the Southern small fruit consortium
NC State University
Clemson University
The University of Arkansas
The University of Georgia
The University of Tennessee
VA Polytechnic Institute and State University

Small Fruit News

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In this issue

Special Reports:

Southern Region Small Fruit Consortium Awards $105,750 in Grants for 2011

Tom Monaco, Coordinator, SRSFC

The Steering Committee of the Southern Region Small Fruit Consortium (SRSFC) awarded $105,750 in research and extension grants at their annual meeting held January 2011 in Savannah, GA. Twenty-one research proposals and eight extension proposals were submitted to the SRSFC. Seventeen research proposals totaling $84,950 were funded and five extension proposals for a total of $20,800 were funded. Also $4,500 was awarded to the extension efforts in updating the IPM/Production Guides.

The IR4 Performance program added a half match to two of the research proposals, which added $5,000 in additional funding so the total amount invested in research for 2011 is $89,950.

Research projects funded for 2011 include:

SRSFC 2011-01 Predictive model verification and review of utility for initiation of downy mildew fungicide programs for Georgia and North Carolina wine grape vineyards Brannen, Boudreau, Sutton $5000

SRSFC 2011-01 Predictive model verification and review of utility for initiation of downy mildew fungicide programs for Georgia and North Carolina wine grape vineyards. Brannen, Boudreau, Suttun $5,000

SRSFC 2011-02 Determination of Flower Type in Muscadine Grape Using Molecular Markers. Clark, Owens $5,000

SRSFC 2011-03 Management of anthracnose fruit and crown rot of strawberry in the Southeast. Rahman, Louws $5,00

SRSFC 2011-04 Identification and management of blueberry (Vaccinium spp.) replant disease associated with ring nematodes (Mesocriconema spp.). Noe, Brannen, Jagdale, Cline $5,000

SRSFC 2011-05 Impacts and control of the stink bug complex on caneberries, with emphasis on brown marmorated stink bug, a new invasive species. Pfeiffer $5,000

SRSFC 2011-06 Determining optimum date for foliar sampling of primocane fruiting blackberry in the Mid-South. Garcia, Beam $4,950

SRSFC 2011-07 Increasing High Tunnel Strawberry Productivity in the Late Fall and Early Winter with Day Neutral Strawberries and the New Florida Short Day Cv. Radiance. Poling, Pattison $5,000

SRSFC 2011-08 Pollinator diversity and efficiency in southeastern blueberries. Tarpley, Burrack, Rogers $5,000

SRSFC 2011-09 Blueberry necrotic ring blotch disorder: A new disease of southern highbush blueberries. Deom, Brannen, Robinson $5,000

SRSFC 2011-10 Evaluating the effect of Apogee for Control of Runner Growth in Annual Plasticulture Strawberries on Cover Crop and Weed Growth. Straw, Jennings $5,000

SRSFC 2011-11 Evaluation of postharvest storage potential of muscadine cultivars and advanced breeding lines and development of

new muscadine cultivars. Conner, MacLean $5,000

SRSFC 2011-12 Identification of Viruses in Blackberry Yellow Vein Disease Complex. Pesic, Tzanetakis $5,000

SRSFC 2011-13 Understanding blueberry mosaic disease. Tzanetakis and Garcia $5,000

2011-14 Investigating the Transmission of Systemic Southern Highbush Blueberry Diseases Via Softwood Cuttings. Scherm, Holland $5,000

SRSFC 2011-15 Targeting postharvest treatments and storage practices for extended marketing of fresh muscadines. Perkins-Veazie, McArtney, Fisk $5,000

SRSFC 2011-16 The correlation of firmness loss with flavonoid gene expression and pigment synthesis in rabbiteye blueberries (Vaccinium ashei Reade). MacLean, NeSmith $5,000

SRSFC 2011-17 Development and evaluation of a portable mechanical shaker for blueberry. Malladi, NeSmith $5,000

Extension projects funded for 2011 include:

SRSFC 2011 E-01 Developing a volunteer monitoring network for a new insect pest of small fruits. Burrack, Pfeiffer, Smith $5,000

SRSFC 2011 E-02 Update the blackberry diagnostic tool. Fernandez $1,800

SRSFC 2011 E-03 Evaluation of novel chemical mowing mixtures for suppression of fescue groundcovers and weed control in southeastern small fruits. Armel, Lockwood, Vargas $4,000

