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'McShay' Apple

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'McShay' is an attractive, excellent quality apple (*Malus* ×*domestica* Borkh.) with field immunity to apple scab. The fruit is similar in color, flavor, and texture to 'McIntosh'. 'McShay' is named in honor of the late J. Ralph Shay and is a late fall dessert apple well-adapted to Oregon's Willamette Valley. 'McShay' is the ninth cultivar to be released by the cooperative apple breeding program of Indiana, Illinois, and New Jersey Agricultural Experiment Stations.

Origin

'McShay' originated from the cross of 'McIntosh' x PRI 612-4 made in 1962 in a commercial orchard in Michigan City, Ind. The complete pedigree is shown in Fig. 1. Seeds were sown in the greenhouse and seedlings inoculated with *Venturia inaequalis* (Cke.) Wint. (1). Resistant seedlings were planted at the Purdue Univ. Horticultural Farm in 1963. 'McShay' was selected when it first fruited in 1970. Scions were sent to Oregon State Univ. (OSU) and topworked onto an existing seedling tree in Feb. 1971 and fruit were evaluated from 1974 to 1987. 'McShay' has been tested under its progeny number (PRI 1773-8), its original Purdue Univ. location number (CAR7T18), and its OSU Botany Farm location number (R6NR1T15).

Description

Fruit of 'McShay' are round conic and average 65 mm in diameter (Fig. 2). The fruit are attractive with a green undercolor and a dark red blush covering 70% of the surface. The skin has a light bloom and polishes to a bright shine equivalent to that of 'McIntosh', which it resembles. Fruit lenticels are white and moderately conspicuous. No russeting has been observed. The skin is thin and the flesh is fine-textured, moderately firm, juicy, and light green with a good balance of sugars and acids as evaluated subjectively by us. The fruit retains its flavor and texture for 2 to 3 months in common storage (1°C), then softens in a manner similar to 'McIntosh'. Optimum maturity at Corvallis is early September, 1 week after 'Prima' and 3 weeks before 'Delicious'.

The tree of 'McShay' is vigorous, has an upright growth habit, and a tendency to develop spurs. 'McShay' produces good annual crops. 'McShay' has been evaluated on seedling, EMLA 7, and EMLA 26 rootstocks, with the latter being a highly desirable and productive combination.

The tree flowers after 'McIntosh' but before 'Rome Beauty'. It produces viable pollen, but cross-compatibility tests with standard cultivars have not been performed.

'McShay' carries the V_f gene from *Malus floribunda* Sieb. 821. Leaves and fruit are field immune to the apple scab organism [*Venturia inaequalis* (Cke.) Wint.]. Leaves are susceptible to powdery mildew incited by *Podosphaera leucotricha* (Ell. & Ev.) Salm. In the absence of fungicidal sprays mildew develops, but the trees retain their foliage until late in the fall. No fruit infection has been observed even when foliar infection has been severe.

The following detailed description follows Zielinski (2) and uses color designations according to the Royal Horticultural Society Colour Chart, issued by the British Color Council in collaboration with the Royal Horticultural Society of London.

FLOWER

Pedicel: 20 mm in length.

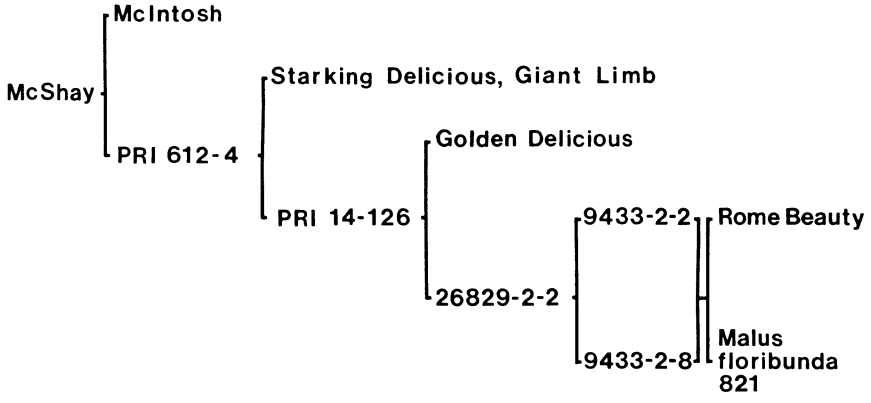

Fig. 1. Pedigree of 'McShay' apple.

Fig. 2. Fruit of 'McShay' apple.

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Corolla: 40 mm in diameter at anthesis.
Color: Spirea Red 025/1 (bud) to Phlox Pink 625/2 (open flowers).

