



(12) **United States Plant Patent**
Zaiger et al.

(10) **Patent No.:** **US PP28,832 P2**
(45) **Date of Patent:** **Jan. 2, 2018**

(54) **NECTARINE TREE NAMED ‘AUGUST MOON’**

(50) Latin Name: *Prunus persica* var. *nucipersica*
Varietal Denomination: **August Moon**

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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 0 days.

(21) Appl. No.: **15/330,592**

(22) Filed: **Oct. 18, 2016**

(51) **Int. Cl.**
A01H 5/08 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./190**

(58) **Field of Classification Search**
USPC Plt./190
CPC A01H 5/0856; A01H 5/08; A01H 5/00
See application file for complete search history.

Primary Examiner — June Hwu

(57) **ABSTRACT**

A new and distinct variety of nectarine tree (*Prunus persica* var. *nucipersica*). The following features of the tree and its fruit are characterized with the tree budded on ‘Nemaguard’ Rootstock (non-patented), grown on Handford sandy loam soil with Storie Index rating 95, in USDA Hardiness Zone 9, near Modesto, Calif., with standard commercial fruit growing practices, such as pruning, thinning, spraying, irrigation and fertilization. Its novelty consist of the following combination of desirable features:

1. Tree having a vigorous, upright growth habit.
2. Tree being a regular and productive bearer of large size fruit.
3. Fruit with an attractive red skin color.
4. Fruit with good flavor and eating quality.
5. Clingstone fruit with firm, yellow flesh.

1 Drawing Sheet

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Botanical designation: *Prunus persica* var. *nucipersica*.
Variety denomination: ‘August Moon’.

BACKGROUND OF THE VARIETY

Field of the Invention

In the field of plant genetics, we conduct an extensive and continuing plant-breeding program including the organization and asexual reproduction of orchard trees, and of which plums, peaches, nectarines, apricots, cherries, almonds and interspecifics are exemplary. It was against this background of our activities that the present variety of nectarine tree was originated and asexually reproduced by us in our experimental orchard located near Modesto, Stanislaus County, Calif.

Prior Varieties

Among the existing varieties of nectarine trees, which are known to us, and mentioned herein, ‘Honey Diva’ Nectarine (U.S. Plant Pat. No. 15,291), ‘Honey Royale’ Nectarine (U.S. Plant Pat. No. 12,008) and the proprietary non-patented nectarine seedlings ‘380LN344’, ‘114LH46’ and ‘222LK299’.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

Not applicable.

ORIGIN OF THE VARIETY

The new and distinct variety of nectarine tree (*Prunus persica* var. *nucipersica*) was developed by us in our experi-

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mental orchard located near Modesto, Calif. from a first generation cross between our proprietary non-patented nectarine seedling selection ‘380LN344’ and ‘Honey Royale’ Nectarine (U.S. Plant Pat. No. 12,008). The seed parent (380LN344) originated as a first generation cross between our proprietary non-patented nectarine seedling selections ‘114LH46’ and ‘222LK299’. A large number of these first generation seedlings were planted and grown on their own root system, during which time we recognized the desirable tree and fruit characteristics of the present seedling and selected it in 2007 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2007 asexual reproduction of the new and distinct variety of nectarine tree was by budding to ‘Nemaguard’ Rootstock (non-patented), as performed by us in our experimental orchard located near Modesto, Calif., and shows that reproductions run true to the original tree and all characteristics of the tree and its fruit are established and transmitted through succeeding asexual propagations.

SUMMARY OF THE NEW VARIETY

The present new and distinct variety of nectarine tree (*Prunus persica* var. *nucipersica*) is of large size, vigorous, upright growth and a regular and productive bearer of large size, yellow flesh, clingstone fruit with good flavor and eating quality. The fruit is further characterized by having firm flesh and an attractive red skin color. In comparison to its proprietary non-patented nectarine seed parent ‘380LN344’ the fruit of the new variety is larger in size and

is approximately 24 days earlier in maturity. In comparison to its pollen parent 'Honey Royale' Nectarine (U.S. Plant Pat. No. 12,008) the fruit of the new variety is clingstone compared to freestone and is approximately 21 days later in maturity. In comparison to the commercial variety 'Honey Diva' Nectarine (U.S. Plant Pat. No. 15,291) the fruit of the new variety is larger in size and is approximately 12 days earlier in maturity.

DESCRIPTION OF THE PHOTOGRAPH

The accompanying color photographic illustration shows typical specimens of the foliage and fruit of the present new nectarine variety. The illustration shows the upper and lower surface of the leaves, an exterior and sectional view of a single fruit divided in its suture plane to show flesh color, pit cavity and the stone remaining in place. The photographic illustration was taken shortly after being picked (shipping ripe) from a 9 year old tree and the colors are as nearly true as is reasonably possible in a color representation of this type.

