Richard Wallace has gone bananas. The professor of organic chemistry in the Department of Chemistry and Physics at AASU took a detour from synthetic methodology research seven years ago and has never looked back. These days he splits his time teaching, doing research in a Science Center laboratory, and toiling in the backyard of his Richmond Hill home, where he grows bananas and citrus trees. He conducts additional research at the Bamboo Farm and Coastal Gardens in Savannah.

Wallace’s work over the last years has been driven by a curiosity to identify a banana variety that can grow and produce edible fruit in Southeast Georgia’s cooler than tropical climate. Recently, Wallace and two collaborators at the University of Georgia-Tifton have identified a variety that holds great promise.

The findings by Wallace, Gerard Krewer, and Esendugue Greg Fon-sah, were published in the 2007 winter issue of *Southeastern Palms*, the quarterly journal of the Southeastern Palm Society.

In the last three years, Wallace has experimented with a variety known as *Veinte Cohol* and observed the same results every time: a two-foot stem gets planted in early May and quickly grows to produce mature fruit in October.

“Scientifically this is pretty exciting,” Wallace said. “Over the last three years we’ve grown 50 plants of this variety and each one does the same thing. This is real.”

That a relatively obscure variety of banana can produce fruit in South Georgia has long-term implications for gardeners and commercial growers in the region.

“Maybe one day we will be thinking about Georgia bananas in addition to Vidalia onions,” Wallace quipped.

In the paper published in *Southeastern Palms*, Wallace and his colleagues write: “The discovery of this short cycle banana... holds great promise for expanding the regions of the world where bananas can be grown and fruited – both by the homeowner and possibly even commercially.”

**GROWING THINGS THAT DIDN’T BELONG HERE**

The path to finding *Veinte Cohol* started in Wallace’s backyard more than seven years ago and has been forged by scientific inquiry as much as a passion and curiosity about “growing things that didn’t belong here.”

Sporting wire-rimmed eyeglasses, a goatee, and a Hawaiian shirt, Wallace speaks with charitable patience to a layman about the years of research, breeding and pollination that has gone into the project.

Consider that there are between 900 and 1,200 banana varieties known around the world. Cavendish is the common variety produced by commercial growers and found in grocery stores worldwide. Growers prefer Cavendish because it has, so far, resisted disease and because its fruit yield is abundant.

Most bananas are grown in the tropics where temperatures fluctuate between 75 and 85 degrees Fahrenheit year round. The plants, and more specifically, their large green leaves, do not fare well in cooler temperatures. In general, trees take anywhere from 100 to 150 days to mature the fruit after it emerges from the stem.

In the search to find the elusive Georgia-friendly banana, Wallace had to pinpoint a variety that had some degree of cold-resistance and be able to produce mature fruit fast, ahead of the first fall frost in early or mid-November.

A *Veinte Cohol* plant that Wallace picked up by chance from a nursery in South Florida some years ago opened up the likelihood of Georgia-grown bananas.
“When I first got the plant from Homestead, FL, I grew it to about two feet in a container and put it in the ground in the spring,” he said. “I harvested fruit from it around the first of November. I didn’t believe it. I had so many other varieties going on at the same time that I thought for sure I’d made a mistake.”

All doubts have now been dispelled.

The baby plants emerge naturally as “suckers” in the field. They are harvested late in the fall and put into a greenhouse over the winter. They are planted in late April or early May and produce mature fruit beginning as early as October.

The fruit it produces is considerably smaller than the Cavendish variety, about four inches in length. The flavor is tangier and has a hint of citrus. That is the consensus reached by volunteer tasters Wallace has summoned from around the campus and his neighborhood.

Working in the laboratory he has been able to achieve rapid multiplication of Veinte Cohol plants. Having an adequate supply of plant material is necessary to conduct further research, breeding, pollination, and DNA manipulation.

“Everything has fit together so nicely,” he said. “We have this plant that we can breed and rapidly reproduce in the lab and see how we can make it better.”

In addition to increasing its fruit yield, which now stands at about 15 pounds per plant, Wallace is working to make the variety even more cold resistant.

He asks, “How will it behave once we move it into North Carolina, North Georgia, or Tennessee?”

**STUDENT INVOLVEMENT**

Starting in fall 2007, senior Crystina Bronk has worked alongside Wallace in the laboratory. Majoring in biology with a minor in chemistry, Bronk has assisted with the delicate work of high rate reproduction under sterile conditions.

“The nice thing about this type of research is that it is so attractive to students.” Wallace said. “For our biology and chemistry students this is something they find interesting and exciting.”

**ORNAMENTAL BANANAS TOO**

Along the way, Wallace has also been breeding ornamental bananas. Over the last seven years he has produced hundreds of new hybrid seedlings.

“These are brightly colored, attractive plants with blooms lasting five to six weeks,” said Wallace. “They have tremendous potential in landscape applications.”

Smaller than the edible varieties, ornamentals are quick to grow and mature. In southeast coastal Georgia, stems will emerge from the ground around mid-April and the plant will reach blooming stage by mid-June.

“Ornamental Bananas: New Hybrids from a Group of Underutilized Landscape Plants,” was published by Wallace, Krewer and Fonsah in the fall 2007 issue of Southeastern Palms.

His research has also appeared in The Journal of Food Distribution Research. “Banana Production: An Alternative Crop for Niche and Ethnic Market in Georgia” was published in 2007 by Wallace, Fonsah, Krewer, and Ben Mullinix, a statistician at the University of Georgia-Tifton.

More recently “Why Are There Seeds in My Banana: A Look at Ornamental Bananas,” has been accepted for publication in the Journal of Food Distribution Research. Fonsah, Wallace and Krewer authored the article.

“Obviously, I am very thankful to be a faculty member at Armstrong where I can explore my love of teaching and research,” he said. 🌸

—Francisco Duque

Opposite page: Richard Wallace examines an edible banana flower from a Honduras-bred hybrid banana known as Sweetheart.

On the cover: Richard Wallace and his experimental banana plants

THE WALLACE FILE

Richard Wallace

1984
B.S. in chemistry,
AASU

1988
Ph.D. in organic chemistry,
Clemson University

1988-1990
Post-doctoral work at
Colorado University

1990-1995
University of Alabama
faculty

1995
Joined AASU faculty