

# The North Carolina Specialty Crops Program

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The Specialty Crops Program, formed in July 1997, is a publicly supported inter-agency program in Eastern North Carolina that is designed to accelerate the process of developing new “cash crops” for small and medium size growers who are primarily dependent on tobacco for their livelihood. Substantial new resources have been identified and committed to equipping a research station in Kinston, North Carolina, with state-of-the art facilities and equipment, including a new polycarbonate greenhouse and a refrigerated diesel truck for making deliveries to various test market locations. At the 160 ha Cunningham Research Station in Kinston, University scientists and technicians are working to generate information on the most efficient field and greenhouse growing systems for the specialty crops and varieties in greatest demand. The program is designed to develop markets for new crops, to help farmers sell what they grow. Many of the research station personnel involved in the program are highly motivated to find high value alternatives as their own families have been growing tobacco for several generations.

The idea of weaning tobacco farmers from tobacco onto other crops is not new. Author Wendell Berry, born in tobacco country (Kentucky), has advocated that government and universities need to become more interested in local food economies. He would like to see an agricultural economy of diversified small farms that produce for local markets and local consumers. In his book chapter, “*The Problem of Tobacco*” (1993), he writes:

*“Tobacco farmers are farmers and among the best of them; their know-how is a great public asset, if only the public recognized it. They are farming some very good land. They should be growing food for people of their region, the people of neighboring cities—or they should have a choice in doing so. The people who condemn them for growing tobacco should be just as eager to help them find alternative crops.”*

The initial strategy of the North Carolina Specialty Crops Program is to take advantage of an unprecedented opportunity in the marketplace to exploit the home grown theme and to develop local and regional markets for high-value specialty crops such as strawberry, peach, blueberry, tomato, asparagus, seedless watermelons, and muskmelon! In the future, the proximity of the Global Transpark, an effort to link North Carolina by air with markets throughout the world, is likely to play a role in the eventual development of export markets for specialty fruits, vegetables, cut flowers, and herbs grown in the 13 southeastern coastal plain counties which comprise the Global Transpark zone.

## MARKETING AND RISK

The Specialty Crops Program explores new market possibilities. We work in inter-agency networks and advisory teams to understand the production and market feasibility of any new item. But, there is a large measure of risk and a lack of security involved with any new specialty crop. Few growers are comfortable with the ambiguity of not knowing the market situation in precise detail—especially growers of tobacco who have been conditioned to working in a crop where production is controlled and provides grower price supports (Toussaint 1992).

For a number of years, the Cooperative Extension Service has been advising growers to proceed cautiously, and to “avoid planting newer crops until you get a market first.” But, relatively few farmers have the interest, time, experience, or financial resources needed to successfully introduce a new crop to the market! For this very reason, a forward-thinking group of tobacco farmers from Eastern North Carolina called the *Alternative Crops Diversification Committee (ACDC)* came to the University and to the Department of Horticultural Science in March 1997 to ask for our leadership and help in developing a program that would provide “visual demonstrations” of potential new crops at the Cunningham Research Station (CRS). It was felt that at the CRS we could grow and evaluate a variety of potentially important new fruit cultivars, vegetables, and herbs for production performance and pest reactions. But, our job would not stop with field and greenhouse production trials. To capture the full potential of this research, these growers wanted marketplace evaluations of each new specialty crop or value-added item!

It was obvious from this initial meeting that if we were going to accelerate the process of introducing promising specialty fruits, vegetables, and herbs to the market, it would be essential to combine the talents and resources of both the North Carolina State University's College of Agriculture and Life Sciences (CALs) with the North Carolina Department of Agriculture's (NCDA) Marketing Division.