SRSFC 2011 E-04 Heading height for primocanes and timing of floricane removal in Apache blackberry. Lockwood, Deyton, Hitch, Smith $5,000

SRSFC 2011 E-05 Development of a web-based grape disease risk assessment system. Nita, Yoder, Sforza, Peery, Knight, De Wolf $5,000

Diagnostic Tour for Small Fruit Pest and Disease Identification for County Extension Agents, May 24-26, 2011

Tom Monaco, Coordinator, SRSFC

This tour was developed to provide some hands-on activity to reinforce the classroom training in pest and disease identification of small fruit problems that agents received in Savannah, GA in January 2011. The tour of small fruit operations in upstate SC was arranged by Dr. Powell Smith, Clemson University, with assistance from Dr. Allen Straw, Virginia Tech. In addition to Powell and Allen other university specialists participating in the training included Dr. Phil Brannen, University of Georgia; Drs. Hannah Burrack, Frank Louws, Katie Jennings and Mr. Wayne Mitchem, NC State University; and Dr. Guido Schnabel, Clemson University. Nineteen county agents from the SRSFC member states attended.

All participants arrived at the Holiday Inn Express, Kings Mountain, NC during the afternoon of May 24 and traveled by vans to the Cherokee County SC extension office, Gaffney, SC for a steak dinner sponsored by Syngenta Crop Protection. Mr. Ken Teeter, Syngenta, technical support representative, gave an overview of Syngenta crop protectants for small fruits following the dinner. The Cherokee County extension staff did an excellent job of preparing the dinner.

The first stop on May 25 was The Bush and Vine Farm in Flibert, SC(Figure 1). Mr. Bob Hall welcomed the group to his farm(Figure 2) and gave a brief description of their operation. We toured his blueberries(Figure 3); hoop house strawberries(Figure 4) and raspberries(Figure 5) and field grown strawberries(Figure 6). University specialists pointed out pest and disease problems along the way and how to diagnose the various organisms. Lunch was sponsored by Nichino America. Ms. Margo Breisch, Nichino technical sales representative, gave an overview of Nichino America and their products for small fruit production during the luncheon which was held in Bob Hall's backyard. The second stop on May 25 was at Strawberry Hill USA in West Chesnee, SC. After a stop at their spacious roadside stand, we proceeded to a strawberry planting where Dr. Guido Schnabel(Figure 7) briefed us on a Strawberry Advisory System's disease management project,

a cooperative project between Clemson, NC State University and the University of Florida which utilizes a modern wireless weather station to predict conditions required for application of fungicides. We also toured the blackberries plantings(Figure 8) at Strawberry Hill, USA.. Dr. Phil Brannnen(Figure 9) discussed viruses and other diseases of blackberries and Mr. Wayne Mitchem(Figure 10) presented information on weed management. Mr. James Cooley, owner of Strawberry Hill, USA sponsored our dinner at his restaurant. He personally cooked the meal. James is a steering committee member of the Southern Region Small Fruit Consortium.

The second day of the training was held at the Spring Farms in Fort Mill, SC. Stops at this location included field grown strawberries, blackberries and some newly constructed high tunnels. Lunch was served at the Dairy Barn and was sponsored by Jaderloon, Information on high tunnel construction and use in crop production was presented. Some background on the Springs Family and Springs Industries was provided by Springs Industries staff at lunch, and the history of the 2300 acre greenway donation to the town of Ft. Mill, SC was highlighted. The training ended at 1 p.m.

Figure 1: *Bush and Vine Farm, Filbert, SC*


Figure 2: *Bob Hall, owner and operator, Bush and Vine Farm*


Figure 3: *Dr. Phil Brannen (center) talking about blueberry viruses*


Figure 4: *Protected culture of strawberries*


Figure 5: *Dr. Frank Louws talking about diagnosing diseases in protected culture of raspberries.*

Figure 6: *Dr. Hannah Burrack presenting information on insect pests of strawberries*

Figure 7: *Dr. Guido Schnabel explaining the strawberry advisory system's disease management project.*

Figure 8: *Blackberry field at Strawberry Hill, USA*

Figure 9: *Dr. Phil Brannen presenting information on blackberry diseases.*

Figure 10: *Mr. Wayne Mitchem discussing weed management in blackberries.*

Getting Ready for Strawberry Planting

Reprinted from the June issue of
The Strawberry Grower.

