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Chaparro et al.

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- (54) **PEACH TREE NAMED ‘UF ONE’**
- (50) Latin Name: *Prunus persica*
Varietal Denomination: **UF ONE**
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- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 117 days.
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- (51) **Int. Cl.**
A01H 5/00 (2006.01)
- (52) **U.S. Cl.** **Plt./197**
- (58) **Field of Classification Search** **Plt./197**
See application file for complete search history.

- (56) **References Cited**
U.S. PATENT DOCUMENTS
PP14,784 P2 * 5/2004 Sherman Plt./197

* cited by examiner
Primary Examiner—Wendy C. Hass

- (57) **ABSTRACT**
A new and distinct variety of peach tree, denominated ‘UF ONE’, has a low winter chilling requirement estimated at 150 chill units (cu). The tree is of medium size, has a moderate vigorous and semi-spreading growth habit. It has showy, pink flowers, and leaves with globose glands. Trees of ‘UF ONE’ are self-fertile and regularly bear heavy annual crops of early season fruit that are large for its ripening season. Fruit are uniformly firm and yellow with non-melting, clingstone flesh. Fruit are slightly oval, and uniform with substantially symmetrical shape, and have an attractive 40% bright red skin. The fruit of ‘UF ONE’ blooms about 3 days before and ripens about 8 days after ‘UFBeauty’ peach after the first week in May at Gainesville, Fla.

1 Drawing Sheet

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Botanical designation: *Prunus persica*.
Variety denomination: ‘UF ONE’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct variety of peach [*Prunus persica* (L.) Batsch] tree adapted to a subtropical (low chill) winter climate. This new tree, named ‘UF ONE’, produces 40% red blush, good eating quality, clingstone and non-melting flesh fruit for fresh market before mid-May at Gainesville, Fla. Contrast is made to ‘UFBeauty’ (U.S. Plant Pat. No. 14,784) peach, a standard variety, for reliable description. ‘UF ONE’ is a promising candidate for commercial success in that it has large, attractive yellow ground color, and sweet fruit that ripen evenly and set fruit under the high night temperatures during bloom in central Florida.

‘UF ONE’ peach tree (genotype) originated in a cultivated area of the fruit breeding program at the University of Florida, located at Gainesville, Fla. where it was tested. The seed parent (Fla. 90-50cn) was of complex origin and was open pollinated (out-crossed to an unknown peach). ‘UF ONE’ was selected in 1997 because it exhibited tree and fruit qualities with potential for variety release. It was designated and tested

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as Fla. 97-30c. It was asexually propagated by budding onto ‘Flordaguard’ (unpatented) seedling rootstock (for root-knot nematode control) and determined to have unique tree and fruit characteristics making it worthy for commercial fresh fruit production. There are no known effects of this standard rootstock on this scion cultivar. Asexually propagated plants remained true to the original tree and all characteristics of the tree and the fruit have transmitted for two generations.

SUMMARY OF THE INVENTION

The new and distinct variety of peach tree bears fruit that ripen just after the first week in May at Gainesville, and has a moderately low chilling dormancy requirement. ‘UF ONE’ blossoms (showy pink flowers) about 3 days before ‘UFBeauty’ peach in late January at Gainesville. The estimated chilling requirement is 150 chill units, based on bloom time. ‘UF ONE’ tree has fruit that are clingstone and of good flavor and eating quality. The trees are vigorous, productive and without alternate bearing. Trees attain in two years, a height of two meters and a spread of one and a half meters at Gainesville. Terminal growth of up to a meter annually is common on mature 5-year-old trees with normal pruning to a vase shape.

The first fruit ripen in early May at Gainesville in about 95 days from full bloom, which is about 8 days after ‘UFBeauty’. The fruit are uniformly large, averaging 140 g when properly thinned to a full crop. Ripe fruit have no red pigment in the flesh at the pit, but there may be some red pigment in the flesh, especially on trees stressed in hot, dry weather, common to many standard peach varieties.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawing (FIG. 1) is a color photograph which shows a typical specimen of the fruit, leaf, and stem of the new variety as nearly true as it is reasonably possible to make in a color illustration of this type. The photograph shows an attractive shape and exterior coloration of six specimens of fruit above a ruler in side view, stem end view, a blossom end view, a side view showing the suture and a fruit cut longitudinally to show with and without the pit.

DETAILED BOTANICAL DESCRIPTION

The tree, flowers, and fruit may vary in slight detail due to variations in soil type, cultural practices, and climatic condition. The potential for commercial production of fresh fruit by 'UF ONE' is high, due to its attractive red fruit over a bright yellow ground color in skin, large fruit of good flavor, and good firmness with even ripening throughout the fruit. The present botanical description is that of the variety grown on 5-year-old trees on 'Flordaguard' rootstock under the ecological conditions prevailing at Gainesville, Fla. Colors (except those in common terms) are described from "The Pantone Book of Color", published by H. N. Abrams, Inc., N.Y. 1990.

