

'Austin' Rabbiteye Blueberry

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'Austin' rabbiteye blueberry (*Vaccinium ashei* Reade) ripens early in the rabbiteye blueberry season along with 'Climax' (Brightwell and Draper, 1975). 'Austin' produces large to medium-sized, high-quality fruit that can be harvested mechanically. Named in recognition of Max E. Austin's contribution to southern blueberry breeding, it is released cooperatively by the Univ. of Georgia College of Agricultural and Environmental Sciences, the Univ. of Georgia Agricultural Experiment Station, and the U.S. Dept. of Agriculture, Agricultural Research Service.

Origin

'Austin', previously tested as T-339, was selected at Alapaha, Ga., in 1978 by Arlen D. Draper and Max E. Austin from a cross of T-110 ('Woodard' x 'Garden Blue') x 'Brightwell' (Fig. 1) and was evaluated there in replicated yield trials. It has also been tested in the Southern Regional Blueberry Evaluation Trials and observed in growers' fields in southern Georgia. Results indicate that 'Austin' is adapted to those areas where rabbiteye blueberries are successfully grown.

Description and Performance

'Austin' was compared with 'Climax', a standard for early season rabbiteye blueberries. In Georgia, productivity has been similar to 'Climax' (Table 1), with generally larger berries (Table 2). 'Austin' also has fewer seeds and lower seed mass per fruit than 'Climax' (Table 3). Color difference measurements made with a Gardner XL20 colorimeter (Gardner Laboratories, Bethesda, Md.) equipped with a 1-cm aperture and standard-

ized with a medium blue tile ($L = 23.87$, $a = +1.59$, and $b = -31.82$) indicated that 'Austin' fruit had greater "L" value, similar negative hue, and greater chroma than 'Climax'. This color difference indicated a light but intense blue coloration. In the 1994 Southern Regional Blueberry Evaluation Trials, characteristics are rated on a scale of 1 = poorest to 10 = best, with ratings of 6 to 10 considered to be within the range of commercial usage

(Morrison et al., 1949). Ratings from the Southern Regional Blueberry Evaluation Trials (Table 4) support the findings from Alapaha for yield, fruit size, and color. Observations at Alapaha indicated that 'Austin' had acceptable firmness, stem scar, and flavor (no data available) and ratings from the Southern Regional Evaluation Trials scored 'Austin' at 7 or greater on the 1 to 10 scale for these trials (Table 4), indicating that 'Austin' has firm berries with small dry stem scars and good flavor.

In 1994, 'Austin' reached 50% anthesis 10 d later than 'Climax' (19 Mar. vs. 9 Mar.) at Alapaha. Data for anthesis were not taken in other years. At Alapaha, 'Austin' reached 50% or greater ripe fruit at the same time as 'Climax' in 1993, 1994, and 1995 and a week later than 'Climax' in 1992. The Southern Regional Blueberry Evaluation Trials showed 'Austin' reaching 50% ripe slightly later than 'Climax' at two locations and slightly earlier at one location (Table 4).

During Winter 1993-94, 1993 growth of blueberry shoots was collected from the field after 0, 100, 250, 350, 400, 450, 500, 550, 600,

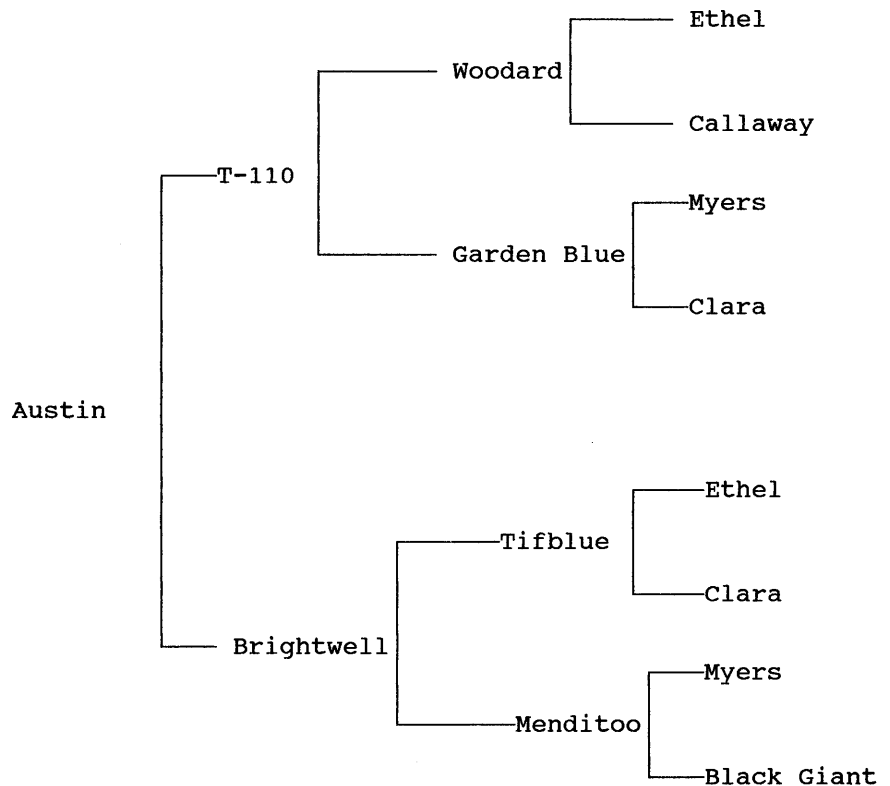


Fig. 1. Pedigree of 'Austin' rabbiteye blueberry.