First order your plants... Then think land prep. The charts to right, first published in *The Strawberry Grower* in July 2008, are still useful for growers thinking about their best fumigation choices. Remember that methyl bromide is under a Critical Use Exemption through 2012; it is by no means clear that there is any prospect for a continuing CUE after that. As the original article pointed out: "***If you have not tried alternative fumigants on your farm, this is the time to seriously think about why you fumigate and switch a portion of your production to an alternative.***

"If you use a good crop rotation or are moving onto new production land, then the need to fumigate is minimal. It might not even be needed at all....What are the soil issues that make

fumigation desirable? If you are unsure of your problems and have been fumigating simply because it is part of the plasticulture system, try leaving some of your production unfumigated and see what the results are. You might be surprised."

Fumigation decisions are complicated by the more stringent worker and bystander protection regulations that went into effect in December 2010. Fumigation Management Plans will be a key topic at most preplant meetings. For resources relating to these new regulations as well as information on how to get respirator medical clearance and fit testing, see www.ncstrawberry.com/docs/Preplants-and-Fumigation.htm.

Efficacy of Various Fumigants and Herbicides

	Fungal Disease	Nematodes	Annual/ biennial weeds[1]	Perennial Nutsedge
Fumigants				
Chloropicrin	E	N	N	N
Metam Sodium (MS)	F to G	P to F	G to E	F
Chloropicrin + MS	E	P to F	G to E	G to E or F-G[5]
Telone C-35	E	E	P to F	P
Telone C-35 + VIF	E	E	G to E	P to F
PicClor 60	E	E	P to F	P
PicClor 60 + VIF	E	E	G to E	P to F
MIDAS + VIF	E	E	G to E	G to E
Paladin[4] + VIF	E	E	G to E	G to E
Herbicides				
Goal (under plastic)			G to E	N
Stinger (Very specific weed spectrum)				
Chateau (under plastic)			G to E	N

Key to chart: E = excellent control, 90% or better G = good, 80-90% F = fair, 50-80% P = poor control, 25-50% N = no control, less than 25%

What's *YOUR* problem?

	No Problem					Huge Problem
Fungal Disease[1]	0	1	2	3	4	5
Nematodes	0	1	2	3	4	5
Annual and Biennial Weeds	0	1	2	3	4	5
Perennial Nutsedge (yellow and purple)	0	1	2	3	4	5

USDA Conducts Raspberry Referendum

Reprinted from June 2011 Issue of Fruit Growers News

USDA is conducing a referendum June 8-24 for eligible processed raspberry producers and importers to determine whether a new national Processed Raspberry Promotion, Research and Information Order should be established.

The program will be implemented if approved by a majority of eligible producers and importers voting in the referendum. Producers and importers of more than 20,000 pounds of raspberries for processing or processed raspberries annually are eligible to vote in the referendum, according to USDA.

If implemented, a 13-member council and its alternates would administer the program. In addition, the council will work to develop, maintain and expand domestic and foreign markets for processed raspberries and raspberries for processing.

The national generic program would be financed by a mandatory assessment of 1 cent per pound paid by producers of raspberries for processing and importers of processed raspberries.

Producers and importers of less than 20,000 pounds annually would be exempt from paying assessments, according to USDA.

The referendum order was published in the May 5 Federal Register, and posted on the Internet at www.ams.usda.gov/FVPromotion and www.regulations.gov.

USDA will mail the ballots, voting instructions and a summary of the proposed program to all known eligible producers and importers of raspberries for processing and processed raspberries.

Eligible producers or importers who do not receive a ballot should write Kimberly Coy, Research and Promotion Branch, Fruit and Vegetable Programs, AMS, USDA, Stop 0244, 1400 Independence Avenue SW, Washington, DC 20250-2044; call 888-720-9917; fax 202-205-2800; or email Kimberly.Coy@ams.usda.gov.

Vineyard Concerns

Sara E. Spayd, Extension Viticulture Specialist
Department of Horticultural Science
NC State University

The 2011 vineyard season has had a split personality to date. Bloom was a bit late and some fruit set issues were noted due to the cool wet weather. This weather also brought on downy mildew that caught a few growers off-guard. By the time it was getting ready to roll, the weather turned hot and dry, knocking the downy mildew back. Fruit growth caught up in the hot weather. With intermittent rain showers hitting in some growing areas, grape berries rapidly sized. In the Yadkin Valley, bunch closure in the warmer areas occurred mid-June and in the cooler areas late June.

