

Small Fruit News

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NC State University
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In this Issue:

Special Reports *North American Blueberry
Research & Extension Workers
Conference a Success!*
Bramble Chores *Summer 2006*

Special Reports

North American Blueberry Research & Extension Workers Conference a Success!

D. Scott NeSmith

The 10th North American Blueberry Research & Extension Workers Conference was held June 4-8, 2006 at the University of Georgia's Tifton Campus Conference Center, and it was a great success. Serving as hosts for the event were Dr. Gerard Krewer and Dr. Scott NeSmith, both faculty members of UGA's Department of Horticulture. The Conference was attended by more than 65 participants from across North America and around the world. The attendees came from Georgia, Mississippi, North Carolina, Alabama, Michigan, New Jersey, Oregon, Idaho, Maine, Tennessee, and South Carolina in the U.S. International participants were from a variety of countries including Canada, Australia, Japan, Chile, Uruguay, Korea, and France.

The Conference consisted of 2-days of oral and poster presentations on a range of topics including genetics, plant physiology, cultural management, pest management, soil fertility, and post-harvest issues. The first day's "welcome" was given by Dr. Doug Bailey, Horticulture Department Head at UGA, and the second day's welcome was given by Dr. Scott Angle, Dean of UGA's College of Agricultural and Environmental Sciences. Following the first day's scientific meeting, participants were treated to a fine meal and Southern hospitality as they toured UGA's Blueberry Research Farm at Alapaha. During the second evening, a genuine southern fried quail meal was served along with a cultural experience of bluegrass music and southern humor.

Following 2 days of meetings a post-conference tour of Southeast Georgia and the blueberry industry was held. Participants visited several commercial operations, including farms and packing facilities, and made their way to St. Simons Island for an evening on Georgia's beautiful Coast. After the night's stay on the Coast, more of Georgia's blueberry industry was visited as participants made their way back to Tifton the next day.

Sponsors for the Conference are greatly acknowledged for their financial support. The following is a list of sponsors:

Driscoll's

Georgia Blueberry Growers' Association

Georgia Fruit & Vegetable Growers' Association

Michigan Blueberry Growers Association

Southern Region Small Fruit Consortium

SunnyRidge Farm, Inc.

U.S. Highbush Blueberry Council

Valent Biosciences

Proceedings from the meeting are posted on the Southern Region Small Fruit Consortium's web site at: <http://www.smallfruits.org/>.



Figure 1. Participants of the 10th North American Blueberry Research & Extension Workers Conference held June 4-8, 2006 in Tifton, GA.



Figure 2. Blueberry Conference participants enjoy and evening of southern fried quail and bluegrass music.



Figure 3. Blueberry Conference participants visited UGA's Blueberry Research Farm at Alapaha.

Bramble Chores Summer 2006

Gina Fernandez
NC State University, Raleigh, NC

Plant growth and development

- Fruit development.
- Rapid primocane growth.
- Floricanes senesce.
- Primocane fruiting types flower and produce fruit.

Pruning and Trellising

Erect types:

- In warm climates with a long growing season, hedge (tip) the new primocanes when they are about 6-12" below the top wire of the trellis to encourage lateral branching. Continue hedging at monthly intervals to maintain desired branching and height of canopy (laterals should reach top wire).
- In colder climates, tip primocanes once when they are about 2 – 3 ft. tall to encourage lateral branching.
- Prune out spent floricanes after they have produced fruit, do not thin out primocanes until mid-to late winter.
- Train primocanes to trellis to minimize interference with harvest. Shift trellises or V trellises make this relatively easy.

Trailing types

- Train new primocanes to middle of trellis, or on the ground in a weed free area or temporarily to trellis outside of fruiting area (depends on trellis type).
- Cut back side shoots to 18" (after dormancy in cold climates).
- Remove spent floricanes after harvest.

Weed management

- Mow along side of row to maintain the width of the bed to 3-4 ft.
- Weed growth can be very vigorous at the same time as the bramble crop peaks.
- Weed control is best done earlier in the season before harvest commences.
- Mow middles regularly to allow pickers to move through rows easily.

Insect and disease scouting

- Scout for insects
 - Raspberry crown borer (canes girdled and wilt)
 - Psyllid
 - Two spotted spider mite
 - June beetle
- Scout for diseases

- Botrytis
- Late rust
- Sooty blotch
- Orange rust
- Powdery mildew

Water management

- Bramble plants need about 1"-2" water/week, and this amount is especially critical during harvest.
- For blackberries (not raspberries) in warmer climates only, consider installing an overhead system for evaporative cooling to reduce sunscald. Turn on once or twice a day from 10 am to 3 pm for short periods of time (approx. 15 minutes).
- Give plants a deep irrigation after harvest.

Nutrient management

- Take leaf samples after harvest and send to a clinic for nutrient analysis. Do not fertilize with nitrogen at this time of the year.

Harvest and marketing

The busiest time of the year for a blackberry or raspberry grower is the harvest season. Each plant needs to be harvested every 2-3 days. For larger plantings, that means fruit is picked from some part of the field every day of the week.

- Pick blackberries when shiny black for shipping. Those that are dull black are fully ripe and suitable for PYO only.
- Pick directly into clamshells with absorbent pads OR for PYO use soft drink flats.
- Keep harvested fruit in shade and move into coolers as soon as possible to lengthen the shelf life of the fruit.
- Use forced-air precoolers for best removal of field heat.
- Store at 32 to 34°F and 95% relative humidity.
- Freeze excess fruit for jam, juice or wine.

NC State University Hires Two New Grape Specialists

The College of Agriculture and Life Sciences at NC State University has hired two new faculty members to work with the expanding grape industry in North Carolina. The positions are in the Department of Horticultural Science.