Botanical classification: *Prunus persica*. cultivar UF ONE.

Tree:

Ploidy.—Diploid.

Size.—Trees are medium stature when trained to an open vase form.

Vigor.—Moderately vigorous, and must be summer and winter pruned when grown to a vase shape to keep the tree open to get strong fruiting wood in the lower center. Trees respond typically to irrigation and fertilization. Tree growth of 4 to 6 feet in height and 3 to 5 feet in width occurs the first growing season in the field in Florida where they need summer pruning.

Density.—Light to medium in branching habit. Pruning in summer and winter is required to open the tree center and permit sunlight entrance for enhanced fruit color and sugar content.

Form.—Semi-spreading, but easily pruned to vase shape.

Hardiness.—Hardy with respect to typical north central Florida winters.

Bearer.—Very productive annually without alternate bearing observed. Trees are self fertile and must be fruit thinned to avoid limb breakage and obtain large fruit size. Trees annually set several times the number of fruit for a desired crop load.

Chilling requirement.—Estimated endodormancy chilling requirement is 150 chill units based on time of bloom and leafing in relation to standard varieties.

Trunk:

Size.—Medium trunk diameter attaining 8 cm diameter at a height of 30 cm at the end of 4 years growth at Gainesville.

Texture.—Medium smooth, but changes to medium shaggy as tree ages.

Bark color.—Older bark gray, Chinchilla (Pantone 17-1109).

Lenticels.—Medium small (2 to 8 mm length perpendicular to the trunk), brown, Lark (Pantone 16-1324) with the center being yellowish brown, Medal Bronze (Pantone 17-0942).

Branches:

Size.—Strong growth of scaffold branches. Fruiting branches are mostly large diameter (4 to 10 mm) and not overly twiggy, resulting in strong fruiting wood. Thus, the tree growth and structure permits easier and faster winter pruning.

Texture.—Relatively smooth, numerous lenticels attaining size smaller than found on trunk and old scaffolds. Roughness increases with age.

Color.—New wood in summer is light green, Endive (Pantone 13-0632); Old fruiting wood in winter is more brown, Sienna (Pantone 18-1239).

Crotch angles.—Angles are selected at 45 to near 90 degrees in first year of tree training. Natural angles are within the normal range of standard varieties for a spreading tree and similar to those of 'UFBeauty'.

Leaves:

Size.—Medium; 15 to 17 cm length, including the petiole; 3.8 to 4.2 cm width. Measurements were made on vigorous upright shoots of summer growth.

Thickness.—Average for commercial nectarine varieties. Not noticeably unusual.

Form.—Lanceolate.

Apex.—Acute.

Margin.—Serrulate, slightly undulate.

Base.—Cuneate.

Surface.—Upper, glabrous; Lower, medium large veins that are pinnately netted.

Color.—Lower surface is green, Peridot (Pantone 17-0336); Upper surface is slightly darker green, Piquant Green (Pantone 17-0235).

Glands.—Usually 2, small globose glands mostly on lower leaf blade, but occasionally on petiole. Leaf glands on young leaves are yellowish green, Sulphur (Pantone 14-0755).

Petiole.—Average 1.2 cm length and 2 mm diameter. Light green, Beechnut (Pantone 14-0425) on older leaves of summer. Grooved longitudinally.

Stipules.—Medium (equal to most commercial peach varieties), usually 2 per bud, and abscising just before leaf becomes full size in summer growth. Color at full size is green, Leek Green (Pantone 15-0628).

Arrangement.—Alternate.

Flower buds:

Hardiness.—Hardy with respect to north central Florida winters (16° F. minimum observed).

Abundance.—Very high. Most buds set fruit in absence of spring frosts and show little evidence of bud drop.

Size.—Medium, average 3.5 mm length in mid winter.

Form.—Plump, conic and free.

Surface.—Pubescent scales.

Color.—Brown, Stucco (Pantone 16-1412) in late summer.

Flowers:

Blossom period.—Blossoms 3 days before 'UFBeauty' peach — average 50% bloom in late January most years at Gainesville, but occurring over a 7-10 day period. Time and length of bloom are dependant on ambient temperature.

Aroma.—None observed.

Flower density.—Abundant, varying 1 to 3 per node, but usually 2.

Type.—Showy, but location and seasonally variable within the range of commercial showy varieties. Aver-

age flower diameter is 3.7 cm. Average petal length, 18 mm; Width, 13 mm. Texture smooth. Margins are undulate and wavy.

Color.—Pink, Orchid Pink (Pantone 13-2010) at flower opening.

