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Zaiger et al.

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(54) **NECTARINE TREE NAMED ‘SPRING BLAZE’**

(50) Latin Name: *Prunus persica* var. *nucipersica*
Varietal Denomination: **Spring Blaze**

(71) Applicants: **Gary Neil Zaiger**, Modesto, CA (US);
Leith Marie Gardner, Modesto, CA (US);
Grant Gene Zaiger, Modesto, CA (US)

(72) Inventors: **Gary Neil Zaiger**, Modesto, CA (US);
Leith Marie Gardner, Modesto, CA (US);
Grant Gene Zaiger, Modesto, CA (US)

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See application file for complete search history.

Primary Examiner — Keith O. Robinson

(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 to large size fruit.
3. Fruit having an attractive, dark red skin color.
4. Fruit with very 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: ‘Spring Blaze’.

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), ‘Red Roy’ Nectarine (U.S. Plant Pat. No. 12,057) and the proprietary non-patented nectarine seedling selections ‘396LN413’, ‘57Z707’, ‘10ZP602’, ‘173LX41’ and ‘182LX184’.

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-

mental orchard located near Modesto, Calif. from a first generation cross between the proprietary non-patented nectarine seedling selections with the field identification numbers ‘396LN413’ and ‘10ZP602’. The proprietary non-patented nectarine seed parent (396LN413) originated from a cross between ‘Red Roy’ Nectarine (U.S. Plant Pat. No. 12,057) and the proprietary non-patented nectarine seedling selection ‘57Z707’. The proprietary non-patented nectarine pollen parent (10ZP602) originated from a cross between the proprietary non-patented nectarine seedling selections ‘173LX41’ and ‘182LX184’. A large number of these first generation seedlings were budded onto older, established trees of ‘Nemaguard’ Rootstock (non-patented) to accelerate rapid fruit production. Under close and careful observation we recognized the desirable tree and fruit characteristics of the present seedling and selected it in 2014 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2014 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, clingstone fruit with very good flavor and eating quality. The fruit is further characterized by having firm, yellow flesh and attractive dark red skin color. In comparison to its proprietary non-patented nectarine seed parent '396LN413' the fruit of the new variety is larger in size and is approximately 20 days earlier in maturity. In comparison to its proprietary non-patented nectarine pollen parent '10ZP602' the fruit of the new variety is larger in size and the tree is more precocious setting more fruit yearly. In comparison to the commercial variety 'Zee Fire' Nectarine (U.S. Plant Pat. No. 13,501), the fruit of the new variety is approximately 22 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 5 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 5 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 35°, 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 4 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 200 hours at or below 45° F.

Trunk:

Size.—Medium, average circumference 35.6 cm at 22.9 cm above ground on a 5 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—Varies from 7.5Y 5/2 to 10Y 4/2.

Branches:

Size.—Medium. Average circumference 8.9 cm at 1.2 meters above ground. Crotch angle approximately 35°, increases with heavy crop load.

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

Lenticels.—Average number 24 in a 25.8 square cm area. Average length 4.0 mm. Average width 1.6 mm. Color varies from 10YR 4/6 to 10YR 5/6.

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

Leaves:

Size.—Medium. Average length 127.3 mm. Average width 37.4 mm.

Form.—Lanceolate.

Apex.—Acuminate.

Base.—Cuneate.

Margin.—Crenate.

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 8.7 mm. Average width 1.6 mm. Longitudinally grooved. Surface — glabrous. Color varies from 2.5GY 6/6 to 2.5GY 5/8.

Glands.—Type — reniform. Size — medium. Average length 1.6 mm. Average diameter 0.8 mm. Average number 2, varies from 2 to 4. Located primarily on the base of the leaf blade and upper portion of the petiole. Color varies from 10Y 5/8 to 10Y 6/8.

Stipules.—Average number 2. Average length 6.9 mm. Edges — pectinate. Color varies from 10Y 6/8 to 2.5GY 7/6.

Color.—Upper surface varies from 5GY 4/6 to 5GY 3/6. Lower surface varies from 5GY 5/4 to 5GY 5/6. Midvein color varies from 2.5GY 7/6 to 10Y 7/6.

