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Zaiger et al.

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(54) **PEACH TREE NAMED 'MAZEE'**

(50) Latin Name: ***Prunus persica***
Varietal Denomination: **Mazee**

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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 with vigorous, upright growth.
2. Regular and productive bearer of large size fruit.
3. Fruit with very good flavor and eating quality.
4. Fruit with attractive red skin color.
5. Having a winter chilling requirement of 250 hours at or below 45° F.

1 Drawing Sheet

Botanical designation: *Prunus persica.*
Variety denomination: 'Mazee'.

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, 'Super Lady' Peach (U.S. Plant Pat. No. 15,578), 'Super Zee' Peach (U.S. Plant Pat. No. 17,874) and the non-patented proprietary peach seedling selections '390LU304', '53ZH1029', '211LK116' and '7LL75'.

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

located near Modesto, Calif. as a first generation cross between our proprietary non-patented peach seedlings '390LU304' and '53ZH1029'. The seed parent (390LU304) originated from the cross of our non-patented peach seedling selections with the field identification numbers '211LK116' and '7LL75'. The pollen parent (53ZH1029) was developed from the cross of 'Super Zee' Peach (U.S. Plant Pat. No. 17,874) and 'Super Lady' Peach (U.S. Plant Pat. No. 15,578). A large number of these first generation seedlings 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 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 variety of peach tree (*Prunus persica*) is of large size, vigorous, upright growth and a regular and productive bearer of large size, yellow flesh, clingstone fruit with very good flavor and eating quality. The fruit is further characterized by its attractive red skin color and good handling and storage quality. In comparison to its seed

parent (390LU304) the fruit of the new variety is larger in size. In comparison to its pollen parent (53ZH1029) the fruit of the new variety has a lower winter chilling requirement and is approximately 4 days earlier in maturity. In comparison to the commercial variety 'Super Zee' Peach (U.S. Plant Pat. No. 17,874) the fruit of the new variety is larger in size, has a higher degree of Brix and is approximately 4 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 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 peach 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 and width 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 250 hours at or below 45° F.

Trunk:

Size.—Large, average circumference 55.9 cm at 25.4 cm above ground on a 5 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age.

Color.—Varies from 10YR 4/2 to 2.5Y 4/2.

Branches:

Size.—Medium. Average circumference 16.1 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 22 in a 25.8 square cm area. Average length 4.2 mm. Average width 1.8 mm. Color varies from 7.5YR 6/12 to 10YR 6/12.

Color.—New growth varies from 2.5GY 6/6 to 5GY 6/6. Mature growth varies from 10YR 4/2 to 2.5Y 3/4, varies with age of growth.

Leaves:

Size.—Medium to large. Average length 145.3 mm. Average width 45.1 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 6.3 mm. Average width 1.7 mm. Longitudinally grooved. Surface — glabrous. Color varies from 5GY 6/6 to 7.5GY 5/6.

Glands.—Eglandular.

Stipules.—Average number 2. Average length 7.3 mm. Edges pectinate. Color varies from 2.5GY 7/8 to 5GY 7/8.

Color.—Upper surface varies from 7.5GY 4/8 to 7.5GY 3/6. Lower surface varies from 7.5GY 4/6 to 10GY 5/6. Midvein color varies from 2.5GY 9/2 to 2.5GY 8/4.

Flower buds:

Size.—Large. Average length 16.7 mm. Average diameter 10.8 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Dense.

Form.—Conical, becoming elongated just before opening.

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

Color.—Varies from 5RP 8/6 to 7.5RP 5/12.

Flowers:

Blooming period.—Date of First Bloom Feb. 4, 2014. Date of Petal Fall Feb. 14, 2014, varies slightly with climatic conditions.

Size.—Large, showy. Average height 20.3 mm. Average diameter 46.7 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — large. Average length 22.1 mm. Average width 20.1 mm. Form — ovate. Petal apex — rounded. Petal base — truncate. Margin — sinuate. Arrangement — free. Both upper and lower surfaces glabrous. Color varies from 5RP 8/4 to 5RP 7/6.

Sepals.—Normally 5, alternately arranged to petals. Size — large. Average length 6.1 mm. Average width 6.2 mm. Shape — ovate, apex rounded to triangular. Margin — entire. Color — upper surface varies from 5GY 5/6 to 5R 2/4. Lower surface varies from 5R 2/2 to 7.5R 2/2. Surface — upper surface glabrous, lower surface pubescent.

Stamens.—Average number per flower 42. On average, the stamens are equal to the height of the petals.

Filament color varies from N 9.5/ (white) to 5RP 7/6, depending on age of flower. Anther color varies from 7.5R 4/12 to 7.5R 3/12.

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

Pistil.—Normally one. Average length 17.7 mm. Position of stigma an average of 1.7 mm below the anthers. Surface — pubescent. Color varies from 10Y 8/4 to 2.5GY 8/6.

Fragrance.—Slight.

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

Pedicel.—Average length 5.1 mm. Average width 1.2 mm. Color varies from 2.5GY 5/6 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.—Apr. 30, 2014.

Date of last picking.—May 10, 2014, varies slightly with climatic conditions.

Size.—Large. Average diameter axially 67.2 mm. Average transversely in suture plane 69.2 mm. Average weight 178.9 grams, varies slightly with fertility of soil, amount of thinning and climatic conditions.

Form.—Globose.

Suture.—Nearly smooth, extends from base to apex.

Ventral surface.—Smooth to very slightly lipped.

Apex.—Retuse.

Base.—Retuse.

Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 6.2 mm. Average diameter 6.0 mm.

Stem:

Size.—Small to medium. Average length 8.3 mm. Average diameter 3.2 mm.

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

Flesh:

Ripens.—Evenly to very slightly earlier at the apex.

Texture.—Firm, meaty.

Fibers.—Few, small, tender.

Firmness.—Good, comparable to other commercial varieties.

Aroma.—Moderate.

Amydgalin.—Undetected.

Eating quality.—Very good.

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

Juice.—Moderate amount, enhances flavor.

Acidity.—Not available.

Brix.—Average Brix 11.2°, varies slightly with amount of fruit per tree and climatic conditions.

Pit cavity.—Average length 34.7 mm. Average width 26.2 mm. Average depth 11.7 mm. Color varies from 5Y 8/8 to 5Y 7/10.

Color.—Varies from 2.5Y 8.5/4 to 5Y 8.5/6 with 5R 3/10 near the apex.

Skin:

Thickness.—Medium.

Surface.—Smooth.

Pubescence.—Moderate amount, short in length.

Tendency to crack.—None.

Color.—Ground color varies from 5Y 8/4 to 7.5Y 8.5/4. Overspread with 5R 3/8 to 7.5R 3/10.

Tenacity.—Tenacious to flesh.

Astringency.—Undetected.

Stone:

Type.—Clingstone. Adherence to flesh present, strong.

Size.—Medium to large. Average length 33.7 mm. Average width 25.2 mm. Average thickness 21.4 mm.

Form.—Ovoid.

Base.—Flat.

Apex.—Rounded to slightly pointed. Average length 0.8 mm.

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

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

Ridges.—Relatively smooth, extending from base to apex.

Tendency to split.—Slight.

Color.—Varies from 10YR 6/6 to 2.5Y 8/4 when dry.

Kernel:

Size.—Medium to large. Average length 8.4 mm. Average width 11.4 mm. Average depth 5.6 mm.

Form.—Ovoid.

Viability.—Partially viable, not all embryos fully developed.

Skin color.—Varies from 5Y 9/4 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 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.

The invention claimed is:

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

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