'Southern Splendour' Southern Highbush Blueberry

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Southern highbush blueberries (*Vaccinium* sp.) continue to increase in importance in Georgia and across the southern United States. Growers are interested in early ripening varieties and are especially keen to find southern highbush varieties with the possibility of machine harvesting for the fresh market. 'Southern Splendour' is a new southern highbush blueberry (*Vaccinium* hybrid) released by The University of Georgia College of Agricultural and Environmental Sciences along with The University of Georgia Agricultural Experiment Station. 'Southern Splendour' is an early-season blueberry, having highly desirable flavor and very good berry firmness along with a shortened fruit development period (time from flowering to ripening). The potential for machine harvesting the new variety exists as a result of its excellent berry firmness, concentrated ripening, and ease of fruit detachment from the plant. As a result of medium yields, however, 'Southern Splendour' may likely be a niche variety in which early ripening, highly flavorful fruit is desired or where needs for machine harvesting exist.

Origin and Description

'Southern Splendour', tested as TH-664, was selected in 2001 at the Georgia Experiment Station in Griffin, GA, from a group of seedlings of the cross 'Reveille' × 'Palmetto' planted in a nursery in 1998. 'Reveille' (Ballington et al., 1991) is a release from North Carolina that is poorly adapted to the low-to-medium chill conditions in south Georgia. Whereas 'Reveille' has a chilling requirement in excess of 800 h, south Georgia typically gets only 400 to 700 h of chilling in the primary blueberry production area. However, growers have been interested in a 'Reveille'-type southern highbush blueberry because of its desirable flavor and as a result of its excellent berry firmness that lends to it being machine harvestable. 'Palmetto' (NeSmith et al., 2004) has a low chilling requirement and good berry flavor and firmness; however, it can overcrop and

produce small berries. Hence, the cross of 'Reveille' × 'Palmetto' attempted to generate seedlings with lower chilling requirements than 'Reveille' while maintaining outstanding flavor and berry firmness and having improved berry size over 'Palmetto'. 'Southern Splendour' is a selection with many of these improved attributes.

'Southern Splendour' has an estimated chill requirement of 450 to 500 h (less than 7 °C). It is an early-season southern highbush with medium to medium-large-sized fruit (1.5 to 1.9 g/berry). Berries are medium to light blue in color and have a small, dry picking scar. Berry flavor and firmness are excellent. 'Southern Splendour' has a short fruit development period (FDP) with flowering occurring in early March and ripening in late April to early May in south Georgia. Plants are vigorous and have a semi-upright bush habit with a narrow crown.

Propagation is easily accomplished using softwood cuttings. Plants are self-fertile, but planting with other southern highbush blueberry cultivars for cross-pollination is recommended.

Performance

'Southern Splendour' was tested in University Research Farm plantings at Alapaha and Griffin, GA, starting in 2002, and the selection was also planted at a grower test site in 2003 in Ware County, GA. Table 1 presents multiyear fruit and plant data for 'Southern Splendour' and 'Palmetto' (one of its parents) along with the industry standards 'Star' and 'Rebel' from the Alapaha, GA, test plots. 'Southern Splendour' had superior flavor and firmness when compared with both 'Star' and 'Rebel' over the evaluation period, and it typically had better firmness and larger berry size than 'Palmetto'. One of the most notable traits of 'Southern Splendour' is the short FDP (only 56 d on average). The new variety flowers several days after each of the standard varieties, yet it ripens with or before them. This delay in flowering can be beneficial in avoiding some spring frost and freeze damage. Average cropping score (a subjective measure of crop load) was lowest for 'Southern Splendour' at this test site. The reduced crop load was likely the result of the combination of a lower number of flowering shoots per plant and a lower number of flower

Table 1. Average ratings of some fruit and plant characteristics of 'Southern Splendour' and the southern highbush standard cultivars Palmetto, Star, and Rebel from 2005–2009 in field test plots at Alapaha, GA.^z

Berry and plant attributes ^y	Cultivar			
	Southern Splendour	Palmetto	Star	Rebel
Berry size	7.5 ± 0.1	6.8 ± 0.3	7.2 ± 0.3	7.5 ± 0.5
Berry scar	7.5 ± 0.3	8.3 ± 0.3	7.5 ± 0.3	8.0 ± 0.1
Berry color	7.1 ± 0.1	7.0 ± 0.1	7.3 ± 0.2	7.7 ± 0.2
Berry firmness	8.8 ± 0.1	8.4 ± 0.1	7.7 ± 0.3	7.8 ± 0.2
Berry flavor	8.9 ± 0.1	8.7 ± 0.2	7.2 ± 0.2	6.8 ± 0.1
Cropping	3.8 ± 0.9	4.5 ± 1.0	4.3 ± 1.6	4.7 ± 2.1
Plant vigor	7.8 ± 0.3	7.5 ± 0.5	6.8 ± 0.8	7.8 ± 0.4
Date of 50% flowering	9 Mar.	28 Feb.	27 Feb.	23 Feb.
Date of 50% ripening	3 May	6 May	7 May	1 May
Fruit development period (days)	56 ± 4.6	67 ± 2.0	69 ± 1.5	66 ± 2.9

^zThese plants were established in 2002. Severe freezes in 2007 and 2008 limited evaluations for those years.

^yValues are means ± SE with n = 3.