DESCRIPTION OF THE VARIETY

The following is a detailed botanical description of the new variety of nectarine tree, its flowers, foliage and fruit, as based on observations of 9 year old specimens grown near Modesto, Calif., with color in accordance with Munsell Book of Color published in 1958.

Tree:

Size.—Large, usually pruned to 3 to 3.5 meters in height and width for economical harvesting of fruit. Size varies with different cultural practices.

Vigor.—Vigorous, growth of 1.5 to 2 meters in height the first growing season. Varies slightly with type and fertility of soil, climatic conditions and cultural practices.

Form.—Upright, usually pruned to vase shape.

Branching habit.—Upright, crotch angle approximately 30°, increases with heavy crop load.

Productivity.—Productive, thinning and spacing of fruit necessary for desired market size fruit. Number of fruit set varies with climatic conditions during blooming period.

Bearer.—Regular, has had adequate fruit set 7 consecutive years. No alternate bearing observed.

Fertility.—Self fertile.

Density.—Medium dense, usually pruned to vase shape to increase air movement and sunlight to enhance fruit color and health of fruit wood.

Hardiness.—Hardy in all stone fruit growing areas of California. Tree grown in USDA Hardiness Zone 9. Winter chilling requirement approximately 800 hours at or below 45° F.

Trunk:

Size.—Large, average circumference 48.2 cm at 22.9 cm above ground on a 9 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—Varies from 7.5GY 2/4 to 5YR 2/4.

Branches:

Size.—Medium. Average circumference 18.5 cm at 1.2 meters above ground. Crotch angle approximately 30°, increases with heavy crop load.

Surface texture.—New growth relatively smooth. Mature growth medium rough, roughness increases with age.

Lenticels.—Average number 21 in a 25.8 square cm area. Average length 4.9 mm. Average width 2.1 mm. Color varies from 5YR 5/10 to 7.5YR 5/10.

Color.—New growth varies from 5GY 5/6 to 7.5GY 5/6. Mature growth varies from 5YR 3/4 to 5YR 3/2, varies with age of growth.

Leaves:

Size.—Large. Average length 103.7 mm. Average width 33.9 mm.

Form.—Lanceolate.

Apex.—Acuminate.

Base.—Cuneate.

Margin.—Serrate.

Thickness.—Medium.

Surface texture.—Upper surface relatively smooth, slight indentations over midrib and leaf veins. Lower surface relatively smooth, except for small ridges created by midrib and pinnate venation. Both upper and lower surfaces glabrous.

Petiole.—Average length 7.5 mm. Average width 1.5 mm. Longitudinally grooved. Surface — glabrous. Color varies from 5GY 5/6 to 5GY 6/6.

Glands.—Type — reniform. Size — medium to large. Average length 1.4 mm. Average diameter 1.0 mm. Number varies from 1 to 4, average number 2. Located primarily on base of leaf blade and upper portion of petiole. Color varies from 5YR 3/6 to 10YR 5/8.

Stipules.—Average number 2. Average length 4.0 mm. Edges — pectinate. Color varies from 5YR 3/6 to 2.5GY 6/6.

Color.—Upper surface varies from 5GY 3/6 to 7.5GY 3/4. Lower surface varies from 5GY 5/4 to 7.5GY 4/4. Midvein color varies from 2.5GY 9/2 to 2.5GY 8/2.

Flower buds:

Size.—Large. Average length 19.5 mm. Average diameter 11.8 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Medium dense.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 3.7 mm. Average width 1.5 mm. Surface — glabrous. Color varies from 10Y 7/6 to 2.5GY 7/6.

Color.—Varies from 5RP 8/6 to 7.5RP 7/8.

Flowers:

Blooming period.—Date of First Bloom Feb. 15, 2016. Date of Petal Fall Feb. 25, 2016, varies slightly with climatic conditions.

Size.—Large. Average height 21.8 mm. Average diameter 44.5 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — large. Average length 24.5 mm. Average width 20.9 mm. Petal apex — rounded. Petal base-truncate. Form — elliptical. Arrangement — overlapping. Margin — sinuate. Color varies from 5RP 8/4 to 7.5RP 8/4, fades with age of flower.

Sepals.—Normally 5, alternately arranged to petals. Size — large. Average length 6.5 mm. Average width 6.5 mm. Sepal apex — rounded to triangular. Margin — entire. Surface — upper surface glabrous,

lower surface pubescent. Color — upper surface varies from 2.5GY 5/8 to 5R 3/6. Lower surface varies from 2.5R 2/4 to 5R 2/4.