With the hot weather, growers should be cautious to prevent over exposing the fruit in leaf removal operations. Leaf removal should be done on east sides of canopies of north-south oriented rows and on the north side of east-west oriented rows to improve fruit exposure and increase air-flow in the canopy.

Three to four feet of growth per shoot with 15 to 18 leaves is ideal for ripening clusters. Ideally, internode length is 3 to 4 inches during early and mid season. Vines that develop large canopies require more water throughout the growing season. An early sign of water stress is tendrils “reach past” the shoot tip and internode length prematurely shortens. Internode length should shorten or shoot growth cease around bunch closure. Eventually, tendrils become flaccid due to loss of turgor and eventually dry up and fall off. Some mild water stress is desirable after the canopy is fully developed as long as there is adequate and active canopy to ripen the crop, mature the canes and store carbohydrates in the permanent vine tissues. Basal leaves will begin to senesce and defoliate. Defoliation progresses up the shoot if the water stress is not relieved. Whether the vine is defoliated due to water stress or disease (as per downy mildew), fruit will accumulate sugar. However, accumulation of sugar in fruit of a defoliated vine comes at the expense of the carbohydrate reserves of the permanent woody tissues. Over a period of years, this will weaken vines and can lead to premature vine death.

Many growers do not consider irrigation a necessity in North Carolina vineyards. Some water stress is not all bad, but timing and degree are critical. Large canopies that developed in the cool, rainy spring need to be maintained and require more water than leaner canopies that develop in drier climates where it is much easier to control soil moisture. Receiving an inch of rain in 30 minutes is not very effective for supplying water to vines. Much of the water will run-off. Leaf temperature is higher on water stressed than non-water stressed vines. Leaf and fruit temperature can be 18 to 20^{o}F higher than ambient temperature. Rate of grapevine photosynthesis peaks about 89 ^{o}F. If day temperatures are 90 ^{o}F, leaf temperatures are 108 to 110 ^{o}F. Water deficits aggravate the influence of high temperature events with a reduction in photosynthetic rate and water conductance. Vines do not immediately recover after re-watering. Several days maybe required for recovery. Time for recovery is variety dependent. Water and heat stress can delay sugar production by the leaves and ultimately accumulation in the fruit.

Preliminary Report on Albion Strawberry in Piedmont, NC

E. Barclay Poling
Professor Emeritus & Small Fruit Specialist

We were quite fortunate to have established two Cooperative Extension Strawberry Variety Demonstrations in late September 2010 in the central piedmont of North Carolina that have been closely followed this past spring (April-June, 2011) by the individual grower cooperators in Guilford County, NC (Bernice and James Kenan; and Kenneth, Joan and Matt Rudd), as well as Dr. William B. Wickliffe II, County Extension Director (Guilford Co.), David Dycus, Regional Agronomist, NCDA & CS, and myself. The plugs plants for these trials were produced at the Upper Mountain Research Station in Laurel Springs in the summer of 2010. The tissue culture plant stock came from the NCSU Micro-propagation Unit in 2009, and was increased at the Piedmont Research Station in Salisbury, NC, with important funding provided by NC Tobacco Trust Fund Commission in 2009-2010.

I have personally been interested in the Albion strawberry variety since the mid-2000's, as this variety has assumed a dominant position in the California strawberry industry in recent years (Table 1). Dr. Kirk Larson and University of California geneticist Dr. Douglas Shaw, selected Albion for its flavorful, sweet berries, productivity and long shelf life. On several occasions I have been asked, "Where does the name Albion come from?" And, fortunately I was able to locate a FOOD BLOG by Jeanette E. Warnert (March 15, 2010), that explains that in trying to come up with a name for this new variety, Dr. Shaw noted that many California place names and plant variety names had been in honor of the state's Hispanic heritage. And that, "Shaw wanted the new variety to honor California's English heritage, in the person of Sir Francis Drake." (http://ucanr.org/blogs/blogcore/postdetail.cfm?postnum=2427)

As it turned out, Shaw decided not to call the new day-neutral strawberry variety 'Drake', but he found it very interesting that Sir Francis Drake dubbed California 'Nueva Albion' when he claimed the territory. In a further search of Wikipedia.com, I learned that Albion is the oldest known name of the island of Great Britain, and that it is thought to derive from the white cliffs of Dover.

