

Ornamental Blueberry Breeding at The University of Georgia: Surround Yourself With Flavorful Beauty®

D. Scott NeSmith

Department of Horticulture, The University of Georgia Griffin Campus, 1109 Experiment Street, Griffin, Georgia 30223

Email: snesmith@griffin.uga.edu

For nearly 70 years The University of Georgia (UGA) has been involved in commercial blueberry cultivar 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 selections for their use as well. In fact, a rapidly growing movement across much of the U.S.A. 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 cultivars for these markets do not need typical commercial production attributes such as concentrated ripening and fruit quality traits for long-distance 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 now have more than 100 ornamental blueberry selections we are evaluating. This summary contains comments and photos from some of the more interesting ornamental blueberries as of 2011.

We currently have two released cultivars that have been, or are being, patented and licensed to ornamental nurseries. The first of these cultivars, *Vaccinium corymbosum* ‘TH-682’, Blue Suede™ southern highbush blueberry (USPP 21,222) should be available in Spring 2012. This new homeowner blueberry cultivar offers striking sky blue fruit and beautiful fall foliage color development for added attraction (Fig. 1). It flowers in late March to early April in south and middle Georgia, and ripens in late May to mid June. The cultivar is exclusively licensed to McCorkle’s Nursery, Inc, and has become part of their Gardener’s Confidence Collection. More information can be found at: [Gardeners Confidence Collection — Blue Suede® southern highbush blueberry](http://gardenersconfidence.com/Blue_Suede/Variety.aspx) (<http://gardenersconfidence.com/Blue_Suede/Variety.aspx>).

Our second ornamental release is *V. Summer Sunset*™ (T-885, USPPAF), a blueberry hybrid (*Vaccinium* sp.) containing mostly rabbiteye (*V. ashei*) germplasm. This new blueberry cultivar 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. 2A). As the fruit



Figure 1. Blue Suede™ southern highbush blueberry sky blue fruit and colorful fall foliage.



Figure 2. Summer Sunset™ ornamental blueberry plant (A) and fruit (B) growing in South Georgia.

begins to ripen, berries develop a richer orange hue, followed by a deep red, until eventually the ripe berry turns midnight blue (Fig. 2B). 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 continues to grow well at test sites 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 cultivar to move quickly in the ornamental trade, hopefully, opening doors for a whole new product line of attractive ornamental blueberries. Summer Sunset blueberry has been exclusively licensed to James Greenhouse and Agri-Starts, Inc., in the U.S.A. Look for promotions concerning this new ornamental cultivar to begin in 2012.

In addition to the two new ornamental blueberry releases mentioned above, we have a number of exciting new selections under evaluation. We have several additional selections with various patterns of berry colors. A standout for 2010 and 2011 has been 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 (Figs. 3A and 3B). 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 blueberry. Also, berries mature 2 or more weeks after Summer Sunset blueberry, offering a later season multi-colored berry. Overall growth of the plant was very good in 2010 and 2011 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 less space being required, and overall look for certain landscape settings. We are currently developing new dwarf edible blueberries. The selection TO-1088, which continues to perform well, is shown in a series of photos depicting a 1-year cycle in Figure 4. Note Figure 4A shows plants in late summer 2009 with a nice compact, full growth habit. Following in January 2010, Figure 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. We are excited about this selection, and look to accelerate testing. In a limited trial TO-1088 was grown in a nursery setting from October 2009 through October 2010. The selection 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. Besides the selection TO-1088, we have several new selections and seedlings coming along with a range of looks that also have the compact plant growth habit.

In addition to the selections described above, we also have various new blueberry selections with a range of home garden appeal. A couple of large-fruited southern highbush selections are being looked at for the home garden market (TH-681 and TH-770). These both tend to be intermediate compact plants with beautiful displays of fruit. Berries are highly flavored, and plants should make an overall attractive shrub. We also have interesting small-fruited blueberry selections such as TO-1202 that may make a great home gardener type for those desiring a flavorful, but small berry. 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 a good plant type, nice fruit during harvest, and attractive foliage for extended appeal. In 2011, several selections showed good foliage color development. The selection TH-663 is a southern highbush with flavor ratings among the highest for our blueberries, and it has good fall color development. The selection TH-889 is a nice southern highbush selection with early ripening fruit, large berry size, and sky blue color at berry maturity, and it too develops good fall leaf color. Two rabbiteye selections, T-1223 and T-1226, have notable silver-blue foliage.

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 in the years ahead, with new selections yet to come.



Figure 3. Colorful ornamental blueberry TO-1098 at different stages in Alapaha, Georgia during 2011. Sequence is (A) and (B) Mid-May; (C) and (D) Mid-June.



Figure 4. Dwarf ornamental blueberry TO-1088 development sequence at Alapaha, Georgia during 2009 and 2010. Sequence is (A) August, (B) January, (C) March, and (D) May.