'NJA54' Apricot

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'NJA54' apricot (*Prunus armeniaca* L.) is a high-quality, dark-orange apricot with an attractive bright red blush over 20% to 40% of the fruit. Fruit ripen early and are sweet ($\approx 18\%$ soluble solids concentration), firm, and juicy. 'NJA54' leaves and fruit are tolerant to bacterial leaf spot [*Xanthomonas campestris* pv. *pruni* (Smith) Young et al.]. 'NJA54' is being released by the New Jersey Agricultural Expt. Station for apricot growers specializing in quality cultivars for wholesale or roadside markets, especially in areas where bacterial spot may be a problem. The cultivar was patented as 'NJA54' but will be sold by commercial nurseries under the registered trademark name SunGem.

Origin

'NJA54' originated from a cross between NJA2 and RR17-62 made in 1973 by L. Fredric Hough and Catherine Bailey at the Rutgers Horticultural Research Farm, New Brunswick, N.J. (Fig. 1). The tree first was selected in 1979 at the Rutgers Fruit Research and Development Center, Cream Ridge, N.J. Its original field location was D2-53-90. The tree was propagated to Lovell seedling rootstock and tested as 'NJA54'. 'NJA54' cropped well and had excellent fruit quality in trials in southern France and at the Peninsular Agricultural Research Station, Sturgeon Bay, Wis.

Description and performance

'NJA54' fruit ripen early, ≈ 1 week before 'Harcot' and 2 weeks before 'Goldcot'. Fruit

develop color early and can be picked while still firm; they are not susceptible to cracking or preharvest drop. The fruit are globose and small to medium in size (Fig. 2). The skin is dark orange with an attractive bright red blush covering $\leq 40\%$ of the fruit surface. Bacterial spot has been absent on the fruit and only rarely present on the leaves. In contrast, 'Harogem', 'Hargrand', 'Veecot', and 'Goldcot' are susceptible to fruit infection, and to a much lesser extent leaf infection, when grown in New Jersey. Brown rot [*Monilia fructicola* (Wint.) Honey] on the fruit has not been a problem when a standard pest control program was followed. The flesh is dark orange and similar in color to the undercolor of the skin. 'NJA54' flesh is fully free from the pit and is firm and juicy. 'NJA54' fruit is consistently sweet with excellent flavor. We believe it is one of the best-tasting apricots in our extensive collection.

'NJA54' trees are moderately vigorous with an upright growth habit. Productivity has been variable. Although 'NJA54' tends to have a heavy flower bud set, the buds are susceptible to late winter and early spring cold injury. Productivity has been similar to that of 'Harcot' in Cream Ridge, N.J. 'NJA54' tree health could be a problem in areas with widely fluctuating winter temperatures (Frecon, 1991).

The following detailed description of 'NJA54' is based on Hedrick (1925) and uses color designations in accordance with the *Royal Horticultural Colour Chart* issued by the British Colour Council in collaboration with the Royal Horticultural Society. Color also was measured in terms of its color space coordinates (L^* , a^* , and b^*) with a chromameter (model CR-300; Minolta, Ramsey, N.J.) calibrated with a white calibration plate.

FRUIT

Shape:	Globose, slightly compressed.
Average size:	Axial diameter, 4.1 cm; transverse diameter in suture plane, 4.2 cm; transverse diameter at right angles to suture plane, 3.9 cm.
Average mass:	42 g.
Skin color:	Undercolor is orpiment orange to nasturtium orange, plates 25a to 25b ($L^* = 59.47$, $a^* = +20.21$, $b^* = +52.09$). Overcolor is orange-red ($L^* = 42.25$, $a^* = +35.93$, $b^* = +29.82$).
Pubescence:	Slight.
Cuticle:	Shallow, extending from base to apex; slightly more pronounced at stem end.
Base:	Retuse.
Apex:	Rounded to slightly depressed; pistil point slightly depressed.
Cavity:	Elongated; average width 1.24 cm at right angle to suture plane; average width 2.04 cm in suture plane; average length 2.53 cm.
Maturity:	Ripened ≈ 1 week before 'Harcot' when grown in Cream Ridge, N.J.
Use:	Early maturing, excellent quality, dessert apricot.

FLESH

Thickness:	Medium.
Color:	Tangerine orange plate 24a to 24b.

Fig. 1. Pedigree of 'NJA54' apricot.

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Texture: Fine, nearly nonmelting.
 Firmness: Very firm.
 Eating quality: Excellent; very sweet and aromatic.

STONE

Type: Freestone.
 Shape: Ovoid.
 Size: Small to medium; average length, 2.5 cm; average width, 1.9 cm.
 Ridges: Slight ridges extending along both sides of the suture plane.
 Tendency to split: None.
 Surface: Irregular, slightly pitted.
 Color: Cinnamon plate 16c ($L^* = 52.72$, $a^* = +10.11$, $b^* = +27.65$).

TREE

Size: Medium.
 Vigor: Moderately vigorous.
 Growth: Upright.
 Production: Productive, but susceptible to spring frost damage.
 Bearer: Regular.

LEAVES

Average size: Length, 7.8 cm; width, 7.4 cm.
 Form: Ovate, abruptly acuminate; obtuse at base.
 Thickness: Medium.
 Margin: Serrate.
 Color: Adaxial surface green plate 137a to 137b ($L^* = 38.41$, $a^* = -13.43$, $b^* = +18.31$). Abaxial surface yellow-green plate 147c to 147b ($L^* = 47.42$, $a^* = -13.13$, $b^* = +19.92$).
 Petiole: Average length, 3.5 cm; average thickness, 0.16 cm.
 Glands: Form, globose; average number, 3.7, variable in number; primarily found on petiole.

Availability

Limited quantities of nonindexed budwood are available only for testing purposes from the Rutgers Fruit Research and Extension Center, 283 Route 539, Cream Ridge, NJ 08514. Plant patent no. 8674 was granted for

Fig. 2. Leaves, fruit, and stone morphology of 'NJA54' apricot.

this cultivar on 5 Apr. 1994 and was assigned to Rutgers Univ., New Brunswick, N.J. 'NJA54' trees are being sold by licensed commercial nurseries under the registered trademark name SunGem. Nurseries desiring propagation license should write to J.C.G.

Literature Cited

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