The California Strawberry Acreage Survey in 2010 indicated about 13,000 acres of Albion were planted in California (total state acreage of 37,609), though I have read unofficial reports that it may have reached as much as 15,000 acres in that same year (http://ucanr.org/blogs/blogcore/postdetail.cfm?postnum=2427). The California Strawberry Acreage Survey in 2011 showed a slight decline in Albion acreage, but the state percentage of Albion plantings in California went up slightly to 34.7 percent (Table 1). In another table not shown from the California Strawberry Commission's 2011 Acreage Survey, it is interesting to note that Albion is a dominant variety for organic production in the state (487 acres, or 26.5%), with a newer DN called 'San Andreas' accounting for 16.6 % of the state's organic total.

Table 1: Acreage Trends for Albion Variety in California, 2006-2011[1]

Year	Total acres	Acres of Albion	% State Acreage
2005	32,636	NA	NA
2006	33,269	288	8.4
2007	34,600	9,952	28.7
2008	36,519	12,670	34.7
2009	38,634	15,252	39.5
2010	37,609	13,004	34.6
2011	**37,425**	**12,982**	**34.7**

[1] Sources: http://www.calstrawberry.com/fileData/docs/2011_Acreage_Survey.pdf, and http://www.calstrawberry.com/fileData/docs/2009_Acreage_Survey.pdf

NCSU research interest in Albion. In 2008, Dr. James Ballington, Kerry Olive and myself published a research paper in HortScience, "Day-neutral Strawberry Production for Season Extension in the Midouth," (43:(7):1982-1986), but in this paper we were principally focused on an outdoor summer and early fall day-neutral season (DN) in the mountains, and we had not given a great deal of thought to the possibility of trying Albion in the piedmont of North Carolina! Surely we thought that if any new variety could ever break the 2-variety stronghold of Chandler and Camarosa on this region, it would have to be another short day strawberry type! And, it was an afterthought that we even decided to include the DN Albion for our Guilford County spring fruiting trials in 2011. In hindsight, I think we are very glad that we did!

First Impressions of Albion from 2 Piedmont Demonstrations were mixed.

Early in the day on May 18, 2011, we visited our first of two extension variety trials in Guilford County (off Jonquil Drive in Greensboro), and it was quite frankly most disappointing to see how poorly Albion had performed at this location. We are still unsure about what may have caused Albion plants to perform so poorly at this location. Both of our farm test locations received identical plant material from the UMRS in Laurel Springs, and both tests were planted on the same date. Row cover management operations did differ at the two locations, and we are also pursuing some other potential explanations that may tie into differences in soil and site conditions. Nonetheless, the Albion plant canopy was quite poor in this first location for reasons that are still undetermined. On the day of our Guilford County farm visits, there had already been several showers in the early week, and we observed that on the first farm visited (Albion plants with poor canopy cover), that there was much more rain damage in Albion than Camarosa.

On our second variety test farm in Guilford County (north of the city), plots of Albion were truly impressive in canopy size and some of the fruit harvested from the white plastic plots is shown in Figure 1 (Albion was also produced on black plastic at this location). It had been a rainy week, but I could not tell whether Albion had any more or less rain damage than either Chandler or Camarosa from this same location.

Figure 1: *Albion berries picked on May 18th (after 2 days of showers) – these same berries were utilized in a taste sampling at the J. C. Raulston Arboretum on May 19th.*

Yields? We did not collect actual harvest data for any of the strawberry varieties, or mulch treatments at the first or second farm location in Guilford County, but we did do something that was different at our second location (Rudd Farm), and here we compared Albion plugs on both traditional black plastic as well as white plastic. It was Kenneth Rudd's impression that Albion on black plastic had a higher yield than Albion on white film, but he, Joan (wife) and his son Matt Rudd, noted that the white plastic Albion fruit seemed to have a better flavor than the black plastic mulch. Since I was due back in Raleigh the very next evening to give a presentation to *Friends of the Arboretum* at the J.C. Raulston Arboretum (May 19), I could not resist the opportunity to put the white vs. black plastic-grown Albion to "taste test".