Table 2. Average ratings of some fruit and plant characteristics of 'Southern Splendour' and the southern highbush standard cultivars Palmetto, Star, and Rebel from 2004–2009 in field test plots at a grower test site in Ware County, GA.^z

Berry and plant attributes ^y	Cultivar			
	Southern Splendour	Palmetto	Star	Rebel
Berry size	7.6 ± 0.2	7.0 ± 0.2	7.9 ± 0.2	8.4 ± 0.3
Berry scar	8.2 ± 0.1	8.1 ± 0.2	7.9 ± 0.3	8.3 ± 0.2
Berry color	7.6 ± 0.1	7.1 ± 0.1	7.4 ± 0.2	7.8 ± 0.1
Berry firmness	8.7 ± 0.1	8.3 ± 0.2	7.6 ± 0.3	8.1 ± 0.1
Berry flavor	9.0 ± 0.2	8.5 ± 0.3	7.4 ± 0.2	6.9 ± 0.1
Cropping	4.8 ± 0.8	6.2 ± 0.8	6.3 ± 0.7	6.6 ± 0.9
Plant vigor	8.2 ± 0.6	7.9 ± 0.6	8.1 ± 0.3	9.0 ± 0.3
Date of 50% flowering	7 Mar.	3 Mar.	28 Feb.	25 Feb.
Date of 50% ripening	4 May	7 May	7 May	1 May
Fruit development period (days)	58 ± 2.2	66 ± 1.8	69 ± 2.2	66 ± 2.7

^zThese plants were established in 2003. Severe freeze damage in 2007 limited evaluations for that year.

^yValues are means ± SE with n = 5.

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Table 3. Average ratings of some fruit and plant characteristics of ‘Southern Splendour’ and the southern highbush standard cultivars Palmetto, Star, and Rebel from 2004–2009 in field test plots at Griffin, GA.^z

Berry and plant attributes ^y	Cultivar			
	Southern Splendour	Palmetto	Star	Rebel
Berry size	7.5 ± 0.1	7.2 ± 0.2	7.2 ± 0.4	7.2 ± 0.4
Berry scar	8.2 ± 0.2	7.8 ± 0.3	7.6 ± 0.2	8.0 ± 0.2
Berry color	7.8 ± 0.2	7.2 ± 0.2	7.3 ± 0.1	7.8 ± 0.2
Berry firmness	8.9 ± 0.2	8.1 ± 0.4	7.5 ± 0.2	7.8 ± 0.1
Berry flavor	8.9 ± 0.2	8.8 ± 0.2	7.2 ± 0.1	7.0 ± 0.1
Cropping	5.4 ± 1.1	4.8 ± 1.0	6.0 ± 1.0	6.0 ± 1.5
Plant vigor	8.1 ± 0.6	8.0 ± 0.1	6.8 ± 0.4	7.1 ± 0.3
Date of 50% flowering	22 Mar.	16 Mar.	14 Mar.	9 Mar.
Date of 50% ripening	15 May	21 May	21 May	14 May
Fruit development period (days)	54 ± 3.9	66 ± 0.6	68 ± 1.4	66 ± 1.3

^zThese plants were established in 2002. Severe freeze damage in 2007 limited evaluations for that year.

^yValues are means ± SE with n = 5.

buds per shoot. However, the improved attributes of berry flavor and firmness still make the variety desirable for certain production and marketing opportunities.

Data from the on-farm test site for ‘Southern Splendour’ and standard varieties for the period 2004–2009 are depicted in Table 2. Again, ‘Southern Splendour’ had superior berry flavor and firmness when compared with ‘Star’ and ‘Rebel’, and it had the shortest FDP of the four varieties. Berry size, flavor, and firmness of the new variety were typically improved when compared with ‘Palmetto’. Cropping score was lowest for ‘Southern Splendour’ over the evaluation period at this location, again likely attributable to less flowering shoots and flower buds per shoot.

Finally, multiyear data from the Griffin, GA, test site are listed in Table 3. ‘Southern Splendour’ also had very good berry firmness and flavor at this site, and it had a short FDP. Cropping score for ‘Southern Splendour’ was similar to the other varieties in Griffin. Berry size and plant vigor were also good for ‘Southern Splendour’ in Griffin.

Collectively, data from these three locations over the 5-year period from 2004 to 2009 suggest ‘Southern Splendour’ could be a useful variety for certain production and/or marketing needs. Its excellent fruit attributes (flavor and firmness) are expected to make it desirable for serving quality-minded markets. Although yields can be lower for ‘Southern Splendour’ (estimated to be 75% of ‘Rebel’ and ‘Star’ on

average), it is expected some growers will be interested in this new variety for its early ripening and potential for machine harvesting. The firm fruit characteristic of ‘Southern Splendour’ is considered a prerequisite to successful machine harvesting. A very limited test for machine harvesting was conducted at a grower test site during 1 year, and berries detached very easily and the fruit appeared to hold up well during the procedure when compared with the other southern highbush blueberry varieties.

Availability

‘Southern Splendour’ will be a patented cultivar (USPP applied for) and is owned by the University of Georgia Research Foundation. Propagation rights controlled by University of Georgia Research Foundation, Technology Commercialization Office, GSRC Boyd Building, Athens, GA 30602-7411 (www.ovpr.uga.edu/tco/).

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