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Zaiger et al.

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(54) **NECTARINE TREE NAMED 'ERIC'S BLISS'**

(50) Latin Name: ***Prunus persica* var. *nucipersica***
Varietal Denomination: **Eric's Bliss**

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See application file for complete search history.

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(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 medium size fruit.
3. Clingstone fruit with firm, white flesh.
4. Fruit having an attractive, dark red skin color.
5. Fruit with good flavor and eating quality.

1 Drawing Sheet

Botanical designation: *Prunus persica* var. *nucipersica*.
Variety denomination: 'Eric's Bliss'.

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, 'Zee Fire' Nectarine (U.S. Plant Pat. No. 13,501), 'Polar Light' Nectarine (U.S. Plant Pat. No. 16,858) and the proprietary non-patented nectarine seedling selections '60ZB345', '60Z158', '55ZH874' and '56Z614'.

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 experimental orchard located near Modesto, Calif. from a first generation cross between the proprietary non-patented nectarine seedling selections with the field identification numbers '60ZB345' and '55ZH874'. The proprietary non-patented nectarine seed parent '60ZB345' originated as an open pollinated nectarine seedling from the proprietary non-patented nectarine seedling '60Z158'. The proprietary non-patented nectarine pollen parent '55ZH874' originated from crosses between our proprietary non-patented nectarine seedling '56Z614' and 'Polar Light' Nectarine (U.S. Plant Pat. No. 16,858). A large number of these first generation crosses were planted and grown on their own root system. Under close and careful observation, we recognized the desirable tree and fruit characteristics of the present seedling and selected it in 2010 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2010 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 medium to large size, white flesh, clingstone fruit. The fruit

is further characterized by its good flavor and eating quality and having good storage and shipping ability. In comparison to its proprietary non-patented nectarine seed parent (60ZB345) the fruit of the new variety has a more attractive red skin color, is larger in size and is approximately 13 days earlier in maturity. In comparison to its proprietary non-patented nectarine pollen parent (55ZH874) the fruit of the new variety is larger in size and is approximately 16 days earlier in maturity. In comparison to the commercial variety 'Zee Fire' Nectarine (U.S. Plant Pat. No. 13,501) the fruit of the new variety has white flesh compared to yellow.

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 an 8 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 8 year old specimens grown near Modesto, Calif., with color in accordance with Munsell Book of Color published in 1958.

Tree:

Size.—Medium, 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 25°, 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 6 consecutive years. No alternate bearing observed.

Fertility.—Self fertile.

Density.—Medium dense, usually pruned to vase shape to increase air movement and sunlight to center of tree 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 400 hours at or below 45° F.

Trunk:

Size.—Medium, average circumference 66.0 cm at 22.9 cm above ground on a 8 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—Varies from 10YR 4/2 to 10YR 3/2.

Branches:

Size.—Medium. Average circumference 14.0 cm at 1.2 meters above ground. Crotch angle approximately 25°, increases with heavy crop load.

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

Lenticels.—Average number 27 in a 25.8 square cm area. Average length 4.3 mm. Average width 1.9 mm. Color varies from 10YR 5/8 to 10YR 5/6.

Color.—New growth varies from 5GY 7/6 to 2.5GY 6/6. Mature growth varies from 10YR 4/6 to 10YR 3/4, varies with age of growth.

Leaves:

Size.—Large. Average length 117.8 mm. Average width 40.0 cm.

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 9.0 mm. Average width 1.6 mm. Longitudinally grooved. Surface — glabrous. Color varies from 5GY 7/6 to 5GY 6/6.

Glands.—Type — reniform. Size — small. Average length 1.0 mm. Average diameter 1.0 mm. Average number 2, varies from 1 to 3. Located primarily on the base of leaf blade and upper portion of petiole. Color varies from 5GY 6/6 to 5GY 7/6.

Stipules.—Average number 2. Average length 6.0 mm. Edges — pectinate. Color varies from 5GY 6/6 to 5GY 7/6.

Color.—Upper surface varies from 2.5GY 3/4 to 5GY 3/4. Lower surface varies from 2.5GY 5/4 to 5GY 5/4. Midvein color varies from 10Y 8/2 to 10Y 7/4.

Flower buds:

Size.—Large. Average length 20.2 mm. Average diameter 10.7 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Dense.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 4.0 mm. Average width 0.9 mm. Surface — glabrous. Color varies from 5GY 7/6 to 5GY 5/6.