That evening in Raleigh, we had 27 people attend my lecture on the history of strawberry plasticulture in our region, and at the end of the session at 8:30 pm we sampled Albion berries from the piedmont (black and white plastic), as well as Albion berries that had been grown in the Mountains and were harvested on Monday of that week (May 16th) and kept chilled until our May 19th taste test. We rounded the taste test out with Chandler and Camarosa from our 2nd Guilford County farm that were picked on May 18th and handled in identical fashion to the Albion's grown on white and black plastic mulch (Figures 2 and 3). Finally, to make sure that folks at the Arboretum were really paying attention, I threw in a 6th sample of berries right off the shelf at Harris-Teeter (North Raleigh), and the variety in this store bought fruit was unidentified, though they were quite large and had the characteristic conical shape and attractive red color of Albion.

Figure 2: *Camarosa from Piedmont*

Figure 3: *Chandler from Piedmont*

More details about the taste testing. After the lecture on May 19th, I had 27 people 'taste test' the six different samples. Each sample was displayed in a 4-dry quart (gallon) basket, and the fruit had been washed in the late morning on May 19, and allowed to air dry before being placed into cooler chests for the evening's sampling at 8:30 pm. From 6:00 to 8:30 pm the samples were allowed to come back to room temperature. The participants were asked to evaluate the appearance of the berries in each sample as well as evaluate the flavor. For appearance and berry flavor evaluations, the rating system was: 1 = very good; 2 = good; 3 = fair; and 4 = poor. Twenty-five people provided complete evaluations for appearance, flavor and an overall ranking of the six samples from 1 to 6, with 1 = highest ranking and 6 = lowest ranking. Two people elected only to provide an overall ranking. The data in Table 2 represent the mean or average scores of the 25-member group for Appearance and Flavor, and 27-member group for overall Ranking (from 1 – 6). In reviewing Table 2, keep in mind that the lower the number, the better the outcome.

Table 2: Strawberry Taste Testing at the J.C. Raulston Arboretum on May 19, 2011.

Variety	Location	Appearance	Flavor	Ranking
1. Albion	Mountains	1.9	2.3	3.70
2. Camarosa	Piedmont	1.8	2.2	3.33
3. Albion	Pied. (white)	1.4	1.8	1.96
4. Albion	Pied. (black)	1.4	1.7	2.30
5. Chandler	Piedmont	1.7	2.0	2.78
6. Giant (Calif.)	Harris-Teeter	3.1	3.4	4.89

Albion produced on white and black plastic in the Piedmont really impressed our taste testers! The *Friends of the Arboretum* gave Albion some very good scores in general. I am sure the Albion berries from the Mountains would have scored better had they been picked on May 18th (the day the Piedmont samples 2, 3, 4 and 5 were harvested), and not two days earlier! Nonetheless, they still had a flavor score that was very close to Camarosa from the Piedmont. Chandler flavor slightly edged out Camarosa, but fell a bit short of the flavor of Albion berries from the Piedmont. There did not seem to be any real difference in flavor due to the black or white plastic film at the time of our taste testing, but when Kenneth Rudd called me in Raleigh on June 29th (from Greensboro), he indicated that the white plastic mulch was the way to go for extra late season Albion fruit.

Shocking lateness. Interestingly enough, as late as June 29, 2011, the Rudds were still picking Albion berries from our Extension Demonstration plots, and the berry size and flavor was "still good" and the berries were definitely marketable. Yields had trailed off, but not as much as Camarosa, and Mr. Rudd also reported there was still some "green fruit" left on the bushes.

Summary. Clearly, a single season of field testing is not sufficient to say whether Albion will be able to break the "2-Variety Grip" of Chandler and Camarosa on our industry, but we did see some favorable results on at lease one farm with Albion, and in my view this variety could be worthy of further testing just from the standpoint of its very extended season! It also has impressive size and flavor. A lot more cultural work is needed with Albion to better determine optimum planting dates, fertility, and row cover management. At this stage I would suggest that it needs to be planted in the Sweet Charlie window, and this is because Albion is not as vigorous in plant growth as Chandler or Camarosa. It would be very interesting to experiment with planting windows that might even be two weeks ahead of Chandler. In conclusion, I believe that Albion is deserving of an "extra hard look" in 2011-2012, as it has some obvious advantages in size and flavor, and it just may give our industry a boost when other varieties have dropped off in volume, but there are still good markets for local strawberries in the late spring. You should be able to locate a supplier of Albion by checking their nursery supplier list that is also available on the Association's website: http://www.ncstrawberry.com/

