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(54) **NECTARINE TREE NAMED 'BURNECTEIGHT'**

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(57) **ABSTRACT**

A new and distinct variety of nectarine tree (*Prunus persica*) Var. *nucipersica*, which is denominated varietally as 'Burnecteight', and which produces an attractively colored yellow-fleshed, clingstone nectarine which is mature for harvesting and shipment approximately September 15 to September 22 under ecological conditions prevailing in the San Joaquin Valley of Central California.

1 Drawing Sheet

BACKGROUND OF THE NEW VARIETY

BOTANICAL CLASSIFICATION

Prunus persica.

VARIETY DENOMINATION

'Burnecteight'.

The present invention relates to a new, novel and distinct variety of Nectarine tree, *Prunus persica* var. (*nucipersica*), which has been denominated varietally as 'Burnecteight'. The present variety of nectarine tree resulted from an on-going program of fruit and nut tree breeding. The purpose of this program is to improve the commercial quality of deciduous fruit and nut varieties and rootstocks by creating and releasing promising selections of prunus, malus and regia species. To this end we make both controlled and hybrid cross pollinations each year in order to produce seedling populations from which improved progenies are evaluated and selected.

The seedling 'Burnecteight' was originated by us from a population of seedlings grown in our experimental orchards located near Fowler, Calif. The seedlings, grown on their own roots, were the result of a controlled cross of the nectarine tree 'September Red,' (U.S. Plant Pat. No. 5,664), which was used as the sepd parent, and an unnamed nectarine seedling, (unpatented) which was used as the pollen parent. One seedling, which is the present variety, exhibited especially desirable characteristics and was marked for subsequent observation. After the 1997 season, the new, present variety was selected for advanced evaluation and repropagation.

ASEXUAL REPRODUCTION

Asexual reproduction of the new and distinct variety of nectarine tree 'Burnecteight' was accomplished by budding to 'Nemaguard' Rootstock (non-patented). This was performed by us in our experimental orchard located near Fowler, Calif. Subsequent evaluations have shown those asexual reproductions run true to the original tree. All characteristics of the original tree and its fruit were established and appear to be transmitted through succeeding asexual propagations.

SUMMARY OF THE VARIETY

'Burnecteight' is a new and distinct variety of nectarine tree, which is of large size, and which has vigorous growth, and which further is a regular and productive bearer of large, late ripening, firm, yellow fleshed, clingstone fruit with good flavor and eating quality. The tree has a medium-high chilling requirement of approximately 750 hours. The tree also produces relatively uniformly sized fruit throughout the tree with a high degree of red skin coloration, and firm flesh. The fruit appears to have good handling and shipping quality. Still further, the 'Burnecteight' nectarine tree bears fruit that is ripe for commercial harvesting and shipment on approximately September 15 to September 22. In comparison to the seed parent, 'September Red' nectarine tree, (U.S. Plant Pat. No. 5,664), the new variety ripens 10 or more days later.

BRIEF DESCRIPTION OF THE DRAWING

The accompanying drawing which is provided is a color photograph of the present variety. It depicts two whole mature fruit, and one fruit dissected in the equatorial plane and which exposes the flesh and the pit thereof. It also depicts a characteristic twig bearing typical leaves and two individual leaves. The external coloration of the fruit is shown sufficiently matured for harvesting and shipment. The colors are as nearly true as is reasonably possible in a color representation of this type. Due to chemical development, processing and printing, the leaves and fruit depicted in these photographs may or may not be accurate when compared to the actual specimen. For this reason, future color references should be made to the color plates as provided by The Royal Horticultural Society and the descriptions as provided hereinafter.

DETAILED DESCRIPTION

Referring more specifically to the pomological details of this new and distinct variety of nectarine tree, the following

has been observed during the fourth fruiting season under the ecological conditions prevailing at orchards located near the town of Fowler, county of Fresno, state of California. All major color code designations are by reference to The R.H.S. Colour Chart (Fourth Edition) provided by The Royal Horticultural Society of Great Britain.

Tree:

Size.—Generally. — Considered medium-large as compared to other common commercial nectarine cultivars ripening in the late season of maturity. The tree of the present variety was pruned to a height of approximately 314.8 cm to 386.7 cm at maturity.

