

# **Blueberry Cultivar Development at The University of Georgia**

## ***A Progress Report for 2012***

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The UGA Blueberry Cultivar Development Program generates and evaluates numerous selections of southern highbush and rabbiteye blueberries each year. The UGA Blueberry Research Farm near Alapaha is the primary field evaluation site for new selections and advanced selections. Griffin is the primary site for high density seedling nurseries and it is a duplicate test site for growing new selections. Additionally, some on-farm sites have been enlisted as advanced selection testing sites. Having these multiple sites provides considerable climatic and edaphic variability which enhances the cultivar development process.

### ***General Overview of 2012***

The 2012 growing season was very atypical at both Alapaha and Griffin. Chill hours (hours < 45 F) from Oct. 1 thru Feb. 15 were 685 for Alapaha and 883 for Griffin. These were very low compared to the three previous years, when Alapaha averaged 950 chill hours per year and Griffin averaged more than 1400 hours. We had very early chill hour accumulation, followed by rapid warming, which led to early flowering and ripening. In fact, at both sites average ripening times were 2 weeks earlier than ever recorded. There were extreme bird (Cedar Waxwings) problems experienced in the early part of 2012 at both sites which limited evaluations. Comprehensive flowering notes, cropping notes and fruit characteristic evaluations were taken for several hundred selections of rabbiteye and southern highbush blueberries, as well as numerous cultivar standards at the test sites. More than 5500 seedlings were evaluated in the nursery at the Griffin site in 2012, and more than 300 new selections were made for further testing.

### ***Performance of Southern Highbush Selections at Alapaha***

The UGA Blueberry Breeding Program continues to aggressively generate and evaluate southern highbush plant material. Performance ratings of several new selections grown at Alapaha under field conditions, along with some standard cultivars, are depicted in Table 1. These selections are generally less than 8 years old. Much of our effort with southern highbush has been aimed at developing selections that have suitable berry quality and have a high degree of plant vigor. We continue to make considerable advances toward these goals. In 2012, several selections had plant vigor ratings of 8.5 or higher (on a 1 to 10 scale). Notable selections with regards to plant vigor were TH-905, TH-917, TH-940, TH-1007, TH-1008, TH-1111, TH-1113, and TH-1125. While some of these selections may not become cultivars, they will be used in our breeding program to enhance overall plant vigor of our southern highbush germplasm.

Early ripening fruit continues to appeal to many Georgia blueberry growers, and the UGA release 'Rebel' has become a standard for early ripening. 'Rebel' reached 50% ripe fruit by April 18 at Alapaha in 2012. 'Star' had 50% ripe fruit by April 19. As mentioned previously the unusual year with early chill hour accumulation and rapid warming in the spring caused much earlier-than-normal ripening times for most varieties and selections. The earliest ripening selection was our newest release 'Georgia Dawn', which had 50% ripe fruit on April 13. This new variety does flower early as well, so it requires spring frost protection for successful production. Other notable early ripening selections in 2012 were TH-944, TH-1111, and TH-1125. These selections ripened ahead of 'Rebel' at the Alapaha test site.

The fruit development period (FDP) of blueberries, defined as the days from flowering to ripening, can be very important. A short FDP can result in later flowering, which helps to avoid pressure from spring freezing temperatures, while achieving early ripening dates which can bring higher market prices. We continue to try and develop southern highbush varieties with short FDP. However, spring freeze damage this year made flowering date evaluations too difficult to accurately assess, therefore, we could not estimate FDP in 2012.

Berry size is important, and is especially attractive for improving efficiency of hand harvesting. Currently, 'Emerald' is the standard cultivar grown in Georgia with the largest berry size, although the recent UGA releases 'Camellia' and 'Suziblue' also have impressive berry size. Several selections grown at Alapaha during 2012 had berry size similar to 'Emerald'. These included TH-920, TH-931, TH-948, TH-1091, and TH-1125. Many of these large fruited selections also had other desirable traits such as good firmness and/or flavor. We have propagated several of these selections for advanced testing, and we will continue to evaluate these over the next few years for yield consistency and overall long-term plant health.

While flavor is subjective, we are trying to consider this more in our evaluations. The selections TH-904, TH-921, TH-938, TH-1007, and TH-1113 were all rated to have very good flavor in Alapaha. This added benefit could make these selections desirable as cultivars if they hold up to continued testing; especially, TH-904, since it also had very good berry firmness.

