

Ornamental Blueberry Variety Development at The University of Georgia

A Progress Report for 2010

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For nearly 70 years UGA has been involved in commercial blueberry variety development. There has been great success with the effort, and a strong viable industry exists due largely, in part, to the research. With the growth of the commercial blueberry industry has come an increased interest from homeowners and consumers in having blueberry varieties for their use as well. In fact, a rapidly growing movement across much of the U.S. is to have edible garden and landscape plants. Coupling edibility with attractive ornamental traits adds even more value to the plant material. The expectation is that consumers can “surround themselves with flavorful beauty”.

In 2005 we initiated a pilot effort for selecting blueberries for the edible ornamental/home garden consumer. The effort quickly gained momentum from the ornamental industry, and is thus being expanded and becoming a second major effort of our UGA Blueberry Breeding Program. We are seeking a diversity of plant types for this industry that are specifically ornamental in nature. Traits being sought include compact plant habits, colorful berries, novel plant characteristics, and attractive foliage. Blueberry varieties for these markets do not need typical commercial production attributes such as concentrated ripening and fruit quality traits for long distant shipping. Therefore, this entire effort is substantially different than the commercial production evaluations we have done for years. To this end, we have begun to partner with some leading ornamental nurseries to provide us input and test our edible ornamental selections for their potential growing and marketing conditions. We currently have two released varieties that are being patented and licensed to ornamental nurseries. The first of these varieties will be part of a marketing campaign in 2011. We now have more than 80 ornamental blueberry selections we are evaluating. We have interest in this program from several large nurseries, some of which visited our program for the first time in 2010. This summary contains comments and photos from some of the more interesting ornamental blueberries for 2010.

In 2010 we released our second ornamental ‘Summer Sunset’. This new blueberry variety has great appeal based on its multicolored berries. An accent of sunset orange fruit, draped against a backdrop of nonglaucous, deep green foliage is present on the plant through much of the spring (Fig. 1A). As the fruit begins to ripen, berries develop a richer orange hue, followed by a deep red, until eventually the ripe berry turns midnight blue (Fig. 1B). The presence of the array of berry colors makes for good curbside appeal, and the mature fruit are very edible, with a full flavored blueberry taste. This plant has grown well in both south and middle Georgia. It tends to flower around

the middle of March, with fruit beginning to ripen in early to mid June. Fruit ripening is protracted, so consumers can have a steady supply of fruit and color for several weeks during the early to mid summer months. We expect this new variety to move quickly in the ornamental trade, hopefully, opening doors for a whole new product line of attractive ornamental blueberries.

The multicolor berries of 'Summer Sunset' add considerable ornamental appeal. We have several additional new selections with various patterns of berry colors (Fig. 2). A standout for 2010 was TO-1098 (Fig. 3). The berries have a brick red contrast with the medium green foliage for much of the late spring and early summer (Fig. 3 A and B). As the berries begin to ripen, they too turn various shades of yellow, orange, and red before becoming midnight blue at full maturity. The plant structure for TO-1098 is somewhat more upright than Summer Sunset. Also, berries mature 2 or more weeks after Summer Sunset, offering a later season multi-colored berry. Overall growth of the plant was very good in 2010 at both the Griffin and Alapaha test sites. However, the selection is relatively new, and we will continue to evaluate for a few more years.

Compact or dwarf plants often have considerable appeal to consumers due to the lessened space requirements, and overall look for certain landscape settings. We are currently developing new dwarf edible blueberries. The selection TO-1088 is shown in a series of photos depicting a 1 year cycle in Fig. 4. Note Fig. 4A shows plants in late summer 2009 with a nice compact, full growth habit. Following in January 2010, Fig. 4B shows that TO-1088 has great winter color in south Georgia, maintaining foliage cover throughout the winter in that location. By early Spring, the compact plant is in full flower (Fig. 4C), and by early summer, very tasty fruit are present on the compact hedge. Figure 5 shows in greater detail the flowers and fruit of TO-1088. We are excited about this selection, and look to accelerate testing. Figure 6 depicts growth of the dwarf selection in a nursery setting from October 2009 through October 2010. Plants filled in nicely over the course of the year. Thus it appears the selection would make an attractive plant in containers as well. We have propagated this selection for further testing.