Flower buds:

Size.—Large. Average length 18.1 mm. Average diameter 9.7 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Very dense.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 3.6 mm. Average width 1.1 mm. Surface- glabrous. Color varies from 5GY 6/8 to 5GY 5/8.

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

Flowers:

Blooming period.—Date of First Bloom Jan. 30, 2017. Date of Petal Fall Feb. 9, 2017, varies slightly with climatic conditions.

Size.—Large, showy. Average height 19.9 mm. Average diameter 34.0 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — large. Average length 18.2 mm. Average width 15.6 mm. Petal apex — rounded. Petal base-truncate. Form — obovate. Arrangement — slightly overlapping. Margin — sinuate. Color varies from 5RP 7/6 to 5RP 8/4, fades with age of flower.

Sepals.—Normally 5, alternately arranged to petals. Size — large. Average length 5.8 mm. Average width

5.7 mm. Sepal apex — rounded to triangular. Shape — ovate. Margin — entire. Surface — upper surface glabrous, lower surface pubescent. Color — upper surface varies from 5GY 5/6 to 5GY 4/8. Lower surface varies from 5R 2/4 to 7.5R 2/6.

Stamens.—Average number per flower 53. Average filament length 14.2 mm. On average, the stamens are above the height of the petals. Filament color varies from N 9.5/(white) to 5RP 6/8. Anther color varies from 7.R 3/10 to 5Y 8/8.

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

Pistil.—Number — normally one. Average length 17.4 mm. Position of stigma an average of 1.5 mm below anthers. Surface — glabrous. Color varies from 10Y 8/4 to 2.5GY 7/6.

Fragrance.—Moderate.

Flower color.—Varies from 5RP 7/6 to 5RP 7/8.

Pedicel.—Average length 5.1 mm. Average width 1.2 mm. Color varies from 2.5GY 6/8 to 5GY 6/8.

Number flowers per flower bud.—Normally one.

Fruit:

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

Date of first picking.—Apr. 28, 2017.

Date of last picking.—May 8, 2017, varies slightly with climatic conditions.

Size.—Medium to large. Average diameter axially 64.8 mm. Average transversely in suture plane 65.2 mm. Average weight 161.3 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.

Form.—Globose.

Suture.—Slightly lipped.

Ventral surface.—Slightly lipped.

Apex.—Slightly retuse.

Base.—Flat.

Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 5.5 mm. Average diameter 7.9 mm.

Stem:

Size.—Small. Average length 8.6 mm. Average diameter 3.4 mm.

Color.—Varies from 2.5GY 5/8 to 5GY 5/8.

Flesh:

Ripens.—Slightly early at apex.

Texture.—Firm, meaty.

Fibers.—Few, small, tender.

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

Aroma.—Slight.

Amygdalin.—Undetected.

Eating quality.—Very good.

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

Juice.—Moderate amount, enhances flavor.

Acidity.—Not available.

Brix.—Average Brix 12.2°, varies slightly with amount of fruit per tree and climatic conditions.

Color.—Varies from 5Y 8.5/6 to 5Y 8.5/8.

Pit cavity.—Average length 39.0 mm. Average width 23.0 mm. Average depth 10.2 mm. Color varies from 5Y 8.5/8 to 7.5Y 8/8.

Skin:

Thickness.—Medium.

Surface.—Smooth.

Pubescence.—Wanting.

Tendency to crack.—None.

Color.—Ground color varies from 5Y 8.5/8 to 7.5Y 7/8. Overspread with 7.5R 3/10 to 7.5R 2/6.

Tenacity.—Tenacious to the flesh.

Astringency.—None.

Stone:

Type.—Clingstone, strong adherence to flesh.

Size.—Large. Average length 37.7 mm. Average width 22.2 mm. Average thickness 19.9 mm.

Form.—Ovoid.

Base.—Flat.

Apex.—Rounded.

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.—Very slight.

Color.—Varies from 5YR 4/6 to 7.5YR 5/6 when dry.

Kernel:

Size.—Medium to large. Average length 18.8 mm. Average width 12.3 mm. Average depth 5.2 mm.

Form.—Ovoid.

Viability.—Partially viable, incomplete embryo development.

Skin color.—Varies from 7.5Y 9/2 to 10Y 9/2.

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.