Flower parts.—Stamens and pistil size, shape and color are within the range of standard commercial varieties. There are 5 sepals and petals. Sepals average 5 mm length and 5 mm wide at attachment to calyx cup and rounded at the distal end. Sepals are green, Leaf Green (Pantone 17-0332) on the interior and red, Mineral Red (Pantone 17-1537) on the exterior with a smooth pubescent margin. Sepals are pubescent and petals are glabrous. Pistils are usually 1 per flower and straight (without curls or curves) just prior to flower opening. Pistil length (from tip of stigma to base of ovary) averages 16 mm. Pistils are light green, Pale Star (Pantone 12-0626). Flower pedicel is 1 to 2 mm length.

Calyx cup.—Medium small in the size range of commercial varieties. Calyx cup diameter is 5 mm at the time of flower opening. Calyx exterior is red, Cardinal (Pantone 18-1643) and interior is orange, Melon (Pantone 16-1442).

Stamen.—Anthers are Orange, Pumpkin (Pantone 14-1139) at flower opening. Number of anthers varies from 38 to 54. Filaments are light pink, Pearl (Pantone 12-1304) and length is 7 to 9 mm.

Pollen.—Abundant and bright yellow, Snapdragon (Pantone 13-0840), common in many peach varieties.

Fertility.—Fully self fertile, and no cross pollination is required. Fruit set is abundant.

Fruit:

Maturity when described.—Tree ripe, May 13, 2008 at Gainesville.

Date of picking.—First, Apr. 10, 2006; Last, — May 18, 2008 at Gainesville.

Size.—Uniform, medium large (large size for early mid-season maturity at 130 to 150 g). Varies with fruit number per tree, soil type, climatic conditions and cultural practices. Average equatorial diameter. — $2\frac{3}{8}$ inches (60 mm). Average polar length (stem to distal end). — $2\frac{5}{8}$ inches (65 mm).

Pedicel size and color.—Length is approximately 7 mm; Width is approximately 3 mm. Color is green, Lettuce Green (Pantone 13-0324).

Longitudinal section form.—Nearly round with slight tip.

Transverse section through diameter.—Nearly round with slight suture bulge.

Suture.—Shallow and inconspicuous except for a slight crease on the stem end of the fruit.

Ventral surface.—Mostly rounded with a slight suture bulge on one side.

Base.—Slightly cordate.

Apex.—Slightly obtuse.

Crater at stem attachment.—Flaring circular with slight suture crease at the stem end. Depth is 9 to 11 mm; breadth is 18 mm at top and 4 mm at pedicel attachment.

Skin.—Thickness. — Medium in comparison to commercial peach varieties. Texture. — Medium in com-

parison to commercial peach varieties. Tenacity. — Tenacious to flesh. Color. — Light red, Faded Rose (Pantone 18-1629), over 40% of skin. Ground color is yellow, Saffron (Pantone 14-1064). Fruit surface exposed to sunlight has a higher degree of enhanced red skin. Tendency to crack. — None observed. Taste. — No astringency observed. Epidermis. — Pubescent, but slightly shorter than 'UFBeauty'.

Flesh.—Ripens. — Evenly within each fruit. Texture. — Firm, juicy, melting when fully ripe. Fibers. — Very fine, small, tender, and abundant. Aroma. — Moderate and in the middle range of commercial peach varieties. Eating quality. — Good, moderately sweet, slightly acid. Soluble solids vary from 10.6 to 13.8 brix at 2.5 to 3 kg penetrometer ($\frac{3}{16}$ inch tip) firmness over a 5 year period. Juice. — Abundant. Color. — Yellow, Daffodil (Pantone 14-0850). There is no red at the pit. Browning by oxidation. — Not detectable on tree ripe fruit beginning to soften. Amygdalin. — Undetected.

Stone.—Type. — Semi-clingstone. Size. — Medium small: average length is 30 mm; average width is 22 mm; average thickness is 16 mm; average wall thickness is 5 mm. Color. — Light Brown, Nugget (Pantone 16-1148) when flesh is freshly cut. Form. — Oblong. Base. — Straight. Apex. — Acute, but with no sharp apex. Sides. — Near equal. Surface. — Slightly irregularly furrowed and pitted from base to apex. Ridges. — Not prominent. Tendency to split. — None observed. Seed. — Bitter (amygdalin is abundant) kernel. Viable if stratified upon removal from fruit at harvest, and without drying. Kernel is brown, Sunflower (Pantone 16-1054) when first removed from ripe fruit. Size is 16 mm length, 9 mm wide and 5 mm thick. Shape is acute tip with obtuse base and overall ovate shape.

Use: Fresh; dessert.