Table 1. Total yield (kg/plant)^a of 'Austin' and 'Climax' rabbiteye blueberries at Alapaha, Ga., 1992-95.

Cultivar	Year			
	1992	1993	1994	1995
Austin	0.9 a ^b	1.5 a	3.0 a	5.4 a
Climax	0.7 a	1.3 a	3.3 a	2.0 b

^aData from seedling evaluations planted in randomized complete-block designs. Two-plant plots in four replications, 1992-94; plants established in 1986. Five-plant plots in two replications, 1995; plants established in 1988.

^bMean separation within columns by Duncan's multiple range test at $P \leq 0.05$.

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Table 2. Fruit size (g/100 fruit) of 'Austin' and 'Climax' rabbiteye blueberries at Alapaha, Ga., 1992–1995.

Cultivar	Sampling date									
	1992		1993		1994		1995			
	3 June	15 June	24 June	1 July	17 June	24 June	7 June	13 June	13 June	3 July
Austin	217 a ²	219 a	185 a	157 a	78 a	121 a	---	146	176 a	175
Climax	124 b	126 b	87 b	79 b	77 a	92 b	142	---	149 b	---

²Mean separation within columns and years by Duncan's multiple range test at $P \leq 0.05$.

³No harvest.

Table 3. Number and mass of seeds and fruit color of 'Austin' and 'Climax' rabbiteye blueberries, 1991.

Cultivar	Seeds ²		Color ³		
	No./fruit	Mass/fruit (mg)	L	Hue ⁴	Chroma ⁵
Austin	75 b ⁶	0.025 b	27.24 a	-65.0500	5.1780 a
Climax	96 a	0.035 a	25.18 b	-67.1499	4.7977 b

²Measurements conducted on four replicates of 100 fruits each selected randomly from harvested fruit of each cultivar.

³Measurements conducted on four replicates of 25 fruits each selected randomly from harvested fruit of each cultivar.

⁴tan⁻¹b/a derived from "a" and "b" CDM measurements.

⁵(a²+b²)^{1/2} derived from "a" and "b" CDM measurements.

⁶Mean separation within columns by Duncan's multiple range test at $P \leq 0.05$.

Table 4. Yield and fruit characteristics² of 'Austin' and 'Climax' rabbiteye blueberries at three locations in 1994.

Observation	Austin ²			Climax ²		
	Location ³			Location ³		
	1	2	3	1	2	3
Yield (kg/plant)	7.2	2.5	2.1	5.1	2.3	2.8
Fruit						
Size	7.0	7.7	7.3	7.3	7.0	7.0
Color	8.0	7.7	7.5	7.3	7.5	8.0
Firmness	7.5	7.9	7.5	7.3	8.0	7.7
Scar	8.0	8.1	7.7	8.0	9.0	7.7
Flavor	7.3	8.0	7.0	8.0	7.3	7.5
Fruit 50% ripe on (day of year)	186	177	156	181	171	161

²Rated from 1 (poorest) to 10 (best). Ratings of 6 to 10 are within range of commercial usage (Morrison et al., 1949).

³Location: 1 = Castle Hayne, N.C.; 2 = Clarksville, Ark.; 3 = Poplarville, Miss.

650, and 700 h of exposure below 7 °C to determine hours of chilling to force flower bud expansion, as described by Austin and Bondari (1987). Bud expansion measurements at Alapaha showed that 'Austin' flower buds had a chilling requirement within the range for 'Climax' (450 to 500 h <7 °C) (Austin, 1994). 'Austin' has flowered, leafed, and fruited well at Gainesville, Fla., from 1988 to 1995 and has not suffered from lack of chilling (Paul Lyrene, personal communication). Plants of 'Austin' are moderately vigorous and upright, and produce enough new stems to renew the plant. Because rabbiteye blueberries must be cross-pollinated for commercial fruit production, 'Austin' should not be planted in solid blocks. 'Austin' will be another early harvest season rabbiteye cultivar and serve as a pollinizer for 'Climax'.

Availability

A limited supply of rooted cuttings of 'Austin' was distributed to nurseries in the southeastern United States in Spring 1996. Contact the Georgia Seed Development Commission, 2420 S. Milledge Avenue, Athens, GA 30606, for further information. Neither the Georgia Agriculture Experiment Station nor the USDA/ARS has plants for sale or distribution.

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