Vigor.—Moderately vigorous. The present variety grew from about 139.0 cm to 189.7 cm in height during the first growing season. The variety was pruned to a height of approximately 106.7 cm during the first dormant season and primary scaffolds were then selected for the desired tree structure.

Productivity.—Productive. Fruit set varies from 2.0 to several times more than the desired crop load. Fruit set is spaced by thinning to develop into the desired market sized fruit. The number of fruit set varies with climatic conditions and cultural practices during the bloom, period and is therefore not distinctive of the variety.

Bearer.—Regular. Fruit set has been heavy, and thinning was necessary during the past 4 years.

Form.—Upright, and pruned to a vase shape.

Density.—Medium dense. It has been discovered that pruning the branches from the center of the tree to obtain a resulting vase shape allows for air movement and appropriate amounts of sunlight to enhance fruit color and renewal of fruiting wood throughout the tree.

Hardiness.—The present tree was grown and evaluated in USDA Hardiness Zone 9. Winter chilling requirements are approximately 750 hours below 7.0 degrees C. The present variety appears to be hardy under typical Central San Joaquin Valley climatic conditions.

Trunk:

Diameter.—Approximately 15.5 cm in diameter when measured at a distance of approximately 15.24 cm above the soil level, at the end of the fourth growing season.

Bark texture.—Considered moderately rough, with numerous folds of papery scarfskin being present.

Lenticles.—Numerous flat, oval lenticels are present. The lenticels range in size from approximately 3.0 to 5.0 millimeters in width, and from 1.0 to 2.0 millimeters in height.

Lenticel color.—Considered an Orange Brown, (RHS Greyed Orange 171 C).

Bark coloration.—Variable, but it is generally considered to be a medium brown, (RHS Greyed Orange Group 165 A).

Branches:

Size.—Considered medium for the variety.

Diameter.—Average as compared to other varieties. The branches have a diameter of about 6.0 centimeters when measured during the fourth year after grafting.

Surface texture.—Average, and appearing furrowed on wood which is several years old.

Crotch angles.—Primary branches are considered variable between about 45 to 49 degrees from the horizontal axis. This characteristic is not considered distinctive of the variety, however.

Current season shoots.—Surface texture — Substantially glabrous.

Internode length.—Approximately 2.3 to 2.4 cm.

Color of mature branches.—Medium brown, (RHS Brown Group 200 D).

Current seasons shoots.—Color. — Green, (RHS Group 135 B). The color of new shoot tips is considered a bright and shiny green (RHS Green Group 139 B).

Leaves:

Size.—Considered medium-large for the species. Leaf measurements have been taken from vigorous, upright, current-season growth at approximately mid-shoot.

Leaf length.—Approximately 176.0 to 181.0 millimeters.

Leaf width.—Approximately 40.0 to 43.0 millimeters.

Leaf base shape.—Slightly oblique relative to the leaf longitudinal axis.

Leaf form.—Lancelolate.

Leaf tip form.—Acuminate.

Leaf color.—Dark yellow-green, (approximately RHS Yellow Green Group 146 A).

Leaf texture.—Glabrous.

Lower surface.—Medium green, (RHS Yellow Green Group 146 C).

Leaf venation.—Pinnately veined.

Mid-vein.—Color. — Light yellow green, (RHS Yellow Green Group 154 D).

Leaf margins.—Slightly undulating. Form. — Considered crenate, occasionally doubly crenate. Uniformity. — Considered generally uniform.

Leaf petioles.—Size. — Considered medium long. Length. — About 11.0 to about 14.0 mm. Diameter. — About 1.5 to about 2.5 mm. Color. — Pale green, (RHS Yellow Green Group N144 C).

Leaf glands.—Size. — About 1.5 mm in height and about 1.0 mm in width. Number. — Generally one per side, occasionally two per side. Type. — Reniform, and considered reasonably appressed relative to the petiole margin. Color. — Light green, (RHS Yellow Green Group146 B).

Leaf stipules.—Size. — Medium large for the variety. Number. — Typically 2 per leaf bud, and up to 6 per shoot tip. Form. — Lanceolate in form, and having a serrated margin. Color. — Green, (RHS Green Group 132 A) when young, but graduating to a brown color, (RHS Greyed Orange group 177 B) with advancing senescence. The stipules are considered to be early deciduous.

Flowers:

Flower buds.—Generally — The floral buds, depending upon the stage of development, are approximately 8.0 millimeters wide; and about 11.0 millimeters long; conic in form; and slightly appressed relative to the bearing shoot.