We could not obtain accurate yields in 2012 due to excessive Cedar Waxwing pressure. However, cropping scores reflect that some selections had good crops even following the harsh spring freeze damage received early on. These included TH-889, TH-904, TH-912, TH-917, and TH-920. Most of these were later ripening varieties too. TH-1091 was one of the earliest ripening selections with a reasonable crop load. The multitude of southern highbush material we now have covers a broad range of ripening times, which should be beneficial to the industry in establishing a more stable fresh fruit industry as we release several of these in the coming years.

**Table 1.** Ratings of some fruit and plant characteristics of field grown southern highbush blueberry cultivars and selections from Alapaha during 2012.

<b>Selection or Variety</b>	<b>Date of 50% Ripening</b>	<b>Berry Size</b>	<b>Berry Scar</b>	<b>Berry Color</b>	<b>Berry Firmness</b>	<b>Berry Flavor</b>	<b>Crop Load</b>	<b>Plant vigor</b>
Camellia	April 28	9.0	7.0	8.5	7.0	8.0	5.5	9.8
Emerald	April 27	9.2	7.0	8.0	8.0	7.5	2.5	7.5
Rebel	April 18	8.0	8.0	7.8	7.8	6.8	4.0	8.0
Star	April 19	7.5	7.0	7.0	7.0	7.0	2.0	7.5
Suziblue	April 21	8.5	7.5	7.0	8.0	7.5	5.5	8.0
GA Dawn	April 13	7.5	7.5	7.5	7.0	8.0	2.5	8.5
TH-889	May 4	7.5	8.0	8.0	7.5	7.5	8.0	8.0
TH-904	April 29	8.3	7.5	7.5	8.5	8.5	6.5	8.5
TH-905	April 28	7.5	7.5	7.5	8.0	7.5	5.5	9.5
TH-906	April 28	7.5	7.5	7.5	7.0	7.5	3.5	8.0
TH-912	April 29	8.0	7.5	8.0	8.0	7.5	7.0	8.5
TH-917	May 3	8.0	8.0	7.5	7.5	8.0	6.0	9.8
TH-920	April 24	8.8	7.0	8.5	6.8	7.3	6.5	8.5
TH-921	April 18	7.3	7.5	7.5	7.3	8.5	3.0	8.0
TH-931	May 5	9.0	7.0	9.0	7.5	7.5	5.0	6.5
TH-938	April 22	8.0	7.3	8.5	8.8	8.3	4.5	8.5
TH-939	April 27	8.0	7.5	8.0	7.5	7.5	5.0	8.5
TH-940	April 30	8.0	7.3	8.0	7.0	7.3	5.5	9.8
TH-944	April 16	8.0	7.0	6.8	7.0	7.0	1.5	6.8
TH-948	April 24	8.5	7.5	7.5	7.5	7.5	3.5	7.0
TH-1007	April 18	8.5	7.5	7.0	7.5	8.5	2.5	9.0
TH-1008	April 28	8.0	7.0	7.5	7.5	7.0	2.5	9.8
TH-1091	April 18	8.7	7.5	8.0	7.5	7.0	4.5	9.8
TH-1111	April 16	8.5	7.0	8.0	8.5	8.0	3.0	9.8
TH-1113	April 21	7.5	7.3	7.0	7.0	8.5	5.5	9.8
TH-1124	April 20	8.0	7.0	7.0	9.0	8.0	3.0	8.0
TH-1125	April 17	9.0	7.3	7.0	9.0	7.3	1.5	9.5

### ***Performance of Southern Highbush Selections at Griffin***

All of the southern highbush plants growing in Griffin are 8 years old or less. While the test site is not considered as suitable for southern highbush production, we have been able to successfully grow many of our selections in the red Piedmont soil with pine bark mulch and irrigation. Table 2 lists data for several of the highbush selections in Griffin. Most of these were evaluated at Alapaha as well. Selections that demonstrated outstanding plant vigor at the Griffin site included TH-905, TH-906, TH-917, TH-920, TH-940, TH-948, TH-1111, TH-1113, TH-1122, and TH-1125. Several of these selections also had very good plant vigor at Alapaha, suggesting a wide range of soil adaptation.