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

Flowers:

Blooming period.—Date of First Bloom Feb. 7, 2018. Date of Petal Fall Feb. 17, 2018, varies slightly with climatic conditions.

Size.—Large. Average height 18.8 mm. Average diameter 39.6 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — large. Average length 18.9 mm. Average width 16.4 mm. Petal apex — rounded. Petal base — truncate. Form — ovate. Arrangement — overlapping. Margin — sinuate. Color varies from 5RP 7/6 to 7.5RP 7/6, fades with age of flower.

Sepals.—Normally 5, alternately arranged to petals. Size — large. Average length 5.7 mm. Average width

5.7 mm. Sepal apex — rounded. Shape — ovate. Margin — entire. Surface — upper surface glabrous, lower surface pubescent. Color — upper surface varies from 5GY 5/6 to 2.5R 3/6. Lower surface varies from 2.5R 3/2 to 2.5R 3/3.

Stamens.—Average number per flower 53. Average filament length 14.5 mm. On average, the stamens are above the height of the petals. Filament color varies from N 9.5/(white) to 5RP 8/4. Anther color varies from 7.5R 3/2 to 7.5R 3/10.

Pollen.—Self fertile. Color varies from 2.5Y 7/12 to 5Y 7/10.

Pistil.—Number — normally one. Average length 17.2 mm. Position of stigma an average of 1.1 mm below anthers. Surface — glabrous. Color varies from 10Y 8/6 to 2.5GY 8/6.

Fragrance.—Slight.

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

Pedicel.—Average length 4.3 mm. Average width 1.0 mm. Color varies from 2.5GY 6/8 to 5GY 5/6.

Number flowers per flower bud.—Normally one.

Fruit:

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

Date of first picking.—May 23, 2018.

Date of last picking.—Jun. 2, 2018, varies slightly with climatic conditions.

Size.—Medium to large. Average diameter axially 66.4 mm. Average transversely in suture plane 70.1 mm. Average weight 190.3 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.

Form.—Globose.

Suture.—Lipped.

Ventral surface.—Slightly lipped.

Apex.—Slightly retuse.

Base.—Retuse.

Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 6.1 mm. Average diameter 6.6 mm.

Stem:

Size.—Small to medium. Average length 10.6 mm. Average diameter 3.2 mm.

Color.—Varies from 5GY 6/8 to 5GY 5/8.

Flesh:

Ripens.—Evenly.

Texture.—Firm, meaty.

Fibers.—Few, small, tender.

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

Aroma.—Moderate.

Amydgalin.—Undetected.

Eating quality.—Good.

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

Juice.—Moderate amount, enhances flavor.

Acidity.—Not available.

Brix.—Average Brix 15.2°, varies slightly with amount of fruit per tree and climatic conditions.

Color.—Varies from 5Y 9/2 to 7.5Y 9/2.

Pit cavity.—Average length 37.5 mm. Average width 28.2 mm. Average depth 12.8 mm. Color varies from 5Y 8.5/6 to 5Y 8/4.

Skin:

Thickness.—Medium.

Surface.—Smooth.

Pubescence.—Wanting.

Tendency to crack.—None.

Color.—Ground color varies from 5Y 9/4 to 7.5Y 9/2. Overspread with 5R 3/8 to 7.5R 3/10. Small areas of randomly spaced ground color showing through giving a speckled appearance.

Tenacity.—Tenacious to the flesh.

Astringency.—Slight to none.

Stone:

Type.—Clingstone, strong adherence to flesh.

Size.—Large. Average length 36.5 mm. Average width 27.2 mm. Average thickness 23.5 mm.

Form.—Obovoid.

Base.—Flat.

Apex.—Pointed. Average length 2.2 mm.

Surface.—Pitted throughout, pits vary from round 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 to very slight.

Color.—Varies from 7.5YR 6/8 to 10YR 6/8 when dry.

Kernel:

Size.—Large. Average length 18.3 mm. Average width 8.3 mm. Average depth 10.6 mm.

Form.—Ovate.

Viability.—Partially viable, incomplete embryo development.

Skin color.—Varies from 7.5Y 9/2 to 7.5Y 9/4.

Use:

Dessert.—Market — local and long distance.

Keeping quality: Good, held firm in cold storage 2 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 (*Prunus persica* var. *nucipersica*), substantially as illustrated and described.

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