants, as well as home gardeners, to help make available the items Mississippians want and need.

## TRIAL GARDENS COLOR RESEARCH

Anyone who thinks experiment station research plots are boring hasn't visited the South Mississippi Branch in Poplarville. For much of the year, the station is a mosaic of color, thanks to the trial gardens.

"We started with two small plots in 1997 and now have expanded to several acres," said MAFES horticulturist Patricia Knight. "Included in the trial gardens are sun coleus, annual vinca, petunias, perennial salvia, dahlias, and we are always trying to obtain new plant material that visitors might find interesting."

The station evaluates plant material for the Mississippi Medallion program, BallSeed, PanAmerican Seed, Ball FloraPlant, the USDA National Arboretum, All-American Flowering Plant trials and the SERA-IEG 27 group.

The trial gardens, Knight said, benefit both commercial growers and homeowners.

"The gardens allow local producers to see how currently available plants perform in our area," she said. "Since we also have a great deal of plant material being evaluated for future release, they can decide whether or not they want to add a particular plant to their product line when it's released."

The gardens at Poplarville also give consumers a chance to see how plants, especially new ones, may look and perform in their home lawns.

"This lets the consumer know about the things they can ask their garden centers to get this year or next," Knight said. "Hopefully, everyone benefits because consumers and producers know what's doing well."

# Almost seedless watermelons: Sweet through and through

Early July was watermelon-harvesting time at the Northeast Mississippi Branch Experiment Station in Verona.

The melons being tossed out of the field by research assistant Thomas Horgan to the waiting hands of student worker Noble Hale weren't like those grown by most north Mississippi farmers and home gardeners. They were seedless varieties under evaluation by MAFES horticulturists.

"The melons consumers want right now are the seedless varieties," said MAFES horticulturist Kent Cushman. "We're evaluating several different varieties here and at the Truck Crops Branch in Crystal Springs for performance under Mississippi growing conditions."



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Kent Cushman, left, and Thomas Horgan record data on seedless melons

Horticulturist Rick Snyder is conducting the trials at Crystal Springs. Christine Coker, a horticulturist at the Coastal Research and Extension Center, also is planning seedless melon trials at the Beaumont Horticultural Unit in Perry County.

At Verona, Cushman and research associate Muhammad Maqbool check various characteristics of just-harvested melons, including weight and sugar content.

"Consumers want melons that are sweet and weigh 20 pounds or less," Cushman said. "In fact, the market is changing in favor of seedless melons the size of a cantaloupe."

While the term "seedless" may be technically incorrect—the seedless varieties do have some small, immature seed and an occasional mature one—they are more consistently sweet throughout.

"You can eat all the way to the rind without a significant loss of quality," Cushman said.

The research so far has shown seedless varieties produce well in Mississippi, although Cushman said prospective growers need to be aware that they do require more management than regular varieties.

"Due to poor seed germination in soil, the plants are grown in a greenhouse and transplanted to the field," he said. "They also produce low levels of pollen, so about 25 percent of a field needs to be planted to seeded varieties to provide pollen for the seedless plants."

## Cut flowers potential new Mississippi cash crop

Strawberry blonds wouldn't seem to be a likely subject for MAFES research, but they're part of a study at the North Mississippi Branch Experiment Station in Verona.

In this case, the strawberry blonds are a sunflower variety and the research is with flowers with potential as a cash crop.

"The value of cut flowers produced and imported to the U.S. each year is more than \$1 billion, but almost none are produced in Mississippi," said MAFES horticulturist Crofton Sloan. "If quality and supply were acceptable and constant, Mississippi florists have indicated they would prefer to buy locally produced flowers rather than those that spend several days in shipment to the state."

This is the third year of a cut flower study by Sloan, research assistant Susan Harkness and Kenneth Hood of the Food and Fiber Center at Mississippi State. They are evaluating several types of sunflowers, as well as zinnias, celosia, snapdragon and other varieties.

"We take flowers from the study to local florists on a regular basis for feedback," Sloan said. "Their input provides an informal survey of market acceptance, vase life and other qualities."



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Research plots at the North Mississippi Branch produce plants for cut flower research.