FRUIT

Shape: round-conic, slightly oblique, regular.
Size: axial diameter 64 mm to 67 mm; transverse diameter 64 mm to 67 mm.
Color: undercolor: uranium green, 63/2; overcolor: currant red, 821/1, covering 70% of the surface.
Skin: thin, smooth, tender with moderately conspicuous white dots, no russetting.
Stem: 20 mm, medium thickness, clubbed.
Cavity: medium depth and width, abrupt angle at shoulder.
Basin: medium depth and width.
Calyx: persistent, upright, open.
Calyx tube: cone-shaped.
Stamens: median.
Core line: meeting.
Flesh: texture—fine-grained, tender, juicy; quality—very good, mild sub-acid; color—chartreuse green, 663/3.
Maturity season: 2 weeks before 'Jonathan', 3 weeks before 'Delicious', 1 week after 'Prima'.
Keeping quality: retains quality and texture 2–3 months at 1°C.
Use: very good dessert apple grown under climatic conditions of the Willamette Valley, Ore.

TREE

Form: upright, vigorous.
Leaves: ovate, single serrate margin, apex acute, base rounded, length to width ratio = 1.6.

Availability

Budwood is available from the senior author in limited quantities for test purposes at Federal and State Experiment Stations. Plant Patent #4724 was granted for this cultivar on 26 May 1981. Trees are available from Carlton Plants, Dayton, OR 97114. Nurseries interested in propagating trees of 'McShay' should contact Carlton Plants.

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'Bonita' Rabbiteye Blueberry

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Florida's early season, fresh market rabbiteye blueberry (*Vaccinium ashei* Reade) industry has been based mainly on the cultivars Beckyblue, Climax, Aliceblue, and Premier. Both 'Aliceblue' and 'Premier' have given problems with poor fruit set after mild winters, particularly in areas south and east of Gainesville (1); thus, there is a need for additional early ripening cultivars to interplant with 'Beckyblue' and 'Climax'. 'Bonita' is being released for this purpose by the Institute of Food and Agricultural Science from the Univ. of Florida blueberry breeding program.

Origin

'Bonita' was selected from a row of open-pollinated 'Beckyblue' planted on the farm of Arthur Elliott in Earlton, Fla. about 1964. 'Bonita' is at least a half-sibling and possibly a full sibling of 'Aliceblue'. Most, and possibly all, of the genes in 'Bonita' trace back to seedling selections made before 1960 in the USDA, Univ. of Georgia Cooperative Breeding Program at Tifton, Ga. Thus, the probability is high that both 'Bonita' and 'Aliceblue' are descendants of the native selections 'Ethel', 'Clara', 'Myers', and 'Walker', which are the ultimate parents of almost all rabbiteye cultivars released to date (2). 'Bonita' was evaluated on Elliott's farm and at a second Earlton farm from 1967 to 1977. It has been evaluated annually at the Univ. of Florida Horticultural Unit in Gainesville, Fla. since 1980. The Gainesville test site is in north-central Florida and receives an average of about 300 hr below 7°C per year. 'Bonita' has been planted since 1982 in grower trials in all Florida blueberry growing areas north of Orlando.

Description

'Bonita' is a vigorous, upright-growing plant. The berries of 'Bonita' are somewhat larger than those of 'Aliceblue', 'Beckyblue', and Climax on plants carrying similar crop loads (Table 1). 'Bonita' fruit are light blue and have a good scar and firmness. 'Bonita' has had a good record of fruit set in Gainesville and Ocala when interplanted with 'Beckyblue' and 'Climax'. A 1:1:1 planting ratio of these three cultivars is recommended in north Florida. Fruit set after mild winters has been as good as for any rabbiteye cultivar tested. Like most rabbiteye cultivars, 'Bonita' is highly, but not completely, self-incompatible and must be interplanted with other rabbiteye cultivars flowering at about the same time to produce good crops. The flowering period (Table 1) of 'Bonita' in north Florida overlaps sufficiently with that of 'Beckyblue', 'Climax' 'Woodard', 'Bluegem', and 'Bluebelle' to allow good cross pollination. 'Bonita' fruit

Table 1. Characteristics of 'Bonita' and other blueberry cultivars with similar harvest seasons.[z]

	Cultivar[y]				
Characteristic	Bonita	Beckyblue	Aliceblue	Climax	Premier
Berry size	9	8	8	7	7
Berry color	8	8	8	6	7
Berry firmness	8	8	8	9	8
Berry scar	9	8	8	9	9
Plant vigor	8	8	8	7	8
Date of 50% anthesis[x]					
1981	16	16	16	14	—
1982	8	1	6	6	18
1983	25	29	28	28	3[x]
1984	16	17	17	15	18
1985	22	16	14	19	29
1986	22	13	16	17	26
1987	17	3	16	8	24
Date of 50% ripe					
1982	29 May	27 May	23 May	25 May	2 June
1983	15 June	4 June	4 June	11 June	7 June
1984	6 June	5 June	2 June	9 June	14 June
1985	4 June	28 May	30 May	29 May	30 May
1986	3 June	29 May	29 May	1 June	2 June

[z]Data from Univ. of Florida Horticultural Unit, Gainesville, Fla.
[y]For all characters, the highest numbers (largest fruit, lightest blue color, most firm, smallest scar, most vigorous) are most desirable (scale 1 to 10).
[x]All March, except 'Premier' on 3 Apr. 1983.

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