Berry size of 'Emerald', 'Camellia', and 'Suziblue' were largest among the standard cultivars in Griffin during 2012. Several newer selections also had very large berry size. These included TH-904, TH-905, TH-920, TH-931, TH-939, TH-948, and TH-1125. Some of these selections also had large berry size at the Alapaha test site, suggesting those selections have a good tendency for sizing of fruit across environments. These large fruited selections will be used in the breeding program for improving overall berry size and quality of the germplasm.

In Griffin during 2012, we quantitatively measured berry weight, firmness, and Brix for several selections. Berry firmness was measured using a FirmTech II firmness tester. This instrument basically records the force (g) required to deflect or compress berries a certain amount (measured in mm). The higher the units (g/mm), the more firm berries are. The standard instrument settings were 50 g minimum and 250 g maximum force. Brix was determined using a hand-held refractometer, and berry weights were derived from 25-berry samples. Table 3 depicts data (first 25% of ripe fruit) for several cultivars and selections. 'Suziblue' continues to be a firm standard with very good berry weight. Selections TH-904, TH-931, and TH-948 all had firmness values greater than 180, which is considered very firm. Again, berry weight measurements indicated some very large fruited selections, including TH-889, TH-905, TH-923, TH-931, TH-938, TH-939, and TH-948. This was our first year taking Brix readings, and data showed 'Camellia' being a high Brix standard along with 'Star'. Several selections had high Brix (> 13.0%), including TH-889, TH-904, TH-905, TH-906, TH-921, TH-923, and TH-940. This combination of berry data will help us identify high quality fruit for variety releases as well as breeding material.

With regards to flavor in Griffin, the selections TH-904, TH-912, TH-1111, TH-1113, TH-1124, and TH-1130 were all rated to have very good flavor. Several of these (TH-904, TH-1111, TH-1113 and TH-1124) also had superior flavor ratings in Alapaha. Cedar Waxwings prevented accurate yield data for southern highbush harvest in Griffin as well. However, cropping scores show overall good fruit set in 2012, even following some significant spring freeze damage.

**Table 2.** Ratings of some fruit and plant characteristics of field grown southern highbush blueberry cultivars and selections from Griffin during 2012.

<b>Selection or Variety</b>	<b>Date of 50% Ripening</b>	<b>Berry Size</b>	<b>Berry Scar</b>	<b>Berry Color</b>	<b>Berry Firmness</b>	<b>Berry Flavor</b>	<b>Crop Load</b>	<b>Plant vigor</b>
Camellia	May 8	8.5	7.0	8.0	7.5	7.5	8.0	9.8
Emerald	May 5	8.0	7.0	8.0	7.0	6.8	2.5	7.5
Rebel	April 25	7.5	7.5	7.0	7.5	6.8	5.5	5.8
Star	April 29	7.5	6.8	7.0	7.0	6.8	8.0	8.0
Suziblue	April 27	8.3	7.5	7.0	8.5	7.0	7.0	7.8
TH-889	May 12	7.5	8.0	8.5	8.0	8.0	8.0	8.5
TH-904	May 5	8.0	7.5	7.0	9.0	8.0	6.0	7.5
TH-905	May 3	8.0	7.3	7.5	8.0	8.0	6.0	8.8
TH-906	May 7	7.0	7.3	7.0	7.5	7.5	3.5	9.8
TH-912	May 4	8.0	7.5	7.5	8.8	8.3	7.0	7.5
TH-917	May 13	7.5	7.0	7.0	6.8	6.8	8.0	9.3
TH-920	May 11	8.5	7.5	8.5	6.5	8.0	8.3	8.8
TH-921	April 28	7.8	7.5	7.3	7.0	8.0	7.0	8.5
TH-931	May 17	9.0	8.0	8.0	7.3	7.5	5.5	8.5
TH-938	May 1	7.8	8.5	8.0	8.0	7.5	6.0	8.0
TH-939	May 3	8.0	7.0	7.0	7.0	7.5	9.0	7.8
TH-940	May 9	7.8	6.5	7.0	7.0	7.0	7.3	8.8
TH-944	April 26	8.0	7.5	6.8	6.5	7.3	6.0	7.5
TH-948	May 1	8.5	7.0	7.3	7.5	7.0	7.0	9.0
TH-1091	April 28	7.5	7.0	6.8	7.3	7.8	6.0	8.3
TH-1111	April 21	7.8	8.0	7.5	8.5	8.0	3.5	9.3
TH-1113	April 28	6.8	7.5	7.3	6.8	8.3	4.5	9.0
TH-1122	May 4	7.0	7.5	7.5	8.3	7.5	2.5	9.0
TH-1124	April 25	7.5	7.0	6.8	8.5	8.5	4.0	8.0
TH-1125	April 22	8.5	7.5	7.5	8.8	8.0	5.5	9.0
TH-1130	April 26	8.0	7.5	7.0	8.5	8.3	5.0	8.0