Flower buds.—Color — The bud scales are gray brown, (approximately RHS Greyed Orange Group 177 C). The buds are considered hardy under typical central San Joaquin Valley climatic conditions.

Hardiness.—No winter injury has been noted during the last several years of evaluation in the central San

Joaquin Valley. The current variety has not been intentionally subjected to drought or heat stress and therefore this information is not available.

Date of first bloom.—Mar. 2, 2000.

Blooming time.—Considered to be mid-late in season in relative comparison to other commercial nectarine cultivars grown in the central San Joaquin Valley. Date of full bloom was observed on Mar. 9, 2000. The date of bloom varies slightly with climatic conditions and cultural practices.

Duration of bloom.—Approximately 9 days. This characteristic varies slightly with climatic conditions.

Flower type.—The variety is considered to have a showy type flower.

Flower size.—Flower diameter at full bloom is approximately 38.0 to 42.0 millimeters.

Bloom quantity.—Considered abundant.

Flower bud frequency.—Normally 1 to 2 appear per node.

Petal size.—Generally — Considered medium for the species. Length. — Approximately 18.0 to 20.0 millimeters. Width. — Approximately 16.0 to 18.0 millimeters.

Petal form.—Broadly ovate.

Petal count.—Nearly always 5.

Petal texture.—Glabrous.

Petal color.—Light pink when young, (RHS Red Purple Group 62 D), and darkening with advancing senescence and exposure to sunlight to a medium to dark pink, (RHS Red Purple Group 67 C).

Fragrance.—Slight.

Petal claw.—Form. — The claw is considered truncate, and has a medium size when compared to other varieties. Length. — Approximately 5.0 to 6.0 millimeters. Width. — Approximately 5.0 to 7.0 millimeters.

Petal margins.—Generally considered variable, from nearly smooth, to moderately undulate, especially apically.

Petal apex.—Generally — The petal apices appear rounded.

Flower pedicel.—Length. — Considered medium-long, and having an average length of approximately 2.0 to 3.0 millimeters. Diameter. — Considered average, approximately 2.0 millimeters. Color. — Considered light green, (RHS Yellow Green Group 144 C).

Floral nectaries.—Color. — A dull orange, (RHS Orange Group 25 B).

Calyx.—Surface Texture. — Generally glabrous. Color. — A dull red, (approximately RHS Greyed Red Group 181 B).

Sepals.—Surface Texture. — The surface has a short, fine pubescent texture. Size. — Average, and ovate in form. Color. — A dull red, (approximately RHS Greyed Red Group 182 B).

Anthers.—Generally. — Average in length. Color. — Reddish-purple dorsally, (approximately RHS Greyed Red Group 184 B).

Pollen production.—Pollen is abundant, and has a yellow color, (approximately RHS Yellow Orange Group 19 A).

Filaments.—Size. — Variable in length, approximately 12.0 to 16.0 millimeters in length. Color. — Considered white to a pinkish-white, (RHS White Group 155 D).

Pistil.—Number. — Usually 1, rarely 2. Generally. — Average in size. Length. — Approximately 15.0 to 17.0 millimeters including the ovary. Color. — Considered a very pale green, (approximately RHS Yellow Green Group 150 D). Surface Texture. — The variety has a long glabrous pistil.

Fruit:

Maturity when described.—Firm ripe condition (shipping ripe). Date of first picking. — Sep. 15, 2000. Date of last picking. — Sep. 25, 2000. The date of harvest varies slightly with climatic conditions.

Size.—Generally — Considered large, and uniform.

Average cheek diameter.—Approximately 78.0 to 81.0 millimeters.

Average axial diameter.—Approximately 77.0 to 80.0 millimeters.

Typical weight.—Approximately 257.0 grams. This is highly dependent upon cultural practices and therefore is not distinctive of the variety.

Fruit form.—Generally — Moderately oblate. The fruit is generally uniform in symmetry.

Fruit suture.—Shallow, and extending from the base to the apex. No apparent callusing or stitching exists along the suture line.

Suture.—Color — This appears to be a light orange colored background, (approximately RHS Orange Group 25 C) and occasionally having some red coloration, (approximately RHS Red Group 46 A).

Ventral surface.—Form — Slightly indented.

Apex.—Rounded.

Base.—Moderately retuse.