## **INTER-AGENCY TEAMS**

A group of CALs faculty in the Department of Horticultural Science, marketing specialists from the NCDA, area extension specialists, research technicians, and front-line research station employees get together monthly at the Cunningham Research Station. These meetings are very important to keeping everyone informed and involved. We always devote the early portion of the meeting to an exploratory discussion of new specialty crops items and marketing ideas. The balance of the meeting is used to review resource requirements, communicate schedule information, delegate tasks, get status updates, and report project details.

Having such a mixed inter-agency group is one of our main strengths. Another strength is our flexibility. That flexibility lets us go to where the opportunities are. Many of those opportunities begin with a visit to another state or country. Trade meetings such as PMA and United Fresh are mandatory events for our group if we are to stay informed of new developments on the food trends superhighway. In 1998, Frieda Caplan, Frieda's Inc., Los Alamitos, California, sponsored two visits from members of the North Carolina Specialty Crops team. But, building bridges to the thought leaders of the specialty foods industry, such as Frieda Caplan, can only help us in our desire to fashion some winning strategies for tobacco farmers in the Carolinas who want to be a part of this nation's food trend superhighway (Caplan 1996).

The Specialty Crops Program must choreograph a number of important transitions in what is basically still a field crop economy in Eastern North Carolina based on tobacco, maize, and soybeans. The main problem or challenge that the Specialty Crops Program must address is to somehow cause a regional demand and a supply to come into existence simultaneously (Berry 1992). While fruits and vegetables are the initial focus of the program, it may eventually include crops such as herbs and cut flowers.

A valuable resource for us has been a "critical mass" of horticultural research and extension specialists resident at North Carolina State University. We feel quite privileged that we are able to directly harness the expertise and research products of our internationally known researchers and extension specialists in fruits, vegetables, and herbs. The fruit and vegetable breeders have a growing warehouse of unconventional cultivars that we believe are going to be "the pick of the produce aisle." But, with each new specialty variety and/or selection comes the critical need to allocate some funds for cultural research trials. In my view, a new selection or cultivar exists only to the extent that we can demonstrate to a farmer that it is well-adapted and economical to grow. Accordingly, The Specialty Crops Program has a research-arm at the Cunningham Research Station in Kinston that is strictly focused on developing precision field and greenhouse recommendations for unconventional crops (including non-food crops) and specialty varieties.

The Specialty Crops Program market research and grower-assistance component is a key element of the effort. A team of marketing specialists led by Don Thompson, Eastern Marketing Center, and Ross Williams, Assistant Director, Division of Marketing, North Carolina Department of Agriculture and Consumer Services, are working to help identify the product quality, volume and packaging requirements of national and regional supermarkets, and foodservice buyers specialty food products and value-added items. Working in close concert with Extension's Area Fruit and Vegetable Specialist, W.R. "Bill" Jester, Jr., they have already succeeded in helping a group of "early adopters" to form a grower association, Southeastern Growers' Association (SGA), that is now shipping and test-marketing various "Carolina Specialties," including eastern grown specialty melons. Fortunately, in the immediate area of the Cunningham Research Station, a large volume of excess refrigeration capacity exists that is now being effectively utilized by the new grower cooperative that has increased from 12 tractor trailer loads of specialty melons in 1997 to over 70 loads in 1998!

The chainstores have been well satisfied with the eastern North Carolina source of cantaloupes and seedless watermelons, and the Specialty Crops Program is now busily working with SGA and other area farmers to introduce lesser known specialty melons such as 'Emerald Jewel' (Fig. 1) and 'Sprite' (Fig. 2).

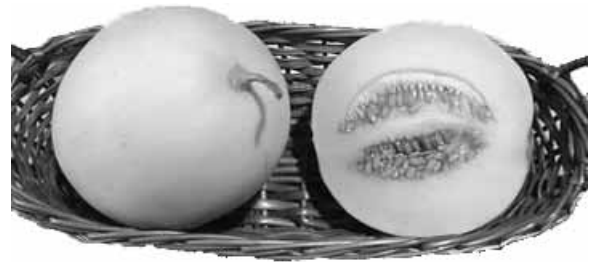
## FUNDING

Conducting field research and greenhouse trials requires some very deep pockets! In 1998, we were fortunate in that the Research Administration of the College of Agriculture and Life Sciences was able to provide seed money for specialty crops initiatives involving off-season asparagus production (fall cropping), early winter blueberry production with low chill selections (greenhouse), greenhouse strawberries (Fig. 3), and seedless watermelon production (Fig. 4).