**Table 3.** Berry weight, firmness, and Brix for several southern highbush blueberry cultivars and selections grown in Griffin, GA during 2012. Firmness was measured using a FirmTech II device and Brix was measured with a hand-held refractometer.

<b>Selection or cultivar</b>	<b>Berry weight (g)</b>	<b>Berry firmness (g/mm)</b>	<b>Berry Brix (%)</b>
Camellia	1.60	164	14.5
Rebel	2.14	171	11.2
Star	1.80	190	13.9
Suziblue	2.54	181	12.1
TH-889	2.25	170	13.4
TH-904	1.82	195	13.3
TH-905	2.03	168	13.5
TH-906	1.86	176	13.7
TH-917	1.55	168	10.6
TH-920	1.90	163	11.7
TH-921	1.75	182	15.3
TH-923	2.15	153	13.6
TH-931	2.66	193	11.3
TH-934	1.75	181	12.3
TH-938	2.00	180	12.4
TH-939	2.95	180	12.0
TH-940	1.99	173	14.3
TH-948	2.17	186	12.0

Table 4 shows data for some of the newest southern highbush selections in Griffin for 2012. These selections and their standards are only 3 years old, but they suggest some very high quality mid to late season southern highbush are coming along in the program. Most of these ripened well after ‘Star’, ‘Rebel’, and ‘Suziblue’, yet they had good crops, large fruit, and good berry quality. Notable late ripening selections were TH-1188 and TH-1225. TH-1230 was a quality mid-season selection. We will continue to monitor this new material in order to explore the possibility of extending our southern highbush season well into early rabbiteye season. This may enhance our markets in some regards, especially for large fruit, fresh fruit.

**Table 4.** Ratings of some fruit and plant characteristics of some newer field grown southern highbush blueberry cultivars and selections from Griffin during 2012.

Selection or Variety	Date of 50% Ripening	Berry Size	Berry Scar	Berry Color	Berry Firmness	Berry Flavor	Crop Load	Plant vigor
Rebel	May 2	8.0	7.5	7.0	7.5	6.8	6.0	8.5
Star	April 28	7.0	7.0	7.0	7.0	7.0	4.5	5.5
Suziblue	May 1	8.5	7.5	6.8	8.0	7.3	7.0	8.0
TH-1185	May 18	8.0	7.0	7.3	7.5	7.5	6.0	9.0
TH-1188	May 21	8.5	8.0	8.0	8.0	8.0	5.0	8.0
TH-1189	May 5	8.3	7.5	8.0	7.5	7.5	5.5	8.0
TH-1190	May 7	8.0	7.5	8.0	7.0	6.8	5.0	8.0
TH-1191	May 4	7.5	7.5	7.5	7.3	8.0	4.0	9.0
TH-1194	May 20	7.8	7.5	7.0	7.3	7.3	6.5	8.5
TH-1203	May 7	7.5	6.8	8.0	7.0	7.0	9.0	8.5
TH-1215	May 21	8.3	7.5	8.0	7.3	7.3	6.0	9.0
TH-1225	May 22	9.2	7.5	7.0	8.0	8.5	6.0	8.5
TH-1230	May 12	8.8	8.5	7.5	7.3	8.0	3.5	9.5

