



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

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(54) **PEACH TREE NAMED ‘MIA SNOW’**

(50) Latin Name: *Prunus persica*
Varietal Denomination: **Mia Snow**

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See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct variety of peach tree (*Prunus persica*). 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 very good flavor and eating quality.
5. Freestone fruit with firm, white flesh.

1 Drawing Sheet

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Botanical designation: *Prunus persica*.
Variety denomination: ‘Mia Snow’.

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 peach 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 peach trees, which are known to us, and mentioned herein, ‘Glacier’ Peach (U.S. Plant Pat. No. 11,868) and the proprietary non-patented peach seedling selections ‘378LU435’, ‘56B484’, ‘375LN520’, ‘225LP158’, ‘155LT581’ and ‘162LX30’.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

Not applicable.

ORIGIN OF THE VARIETY

The new and distinct variety of peach tree (*Prunus persica*) was developed by us in our experimental orchard

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located near Modesto, Calif. from a first generation cross between our proprietary non-patented peach seedling selections ‘378LU435’ and ‘56B484’. The seed parent (378LU435) originated as a first generation cross between the non-patented proprietary peach seedling selections ‘375LN520’ and ‘225LP158’. The pollen parent (56B484) originated as a first generation cross between the proprietary non-patented peach seedling selections ‘155LT581’ and ‘162LX30’. A large number of these first generation crosses were planted and grown on their own root system, during which time we recognized the desirable fruit and tree characteristics of the present seedling and selected it in 2013 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2013 asexual reproduction of the new and distinct variety of peach 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 peach tree (*Prunus persica*) is of large size, vigorous, upright growth and a regular and productive bearer of large size, white flesh, freestone fruit with very good flavor and eating quality. The fruit is further characterized by having firm flesh and attractive red skin color. In comparison to its proprietary non-patented peach seed parent ‘378LU435’ the fruit of the new

variety is approximately 15 days later in maturity and has better flavor. In comparison to its proprietary non-patented peach pollen parent '56B484' the fruit of the new variety is approximately 13 days earlier in maturity and has white flesh compared to yellow. In comparison to the commercial variety 'Glacier' Peach (U.S. Plant Pat. No. 11,868) the fruit of the new variety is approximately 28 days later in maturity.

DESCRIPTION OF THE PHOTOGRAPH

The accompanying color photographic illustration shows typical specimens of the foliage and fruit of the present new peach 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 4 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 peach tree, its flowers, foliage and fruit, as based on observations of 4 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 3 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 53.3 cm at 22.9 cm above ground on a 4 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—7.5YR 2/2.

Branches:

Size.—Medium. Average circumference 16.0 cm at 1.2 meters above ground. Crotch angle approximately 35°, increases with heavy crop load.

Leaves:

Size.—Large. Average length 156.1 mm. Average width 35.6 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 12.2 mm. Average width 1.6 mm. Longitudinally grooved. Surface — glabrous. Color 2.5GY 6/6.

Glands.—Type — reniform. Size — small. Average length 1.0 mm. Average diameter 0.8 mm. Number varies from 1 to 3, average number 2. Located primarily on the upper portion of the petiole and the base of leaf blade. Color 2.5GY 6/6.

Stipules.—None present at time of measurements.

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

Flower buds:

Size.—Large. Average length 18.4 mm. Average diameter 11.5 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Dense.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 3.8 mm. Average width 1.5 mm. Surface — glabrous. Color varies from 10Y 6/6 to 2.5GY 6/6.

Flowers:

Blooming period.—Date of First Bloom Mar. 4, 2017. Date of Petal Fall Mar. 14, 2017, varies slightly with climatic conditions.

Size.—Large. Average height 20.0 mm. Average diameter 46.3 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — large. Average length 24.5 mm. Average diameter 21.1 mm. Petal apex rounded to ovate. Petal base truncate. Form — elliptical. Arrangement — overlapping. Margin — sinuate. Color varies from 5RP 6/8 to 2.5RP 8/6, fades with age.