Bramble (Caneberry) Seasonal Checklist Summer 2011

Gina Fernandez, Small Fruit Specialist
North Carolina State University

This checklist was originally developed for blackberry growers in North Carolina. Many of the items apply to raspberry production as well. You may have to adjust your work activities either earlier or later depending on your location. For more detailed information, check the Southern Region Integrated Bramble Management Guide and the Southeast Regional Bramble Production Guide at: http://www.smallfruits.org/SmallFruitsRegGuide/index.htm

SUMMER

Plant growth and development

- √ Fruit development
- √ Rapid primocane growth
- √ Floricanes senesce after harvest
- √ Primocane fruiting types produce fruit

Pruning and Trellising

Erect types:

- √ 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)
- √ 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, on ground in a weed free area or temporarily to trellis outside of fruiting area (depends on trellis type)
- √ Cut back side shoots to 18"
- √ 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

List are some of the insects and diseases that you may find this summer in your plants. Check the Southern Regional Bramble integrated Management Guide for recommendations. www.smallfruits.org AND Dr. Hannah Burracks Blog. She is working with Extension agents and growers to monitor the Spotted Wing Drosophila incidence in 2011. http://ncsmallfruitsipm.blogspot.com/

Insects

- √ Spotted Wing Drosophila
- √ Raspberry crown borer (canes girdled and wilt)
- √ Psyllid
- √ Two spotted spider mite
- √ June beetle

Disease

- √ Cane blight
- √ Botrytis
- √ Late rust
- √ Sooty blotch
- √ Orange rust
- √ Powdery mildew

Water management

- √ Bramble plants need about 1"-2" water/week, and this is amount is especially critical during harvest.
- √ 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. For information on how to sample and where to send samples in NC go to: http://www.ncagr.com/agronomi/pwshome.htm

Harvest and marketing

- √ Blackberries are fully ripe when they are dull black, PYO only
- √ Pick shiny black fruit for shipping

- √ 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.
- √ Force air precooler is best for removal of field heat
- √ Store at 32 to 34°F and 95% RH
- √ Freeze excess fruit for jam,juice or wine

NEW this year! We are tweeting and blogging. Follow and like us at the links below. We will be adding timely updates on crop development, cultural practices and other timely news that impact the raspberry and blackberry crops.

Follow us at:
Twitter:
@NCTeamRubus

Facebook :
Team Rubus

Blog: http://teamrubus.blogspot.com/

Quarterly Strawberry Plasticulture Checklist

E. Barclay Poling
Professor Emeritus & Small Fruit Specialist

This checklist was originally developed for growers in North Carolina. You will have to adjust your work activities either earlier or later depending on your location. For more detailed information, check the Southern Region Integrated Strawberry Management Guide and the Southeast Regional Strawberry Plasticulture Production Guide at:
http://www.smallfruits.org/SmallFruitsRegGuide/index.htm

Summer

July/August Growers Checklist

- ✓ Critique your 2011 season. What changes do you want to make for 2012? Perhaps you need to adjust your order downward to better manage production peaks in 2012?
- ✓ Consider a possible rotation to another site. Many growers overlooked an opportunity to "rotate" their strawberry production field(s) in 2010-2012, and lower overall yields were the consequence!
- ✓ Carefully evaluate your choices of variety – it may be that you need a selection of varieties that will give you more weeks of fruiting, and not so much fruiting in just a 2-3 week period?
- ✓ In preparing your plant order for next season, also spend some time reflecting on the potential water situation for the season ahead – plugs are far more efficient in water utilization than fresh dugs
- ✓ Destroy plants when harvest ends.
- ✓ Remove and recycle plastic if not double-cropping.
- ✓ Order plants or tips – tips need to arrive one month prior to planting.

Don't wait until the last minute to order.

- ✓ Soil test in early July. Lime early in the summer to raise pH to 6.0 to 6.2. Incorporate lime when existing beds are broken down.
- ✓ Use overhead irrigate to soften soil as needed and subsoil completely.
- ✓ Get mist system set up if growing your own tips. Also order soil, trays, and fertilizer.
- ✓ Stick tips by mid-to-late August, depending on location.
- ✓ For planting in mid-Sept (Western NC), apply preplant fertilizer in mid August.
- ✓ Make a fumigation plan, set a schedule, acquire necessary materials. Be sure to allow appropriate plant-back intervals and an additional cushion in case of bad weather.
- ✓ Attend the Strawberry Preplant Meeting for your area

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