#### ***Performance of Rabbiteye Selections at Alapaha***

As with southern highbush, the early chill hour accumulation and warm spring caused historically early ripening for most rabbiteye varieties and selections. Detailed data on plant and berry attributes were collected for various rabbiteye selections in 2012 at Alapaha. Table 5 depicts data for some of the more promising selections along with observations for some cultivar standards. We continue to be interested in early ripening rabbiteye. 'Alapaha' (UGA 2001 release) ripened May 25. 'Alapaha' fruit tend to be smaller than we would like, but yields continue to be good. 'Vernon' (UGA 2004 release) was 50% ripe by May 18, and it also has good berry size. The most recent release 'Titan' (UGA 2010 release) ripened at a similar time as 'Vernon'. The new variety continues to have very firm, large berries. There were several notable rabbiteye selections that had very early 50% ripe dates at Alapaha in 2012. These included 03-04 (May 14), T-957 (May 8), T-965 (May 16) and T-1101 (May 14). The most notable early ripening rabbiteye was T-1070, which had 50% ripe fruit May 5. This was the 2nd year of observation on this new selection, and we are fast tracking it through testing due to its extreme earliness and outstanding plant and berry attributes in the early trials.

**Table 5.** Ratings of some fruit and plant characteristics of field grown rabbiteye blueberry cultivars and selections from Alapaha during 2012.

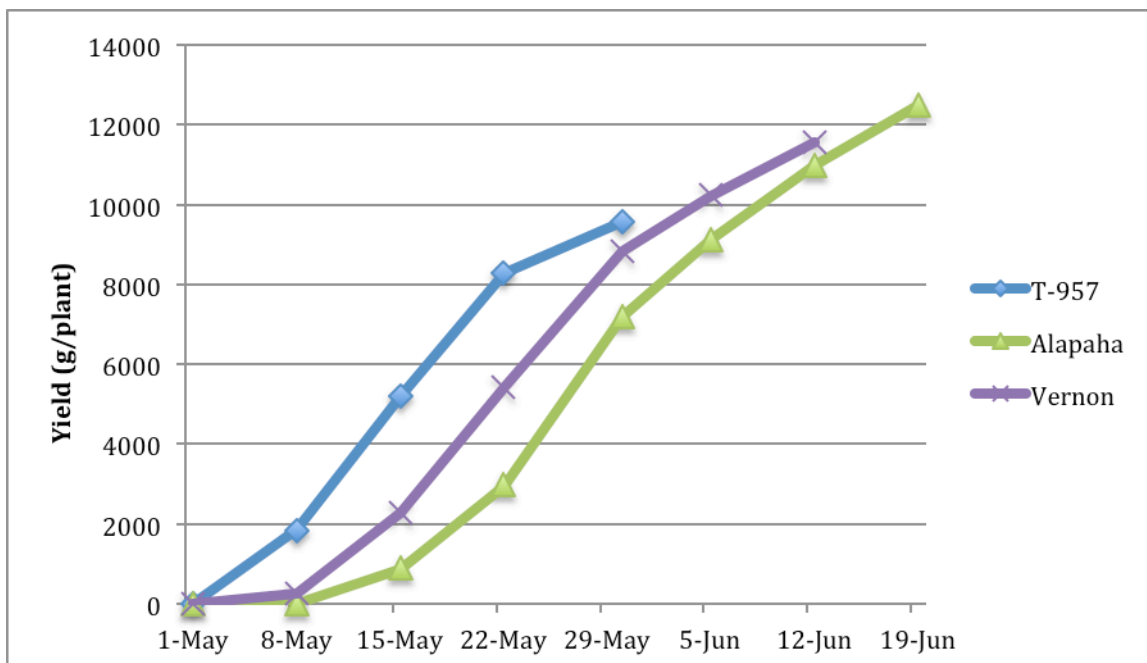
<b>Selection or Variety</b>	<b>Date of 50% Ripening</b>	<b>Berry Size</b>	<b>Berry Scar</b>	<b>Berry Color</b>	<b>Berry Firmness</b>	<b>Berry Flavor</b>	<b>Crop Load</b>	<b>Plant vigor</b>
Alapaha	May 25	6.0	7.5	6.5	7.0	7.0	9.0	8.5
Brightwell	June 8	6.5	7.5	6.5	7.0	6.0	9.0	9.5
Powderblue	June 7	6.5	7.0	7.5	6.5	6.3	4.0	8.3
Premier	May 15	8.0	7.0	6.8	6.8	7.5	2.0	9.8
Titan	May 17	9.3	8.0	7.0	8.0	6.5	4.5	9.8
Vernon	May 18	7.5	7.0	7.0	7.0	7.0	6.0	9.8
03-04	May 14	7.0	7.0	7.0	7.0	7.3	7.0	10.0
T-957	May 8	8.0	7.5	7.0	8.0	7.0	4.5	8.0
T-961	May 15	7.0	6.8	7.0	7.0	7.0	7.0	9.5
T-965	May 16	8.8	7.0	6.5	7.5	6.5	8.0	9.0
T-968	May 28	7.3	7.5	8.0	7.0	7.3	6.0	8.5
T-1070	May 5	7.0	6.8	6.8	8.0	7.5	4.0	8.0
T-1084	June 6	6.5	7.0	7.0	6.8	6.8	4.0	7.0
T-1085	May 18	7.5	8.0	7.0	8.0	7.0	6.0	8.5
T-1096	June 3	8.0	7.3	7.0	7.5	7.5	3.5	10.0
T-1099	June 18	7.5	8.0	7.0	8.3	7.3	5.0	8.5
T-1100	May 25	7.0	7.0	7.0	7.0	6.5	7.3	8.5
T-1101	May 14	9.5	7.0	7.0	7.5	7.3	7.0	8.5
T-1220	May 26	8.0	7.0	8.3	7	7.5	4.0	8.5