In early 1999, we will be aggressively seeking the support of the state legislature. North Carolina is the only one of the 46 states covered by the landmark \$206 billion settlement (Nov. 1998) to specifically earmark money to help out tobacco-dependent communities. North Carolina will receive \$160 million to \$190 million annually over the next 25 years. Half of this amount will go to the foundation set up to assist tobacco communities. This new foundation can help us defray the considerable research expense of developing grower and market-ready specialty crops.



**Fig. 1.** ‘Emerald Jewel’ is a muskmelon with green flesh and green netted exterior with excellent flavor and handling characteristics. Photo credit: Don Thompson, Marketing Specialist, Eastern Marketing Center, NCDA &CS



**Fig. 2.** ‘Sprite’ is a smaller oriental melon from the Sakata Seed Co. which has a white and yellow exterior with a very sweet and crisp white interior flesh.



**Fig. 3.** ‘Sweet Charlie’ is a short day strawberry under evaluation for early winter greenhouse forcing in the program’s new polycarbonate greenhouse at CRS. Photo credit: E. Barclay Poling, Coordinator, Specialty Crops Program.



**Fig. 4.** Seedless watermelon consumer evaluations at Specialty Crops Field Day. The test marketing for specialty melons focuses on a combination of consumer preference surveys, supermarket buyer, foodservice and restaurant evaluations, and market and supply data from various shipping points.

## PROGRAM PHILOSOPHY

Our program philosophy is to: “start small and learn big”! (Sturdivant and Blakely 1999) The basic program goals that we have established are to:

1. Demonstrate the “regional market appeal” of new cultivars of fruits, vegetables, and herbs bred by North Carolina State University breeders, other universities, as well as private seed and nursery companies, that are grown, harvested, packed, and shipped from the Cunningham Research Station in Kinston.
2. Cultivate a national as well as international network of breeders, scientists, and private seed companies that can supply the Specialty Crops Program with promising new cultivars of potentially high market appeal.
3. Generate complete packages of timely and reliable production and test-market information that can guide eastern North Carolina farmers in their decisions on the most profitable new markets for specialty fruits, vegetables, and herbs.
4. Cultivate cooperation between small and independent producers to form private cooperatives that can meet the volume and seasonal supply requirements of regional and national chains.
5. Cultivate a regional network of buyers for specialty fruits, vegetables, and herbs grown in Eastern North Carolina.
6. Identify through research and market-testing new opportunities for growing out-of-season crops.
7. Identify through research and market-testing the potential for growing specialty fruits vegetables and herbs for developing ethnic markets throughout the state and region.
8. Develop a regional identity for “Carolina Specialties.”

We are excited by our mission of introducing unconventional products into the marketplace and making buyers aware that North Carolina growers have the capability to grow and deliver some of the best tasting specialty fruits and vegetables in the world! The market feedback of consumers and buyers to regionally produced specialties, including more flavorful strawberries, low-acid peaches, specialty lettuces, green-flesh muskmelons, red and yellow seedless watermelons, and specialty peppers and squashes (kabocha), is proving to be very positive. Working together, the state Land Grant University and the Department of Agriculture, can leverage a considerable wealth of resources for the purpose of answering the questions tobacco farmers have about specialty crop production practices, marketing strategies, and profit potential. The Specialty Crops Program Web page is available at the following URL: [http://www.cals.ncsu.edu/specialty\\_crops/](http://www.cals.ncsu.edu/specialty_crops/)

## REFERENCES

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