Disease/pest resistance: High leaf and fruit resistance to bacterial spot incited by *Xanthomonas campestris* pv. *pruni* (Pers.) Diet., and show less autumn leaf rust incited by *Tranzschelia discolor* [(Fuckel) Tranzschel & Litvinov] than 'UFBeauty'. Resistance to other fruit and tree diseases are within the range for commercial peach cultivars in Florida. No unusual resistance or susceptibility to insects and diseases noted.

Keeping quality: Excellent after 8 days at 2 C and with minimal bruises or scarring appear on skin.

Shipping quality: Degree of firmness at harvest and firmness retained in refrigeration for 8 days at 2 C, with no internal breakdown of flesh or appreciable loss of eating quality, indicates fruit should be highly acceptable for shipping.

I claim:

1. A new and distinct peach tree as illustrated and described, characterized by a low chilling requirement, and bearing fruit having firm, yellow, sweet, and non-melting, semi-clingstone flesh of high eating quality and an attractive 40% red skin with fruit ripening just after the first week of May or about 8 days after 'UFBeauty' at Gainesville, Fla.

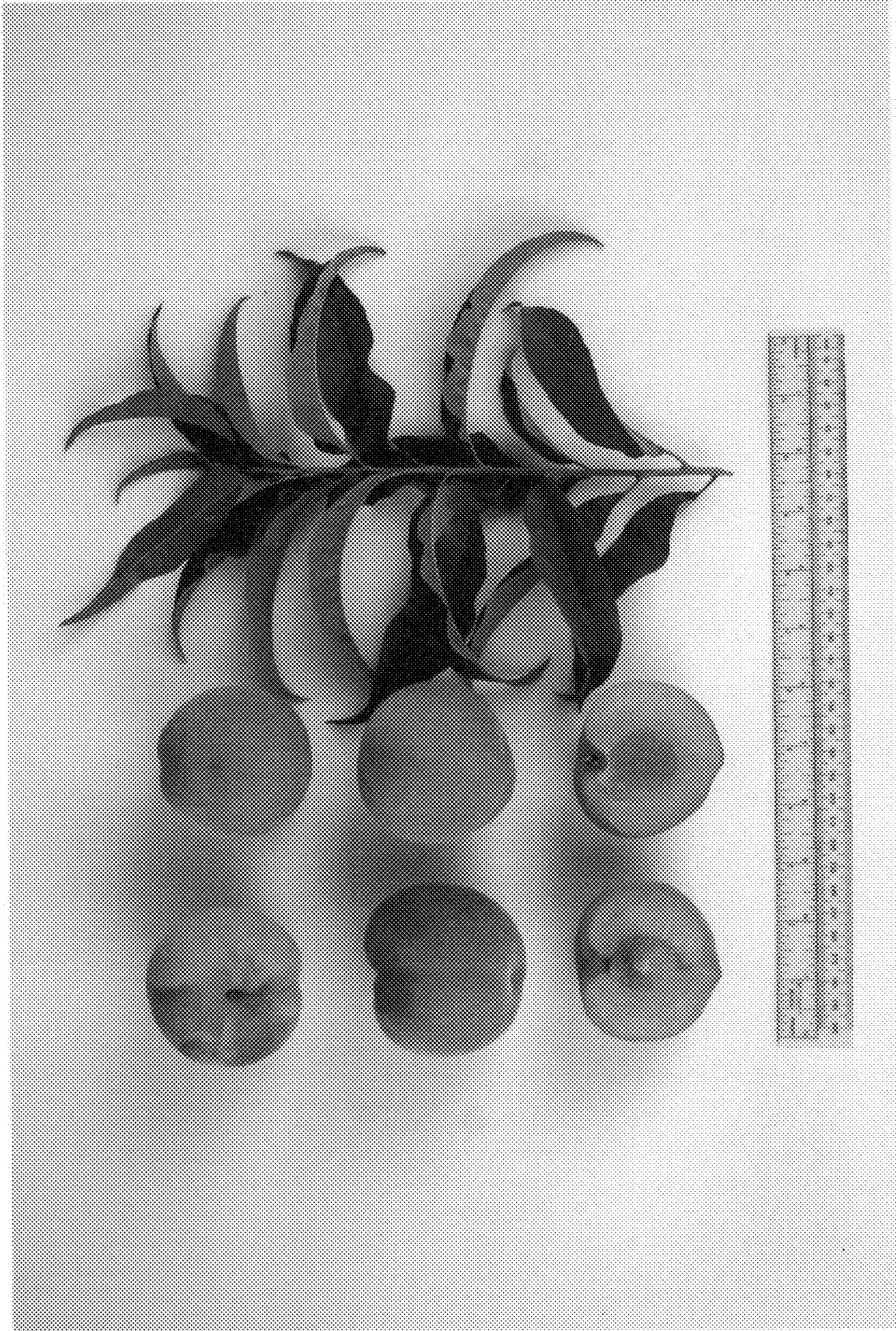


FIG. 1