Berry size in general suffered for rabbiteye selections at Alapaha during 2012 due to an extended period of drought as berries ripened (late May thru early June). However, the new release 'Titan' had very good berry size, as did the selections T-965 and T-1101. These large fruited rabbiteyes generally have early-ripening, firm fruit also.

Figure 1 shows yield for the selection T-957 and two rabbiteye standards from plants at the Alapaha Research Farm for 2012. These plants were 6 years old (established Fall 2006). All three harvested had high yields, reaching 10,000 g/plants (22 lbs per plant) or more. T-957 was noteworthy for its earliness, ripening a full 7 to 9 days earlier than 'Vernon' and 14 days earlier than 'Alapaha'. We will continue to monitor this as a "near-future" release of an early ripening rabbiteye. The berry size is very good for T-957 also, as is firmness.

With regards to mid season rabbiteyes, 'Brightwell continues to be the industry standard, typically giving high yields. However, 'Brightwell' berry quality is only fair with regards to size and eating quality. We are in need of some new selections to compete in the 'Brightwell' window. T-968 is a variety we have looked at for a few years, and it does well, but it hasn't yet shown itself to be worthy of release. Selection T-1220 looks to be very promising for a mid-season selection. It has very high quality fruit, and has been well adapted at both Alapaha and Griffin locations.