In addition to the selections described above, we also have various rabbiteye and southern highbush selections with good home garden appeal. A couple of rabbiteye selections are shown in Figure 7. These new blueberries have full crops with beautiful displays of fruit. Berries are highly flavored, and plants make an overall attractive shrub. We also have some very large fruited southern highbush blueberry selections (Fig. 8) that make great home gardener types for those desiring a more traditional blueberry look. The large fruit are very flavorful, and offer consumers fresh fruit for their eating pleasure. We continue to explore numerous selections similar to these for overall growth habit and adaptation to varied environments.

Finally, we are looking for various blueberry selections that have good plant type, nice fruit during harvest, and attractive Fall foliage for extended season appeal. Figure 9

depicts two selections from 2010 showing good Fall foliage color development. TH-893 (Fig. 9A) is a nice southern highbush selection with early ripening fruit, large berry size, and sky blue berry color at maturity. So, this has multi-season appeal. TH-1226 (Fig. 9B) is a new selection being evaluated for the first time in 2011. It appears the selection has a nice compact plant growth habit that develops Fall color rapidly.

In summary, we have a number of new ornamental blueberry selections under development at UGA. We continue to look for unique plant types and combinations of traits that appeal to consumers from both an edible and ornamental perspective. Our goal with this entire effort is to have consumers surround themselves with flavorful beauty. The effort will continue next year, with new selections yet to come.

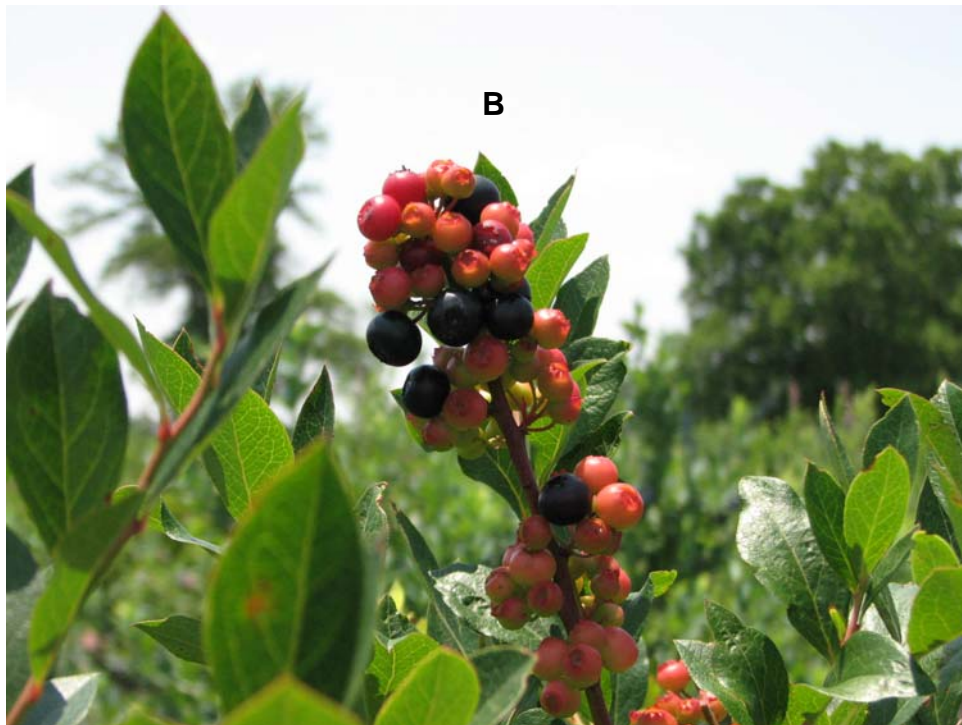


Figure 1. Summer Sunset ornamental blueberry plant (A) and fruit (B) growing in south Georgia during 2010.