The two new faculty members are Dr. Sara Spayd and Ms. Connie Fisk. Sara will be working with the bunch grape industry in western NC and Connie will be working with the muscadine grape industry. The following write-ups were taken from the department's 2006 Spring Newsletter:

Sara Spayd is the Department's new Viticulturist, with a 60% Extension: 40% Research appointment. Sara joined us from Washington State University where she was a full professor in the Department of Food Science and Human Nutrition at the Irrigated Agriculture Research and Extension Center in Prosser. Her research and extension activities focused on improving the quality of grapes and their products through vineyard and winery management practices. Her major areas of research have been the role of irrigation, crop level, nitrogen, and canopy microclimate influences on fruit composition, fermentation characteristics, and sensory characteristics of the final product, fruit yield and vine growth. Dr. Spayd has over 32 referred journal articles, 4 book chapters, and numerous other publications. She offered short courses on wine making and developed a Professional Certificate Program in Viticulture and Enology. She is the recipient of numerous awards and recognitions, including the 2006 Washington Association Wine Grape Growers Industry Service Award, 2005 Washington State Grape Society Service Recognition Award; 2003 American Society for Enology and Viticulture, Best Viticulture Paper for 2002, and many others. Dr. Spayd did her BS in Horticultural Science (1974) at NC State University and her MS (1977) and PhD (1980) at the University of Arkansas. Sara will be responsible for bunch grape research and extension in the Horticultural Science Department. She will serve as a key member of a multidisciplinary team of faculty and county agents working in this area. She will interact closely with the NC Wine and Grape Council as well as other universities and community colleges to advance the NC wine and grape industry.

More information about Sara can be found at http://www.cals.ncsu.edu/hort_sci/faculty/spayd.html

Connie Fisk is the Department's new Muscadine Extension Associate, with a 100% Extension appointment based at the Duplin County Cooperative Extension Service Office. She recently completed her MS degree at Oregon State University and had a dual major in Food Science & Technology and Horticulture. Her BS degree is from OSU in Nutrition and Food Management. Connie's thesis research was on hardy kiwifruit (a crop that is similar in production practices to grapes) and focused on fruit quality from production through post-harvest storage and processing. She also did a three-month internship in the Berry Research Program at the North Willamette Research and Extension Center where she worked on a wide variety of fruit crops.

Connie responsibilities will include training and support for extension agents in counties where muscadines are commercially grown; providing assistance to growers in site selection, vineyard management practices, and fruit quality control; establishment of demonstration and applied research trials; assistance in the organization of annual meetings and workshops; and working closely with growers and the Muscadine Grape Growers Association to advance the industry.

More information about Connie can be found at http://www.cals.ncsu.edu/hort_sci/faculty/fisk.html

NC Wine Industry

Margo Knight, Executive Director
NC Wine and Grape Council
July 1, 2006

The first commercial winery established in North Carolina, Medoc Vineyard, led the country's wine production in 1835. After more than a century, North Carolina is once again building its grape industry and creating promising futures for its farmers and its growing population.

North Carolina ranks 10th nationally in grape production and 12th for wine production, according to USDA and the Federal Tax and Trade Bureau. As of June 2006, NC has 55 wineries in 31 counties located from the mountains to the coast. The number of wineries has more than doubled since 2003. Several more wineries are expected to open this year.

Harvest in 2005 was 3500 tons and annual production of wine in NC was 600,000 gallons. Vineyards cover approximately 1350 acres of the state and more than 350 growers supply the assorted grapes for wine, juice, and fresh-market. Vineyards in 2005 produced an average of 3 tons per acre, valued at \$937 per ton. That's an average gross income of \$2811 per acre. The average price per ton is among the highest in the country.

Growers in the Mountains and Piedmont have planted traditional European grape varieties, called *Vitis vinifera*, and French-American Hybrids. The commonly planted varieties include Cabernet Sauvignon, Cabernet Franc, Merlot, Pinot Noir, Syrah, Chambourcin, Chardonnay, Sauvignon Blanc, Riesling, Seyval Blanc and Vidal Blanc. In 2003 the Yadkin Valley became North Carolina's first federally-recognized American Viticultural Area (AVA). There

are currently seventeen wineries and more than 400 acres devoted to vineyards in the Yadkin Valley.

Plantings of native Muscadine (*Vitis rotundifolia*) grapes are also on the rise due to demand in the fresh market and winery production. Muscadine grapes are relatively pest resistant and thrive in the hot sandy conditions of the coastal plains. Muscadines contain high levels of resveratrol and other health-enhancing antioxidants. September is grape harvest time and many people enjoy visiting vineyards to pick their own grapes for that special recipe. North Carolina has more than 40 muscadine vineyards in 28 counties.

The annual value of grape sales in North Carolina is 3.4 million dollars and the North Carolina sales of state-produced wine are estimated at \$34 million. Grape growing provides an alternative enterprise to many farmers. The expanding grape industry attracts one million tourists to North Carolina wineries and U-pick vineyards each year. Every major type of grape, *Vitis vinifera*; French-American hybrids; *Vitis labrusca*; and *Vitis rotundifolia*, is successfully grown in the state.

The North Carolina Wine & Grape Council was established by the state Legislature in 1986 and funded by a portion of the excise tax from state-bottled wine. Housed in the NC Division of Tourism, the Wine & Grape Council facilitates development of North Carolina grape & wine industries by enhancing product quality for consumers, and encouraging economic viability and opportunity for growers and processors through education, marketing and research.

Photos courtesy of the NC Division of Tourism, Film and Sports Development.



NC Chardonnay grapes



Shelton Vineyard



Kildeer Farm

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