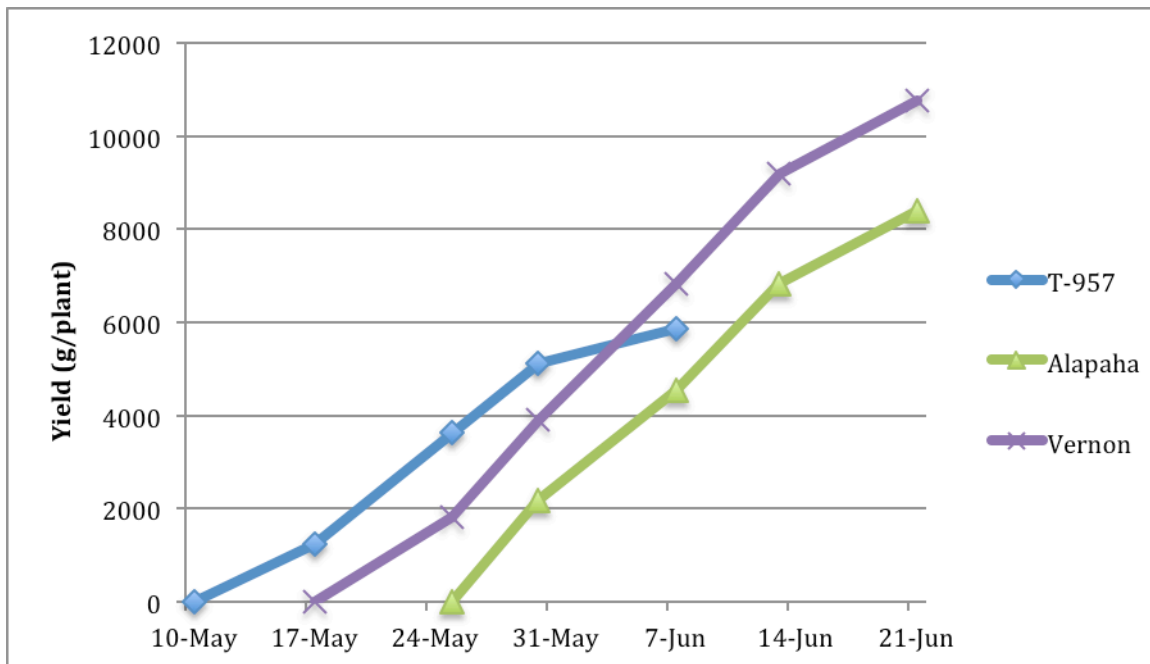


**Figure 1.** Yield of T-957, 'Alapaha', and 'Vernon' rabbiteye varieties at Alapaha for 2012.

### **Performance of Rabbiteye Selections at Griffin**

Many of the rabbiteye selections listed above for the Alapaha location also performed well at the Griffin test site in 2012 (Tables 6). All plants at the Griffin test site are young (6 years old or less), and all plants are irrigated and mulched with bark. With regards to ripening times, again, the early season UGA releases ‘Alapaha’ and ‘Vernon’ continued to perform well. The selections 03-04, T-957, and T-1070 were noteworthy early ripening rabbiteyes in Griffin, all ripening well before ‘Alapaha’ and ‘Vernon’. For mid-season rabbiteyes, ‘Brightwell’ ripening date was June 23, and several selections with better quality fruit were in this ripening time window. These include T-1096, T1100, T-1172, T-1175, T-1198, and T-1220. We will continue to evaluate these selections at both Griffin and Alapaha, as well as at other locations.

Table 7 shows berry weight, firmness, and Brix data for several rabbiteye standards and selections in Griffin for 2012. As typical for rabbiteye, most had good to very good firmness, with T-957, T-1070, T-1083, T-1084, and T-1207 all having very firm fruit. T-1070, T-1096, T-1101, and T-1220 all had very large fruit. Brix data were very interesting, showing a wide range of values among the selections and varieties. T-1083, T-1094, T-1099, T-1180, and T-1207 all had very high Brix readings. Yield data for T-957 compared to ‘Vernon’ and ‘Alapaha’ (Fig. 2) showed the two releases were the highest yielding in Griffin, while T-957 was the earliest ripening.



**Figure 2.** Yield of T-957, ‘Alapaha’, and ‘Vernon’ rabbiteye varieties at Griffin for 2012.

**Table 6.** Ratings of some fruit and plant characteristics of field grown rabbiteye blueberry cultivars and selections from Griffin during 2012.

<b>Selection or Variety</b>	<b>Date of 50% Ripening</b>	<b>Berry Size</b>	<b>Berry Scar</b>	<b>Berry Color</b>	<b>Berry Firmness</b>	<b>Berry Flavor</b>	<b>Crop Load</b>	<b>Plant vigor</b>
Alapaha	June 6	6.5	7.5	7.0	7.0	7.0	10.0	8.0
Brightwell	June 20	5.8	7.0	7.3	7.0	6.5	10.0	9.0
Powderblue	June 18	6.5	7.5	8.5	6.8	7.3	7.0	8.5
Premier	June 4	7.0	7.5	8.0	6.0	7.0	4.0	8.0
Titan	June 8	8.0	8.0	7.0	9.0	7.0	10.0	10.0
Vernon	June 1	7.5	7.0	7.3	7.5	8.0	7.0	9.0
03-04	May 20	7.5	7.3	7.0	7.8	8.0	8.0	10.0
T-957	May 21	7.5	7.0	6.8	7.3	7.0	7.0	8.0
T-961	May 29	7.2	7.0	7.0	6.8	7.0	8.5	9.0
T-965	May 27	8.0	7.5	7.0	8.0	7.5	8.0	9.0
T-968	June 18	7.3	7.0	6.8	7.0	7.0	8.0	7.5
T-1070	May 23	7.5	7.3	7.0	8.0	8.0	7.0	7.0
T-1071	June 10	7.3	7.5	7.3	7.3	6.5	8.0	8.5
T-1072	June 2	7.0	8.0	7.0	6.8	7.0	7.0	8.0
T-1084	July 8	6.0	7.5	7.0	7.0	7.0	7.0	7.0
T-1085	June 2	6.0	7.5	7.3	7.0	7.0	7.0	8.3
T-1096	June 24	8.0	7.5	7.0	7.0	7.3	6.0	10.0
T-1099	July 4	7.5	8.5	7.0	8.0	7.5	8.0	7.3
T-1100	June 15	6.5	7.3	7.0	7.0	7.0	7.0	7.5
T-1101	June 9	8.5	7.0	7.0	7.0	6.8	8.0	7.0
T-1172	June 21	7.5	7.0	7.5	6.8	7.0	7.0	9.0
T-1174	July 7	7.0	8.0	7.0	7.3	7.3	8.0	7.5
T-1175	June 15	6.5	7.5	7.5	7.5	8.0	5.0	7.5
T-1198	June 20	7.5	6.8	7.0	7.0	7.5	6.0	8.5
T-1208	June 28	8.0	7.0	7.0	7.0	7.5	8.3	9.0
T-1209	June 10	8.0	7.5	7.0	6.8	7.5	5.0	6.0
T-1220	June 16	7.5	7.0	8.5	7.0	7.0	6.0	7.0