Figure 2. Several additional new ornamental blueberry selections with multi-colored berries.



Figure 3. Colorful ornamental blueberry TO-1098 at different stages in Alapaha, Ga. during 2010. Sequence is **A)** and **B)** April 28, 2010; **C)** and **D)** June 16, 2010.



Figure 4. Dwarf ornamental blueberry TO-1088 development sequence at Alapaha, Ga. during 2009-2010. Sequence is **A)** August 18, 2009, **B)** January 20, 2010, **C)** March 23, 2010, **D)** May 26, 2010.



Figure 5. Close-up of flowers and fruit for the dwarf ornamental blueberry TO-1088.

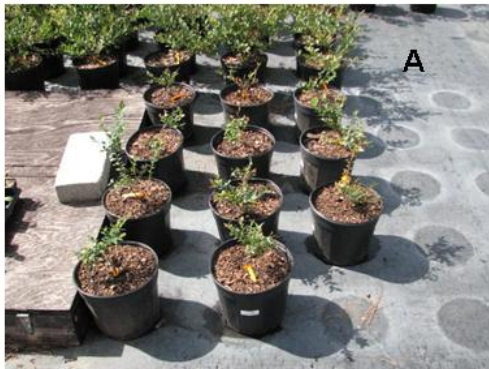


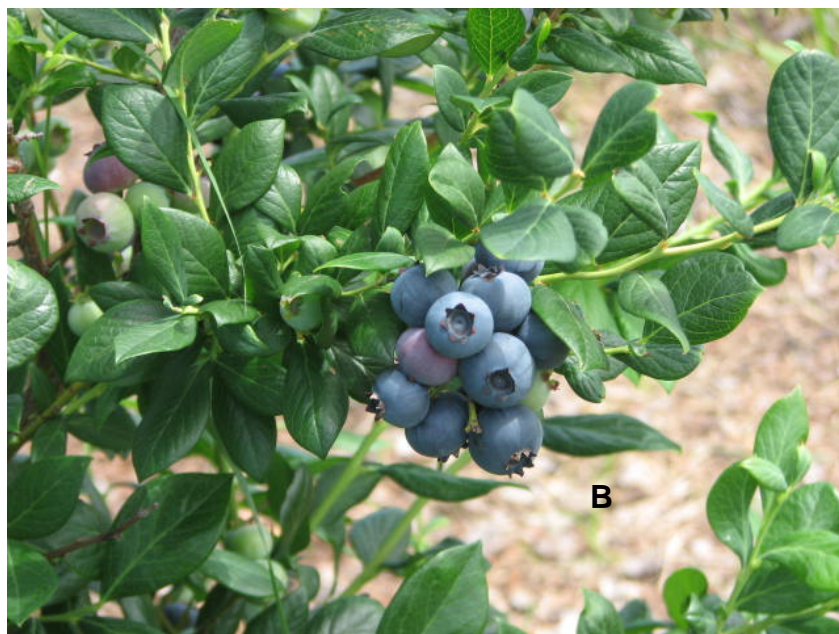
Figure 6. Plants of TO-1088 growing in pots at CANR site in Fall 2009 (A and B) and one year later in Fall 2010 (C and D).



Figure 7. Two rabbiteye blueberry selections for possible ornamental use. T-877 (photos **A** and **B**) has pink fruit contrasting blue. T-882 (photos **C** and **D**) has multiple berry colors of light green, yellow, pink/salmon, and blue. Photos are from Alapaha site June 2010.



A



B

Figure 8. Large fruited southern highbush blueberry selections for home gardeners. The selections are TH-681 (A) and TH-770 (B).



Figure 9. Blueberry selections with good development of Fall foliage color in 2010. Selections are TH-893 (A) and TH-1226 (B).