Sepals.—Number — normally 5, alternately arranged to petals. Size — large. Average length 5.9 mm. Average width 6.2 mm. Shape — ovate. Apex ovate to triangular. Margin — entire. Color — upper surface varies from 2.5GY 4/6 to 2.5GY 5/6. Lower surface varies from 5R 2/6 to 7.5R 2/4. Surface — upper surface glabrous, lower surface pubescent.

Stamens.—Average number per flower 41. Average filament length 15.4 mm. On average, the stamens are below the height of the petals. Filament color varies from N 9.5/(white) to 2.5 RP 5/8. Anther color varies from 5R 3/8 to 5Y 8/4.

Pollen.—Self fertile. Color varies from 2.5Y 6/8 to 2.5Y 6/10.

Pistil.—Number — normally one. Average length 19.1 mm. Surface — pubescent. Color varies from 5Y 8/8 to 7.5Y 7/8.

Fragrance.—Slight.

Color.—Varies from 5RP 8/4 to 5RP 7/10.
Pedicel.—Average length 4.1 mm. Average width 1.7 mm. Color varies from 2.5GY 7/8 to 2.5GY 6/8.
Number flowers per flower bud.—Normally one.

Fruit: 5
Maturity when described.—Firm ripe and ready for consumption.
Date of first picking.—Aug. 9, 2017.
Date of last picking.—Aug. 19, 2017, varies slightly with climatic conditions. 10
Size.—Large. Average diameter axially 79.0 mm. Average transversely in suture plane 85.8 mm. Average weight 322.0 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions. 15
Form.—Globose.
Suture.—Nearly smooth to slightly lipped.
Ventral surface.—Nearly smooth to slightly lipped.
Apex.—Rounded to slight tip.
Base.—Retuse.
Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 15.0 mm. Average diameter 8.6 mm.

Stem: 20
Size.—Small to medium. Average length 9.6 mm. Average width 4.1 mm.
Color.—Varies from 10Y 6/6 to 2.5GY 6/6.

Flesh: 25
Ripens.—Evenly.
Texture.—Firm, meaty, crisp.
Fibers.—Few, small, tender.
Firmness.—Very good, comparable to other commercial peach varieties.
Aroma.—Slight.
Amygdalin.—Undetected. 30
Eating quality.—Very good.
Flavor.—Very good, with a sweet sub-acid flavor.
Juice.—Moderate amount, enhances flavor.
Acidity.—Not available.
Brix.—Average Brix 13.4°, varies slightly with amount of fruit per tree and climatic conditions. 40
Color.—Varies from N 9.5/(white) to 10Y 9/2.
Pit cavity.—Average length 42.1 mm. Average width 31.2 mm. Average depth 13.6 mm. Color varies 5R 3/10 to 5R 3/8. 45

Skin: 50
Thickness.—Medium.
Surface.—Smooth.
Pubescence.—Moderate amount, short in length.
Tendency to crack.—None.
Color.—Ground color varies from 5Y 8.5/4 to 5Y 8/4. Overspread with 5R 3/6 to 7.5R 4/8.

Tenacity.—Tenacious to the flesh.
Astringency.—Undetected.

Stone:
Type.—Freestone, weak to medium adherence to flesh.
Size.—Large. Average length 39.1 mm. Average width 28.2 mm. Average thickness 23.2 mm.
Form.—Obovoid.
Base.—Flat.
Apex.—Pointed. Average length 2.9 mm.
Surface.—Pitted throughout, pits vary from round to elongated.
Sides.—Unequal, one side extending further from suture plane.
Ridges.—Relatively smooth, extending from base to apex.
Tendency to split.—None.
Color.—Varies from 10R 3/6 to 10R 2/4 when dry.

Kernel:
Size.—Medium to large. Average length 20.7 mm. Average width 13.2 mm. Average depth 7.0 mm.
Form.—Ovate.
Viability.—Viable, complete embryo development.
Skin color.—Varies from 2.5Y 8.5/6 to 2.5Y 8/6.

Use: Dessert.
Market.—Local and long distance. 25

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 peach 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. 35
The invention claimed is:
1. A new and distinct variety of peach tree, substantially as illustrated and described. 50

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