Stem cavity.—Rounded too slightly elongated in the suture plane. Average depth of the stem cavity is about 1.95 cm. Average width is about 2.54 cm.

Fruit skin.—Thickness. — Considered medium in thickness, and tenacious to the flesh. Texture. — Glabrous. Taste. — Non-astringent. Tendency to crack. — None observed.

Color.—Blush Color. — This blush color is variable from an orange, (approximately RHS Orange Group 25 C) to a dark red, (approximately RHS Red Group 46 A). The blush color ranges from about 70% to 80% of the fruit surface depending upon the sunlight exposure and prevailing growing conditions. Ground Color. — Yellow orange, (approximately RHS Yellow Orange Group 17 C).

Fruit stem.—Medium in length, approximately 7.0 to 8.0 millimeters. Diameter. — Approximately 2.0 to 3.0 millimeters. Color. — Pale yellow-green, (approximately RHS Yellow Green Group 144 C).

Flesh.—Ripens. — Evenly. Texture. — Firm, and dense. Fibers. — Few, small, and tender. Aroma. — Very slight. Eating Quality. — Very good. Flavor. — Considered sweet and mildly acidic. The flavor is considered both pleasant and balanced. Juice. — Moderate. Brix. — About 12.0 degrees. This characteristic varies slightly with the number of fruit per tree, prevailing cultural practices, and the surrounding climatic conditions. Flesh Color. — Pale yellow, (approximately RHS Yellow Orange Group 17 A) and occasionally areas of a red purple (RHS Red Group 53 B).

Stone:

Type.—Clingstone.

Size.—Considered medium for the variety.

Length.—Average, about 27.0 to about 29.0 millimeters.

Width.—Average, about 22.0 to about 25.0 millimeters.

Diameter.—Average, about 16.0 to 20.0 millimeters.

Form.—Obovoid.

Base.—The stone is usually rounded; however it may vary occasionally from rounded to straight.

Apex.—Shape. — The stone apex is raised and has a short tip.

Stone surface.—Surface Texture — Irregularly furrowed toward the apex, and pitted toward the base. The stone exhibits substantial pitting laterally. Substantial grooving over the apical shoulders is evident. Surface pitting is prominent generally, and more frequently, it is present basally. Ridges. — The surface texture varies from sharp to rounded. Ventral Edge. — Width — Considered medium, and having a dimension of approximately 4.0 to 6.0 millimeters at the mid-suture. The wings are most prominent over the suture line. Dorsal Edge. — Shape. — Moderately flat, and wide, relative to the ventral edge and narrowly grooved. The dorsal edge is moderately eroded over the apical shoulder.

Stone color.—The color of the dry stone is a dull red, (approximately RHS Greyed Red Group 179 A).

Tendency to split.—Splitting has not been noted.

Kernel.—Size. — Length about 15.0 mm. Width — about 12.0 mm. Thickness about — 4.0 millimeters. Form. — Obovoid. Pellicle. — Pubescent. Color. — (RHS Greyed Orange Group 164 A).

Use.—The subject variety 'Burnecteight' is considered to be a Nectarine tree of the very late season of maturity, and which produces fruit which are considered very firm, attractively colored, and which are useful for both local and long distance shipping.

Keeping quality.—Excellent. Fruit has stored well up to 21 days after harvest at 1.0 degree Celsius.

Shipping quality.—Good. Fruit showed minimal bruising of the flesh or skin damage after being subjected to normal harvesting and packing procedures.

Resistance to insects and disease.—No particular susceptibilities were noted. The present variety has not been tested to detect for any susceptibilities or resistances to any known plant and/or fruit diseases.

Although the new variety of nectarine tree possesses the described characteristics when grown under the ecological conditions prevailing near Fowler, Calif., in the central part of the San Joaquin Valley of California, it should be understood that variations of the usual magnitude and characteristics incident to changes in growing conditions, fertilization, pruning, pest control and horticultural management are to be expected.

Having thus described and illustrated our new variety nectarine tree, what we claim is new and desire to secure by plant letters patent is:

1. A new distinct variety of nectarine tree substantially as illustrated and described, and which is characterized principally as to novelty by producing an attractively colored yellow-fleshed, clingstone nectarine which is mature for harvesting and shipment approximately September 15 to September 22 under the ecological conditions prevailing in the San Joaquin Valley of Central California.

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