**Table 7.** Berry weight, firmness, and Brix for several rabbiteye blueberry cultivars and selections grown in Griffin, GA during 2012. Firmness was measured using a FirmTech II device and Brix was measured with a hand-held refractometer.

<b>Selection or cultivar</b>	<b>Berry weight (g)</b>	<b>Berry firmness (g/mm)</b>	<b>Berry Brix (%)</b>
Alapaha	1.28	175	10.8
Brightwell	0.98	230	13.8
Titan	2.60	240	10.2
Vernon	1.60	185	11.5
T-957	1.44	205	14.2
T-961	1.28	206	11.0
T-965	2.16	202	11.8
T-968	1.68	194	10.7
T-1069	2.16	167	13.2
T-1070	2.40	222	14.2
T-1071	2.00	185	13.0
T-1083	1.10	240	16.3
T-1084	1.13	241	13.8
T-1094	1.60	202	15.1
T-1095	1.76	190	14.5
T-1096	2.64	175	14.0
T-1099	1.80	195	15.0
T-1101	2.92	198	12.7
T-1180	2.02	190	16.2
T-1207	1.57	228	15.3
T-1220	2.60	160	13.3
03-04	1.72	187	13.3

### ***Goals of The UGA Blueberry Cultivar Development Program for 2013***

Plans for the year 2013 are to continue aggressively evaluating seedlings, selections, and advanced selections of blueberries for a wide range of uses, including commercial, home owner, and ornamental purposes. More than 50 new crosses were made during 2012, and 3000 to 4000 seedlings will be generated from these crosses in 2013. These seedlings will be planted in a seedling nursery during the summer of 2013 to be grown for future evaluations. More than 4500 seedlings were planted in 2011, and these will be screened in 2013 for fruit and plant characteristics suitable for both commercial and ornamental production. The most promising seedlings will be identified as selections for further evaluation (estimated to be 3 to 5% of total seedlings). In 2012, more than 300 new selections (a mixture of commercial and ornamental material) were made from seedlings of crosses made by the UGA program in the last 3 years. These were propagated, and multiple plants will be established at Alapaha and Griffin in 2013 for further evaluation. These new selections will be added to the several hundred selections currently growing at these locations that will be evaluated during the coming years for possible designation as advanced selections.

In 2011 and 2012, several selections were identified as advanced selections and were propagated. These will be further evaluated in the coming years for potential as cultivars, and some of the advanced selections will be distributed to cooperators to assist in the final evaluation process. Data from these trials will be collected beginning in 2013 and will continue through 2018. Evaluations of the commercial advanced selections will include fruit characteristics, plant growth characteristics, flowering times, and yields (when possible).

In 2009-2011 we established advanced selection plots at the Alapaha Farm to evaluate their potential to be mechanically harvested for the commercial production industry. This is a great need for Georgia growers since hand-harvest labor issues are becoming more cumbersome for the industry. These specialty advanced selection trial blocks will continue to be evaluated in 2013 and will take up to 5 years to complete.