Stamens.—Average number per flower 48. Average filament length 15.9 mm. On average, the stamens are even with the height of the petals. Filament color varies from N 9.5/(white) to 5RP 6/8. Anther color varies from 7.5R 4/14 to 5Y 8/8.

Pollen.—Self fertile. Color varies from 2.5Y 7/10 to 5Y 7/10.

Pistil.—Number — normally one. Average length 20.6 mm. Position of stigma an average of 0.7 mm above anthers. Surface — glabrous. Color varies from 10Y 8/6 to 2.5GY 8/6.

Fragrance.—Wanting.

Color.—Varies from 5RP 8/4 to 5RP 7/6.

Pedicel.—Average length 4.5 mm. Average width 1.2 mm. Surface- glabrous. Color varies from 2.5GY 6/8 to 5GY 6/6.

Number flowers per flower bud.—Normally one.

Fruit:

Maturity when described.—Firm ripe and ready for consumption.

Date of first picking.—Aug. 1, 2016.

Date of last picking.—Aug. 11, 2016, varies slightly with climatic conditions.

Size.—Large. Average diameter axially 76.2 mm. Average transversely in suture plane 78.1 mm. Average weight 261.3 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.

Form.—Globose.

Suture.—Nearly smooth.

Ventral surface.—Nearly smooth.

Apex.—Slightly retuse.

Base.—Slightly retuse.

Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 11.3 mm. Average diameter 8.0 mm.

Stem:

Size.—Small to medium. Average length 9.1 mm. Average diameter 4.2 mm.

Color.—Varies from 10Y 6/8 to 2.5GY 6/8.

Flesh:

Ripens.—Evenly.

Texture.—Firm, meaty, crisp.

Fibers.—Few, small, tender.

Firmness.—Firm, comparable to other commercial nectarine varieties.

Aroma.—Slight.

Amydgalin.—Undetected.

Eating quality.—Good.

Flavor.—Good, having a good balance between acid and sugar.

Juice.—Moderate amount, enhances flavor.

Acidity.—Not available.

Brix.—Average Brix 12.0°, varies slightly with amount of fruit per tree and climatic conditions.

Color.—Varies from 2.5Y 8.5/8 to 5Y 8/8 with 7.5R 3/12 anthocyanin color bleeding from pit cavity.

Pit cavity.—Average length 40.3 mm. Average width 27.1 mm. Average depth 11.3 mm. Color varies from 2.5Y 8/10 to 7.5R 3/10.

Skin:

Thickness.—Medium.

Surface.—Smooth.

Pubescence.—Wanting.

Tendency to crack.—None.

Color.—Ground color varies from 2.5Y 9/4 to 5Y 8/8. Overspread with 7.5R 3/12 to 7.5R 2/8.

Tenacity.—Tenacious to the flesh.

Astringency.—None.

Stone:

Type.—Clingstone, strong adherence to flesh.

Size.—Large. Average length 39.3 mm. Average width 26.1 mm. Average thickness 20.5 mm.

Form.—Ovoid.

Base.—Flat.

Apex.—Pointed. Average length 2.1 mm.

Surface.—Pitted throughout, pits vary from rounded to elongated.

Sides.—Unequal, one side extending further outward from suture plane.

Ridges.—Small, narrow ridges extending from base toward apex.

Tendency to split.—None.

Color.—Varies from 5YR 5/6 to 7.5YR 5/6 when dry.

Kernel:

Size.—Large. Average length 20.6 mm. Average width 11.8 mm. Average depth 7.3 mm.

Form.—Ovate.

Viability.—Viable, complete embryo development.

Skin color.—Varies from 5Y 8.5/6 to 5Y 8/8.

Use:

Dessert.—Market — local and long distance.

Keeping quality: Good, held firm in cold storage 3 weeks at 38° to 42° F. without shriveling, internal breakdown of flesh or appreciable loss of flavor.

Shipping quality: Good, showed minimal skin scarring or flesh bruising during picking, packing and shipping trials.

Plant/fruit disease resistance/susceptibility: No specific testing for relative plant/fruit disease resistance/susceptibility has been designed. Under close observation during planting, growing, and harvesting of fruit, under normal cultural and growing conditions near Modesto, Calif., no particular plant/fruit disease resistance or susceptibility has been observed. Any variety or selection observed during indexing of plant characteristics with abnormal fungus, bacterial, virus or insect susceptibility is destroyed and eliminated from our breeding program. No atypical resistances/susceptibilities have been noted under normal cultural practices.

The present new variety of nectarine tree, its flowers, foliage and fruit herein described may vary in slight detail due to climate, soil conditions and cultural practices under which the variety may be grown. The present description is that of the variety grown under the ecological conditions prevailing near Modesto, Calif.

The invention claimed is:

1. A new and distinct variety of nectarine tree, substantially as illustrated and described.

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