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Zaiger et al.

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- (54) **INTERSPECIFIC TREE NAMED ‘SWEET KASHEL’**
- (50) Latin Name: **Interspecific *Prunus* species**
Varietal Denomination: **Sweet Kashel**
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- (52) **U.S. Cl.**
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See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct variety of interspecific tree. 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, dark red flesh fruit.
3. Fruit with an attractive speckled red skin color.
4. Fruit with very good flavor and eating quality.
5. Fruit with good storage and shipping quality.

1 Drawing Sheet

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Botanical designation: Interspecific *Prunus* species.
Variety denomination: ‘Sweet Kashel’.

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 interspecific 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 interspecific trees, which are known to us, and mentioned herein, ‘Flavorosa’ Interspecific (U.S. Plant Pat. No. 10,285), ‘Flavor Supreme’ Interspecific (U.S. Plant Pat. No. 6,763) and our proprietary non-patented interspecific selections ‘74LW472’ and ‘30ZC361’.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

Not applicable.

ORIGIN OF THE VARIETY

The new and distinct variety of interspecific tree was developed by us in our experimental orchard located near

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Modesto, Calif. as an open pollinated seedling selection from our proprietary non-patented interspecific seedling ‘74LW472’. The seed parent ‘74LW472’ originated from a cross between our proprietary non-patented interspecific seedling ‘30ZC361’ and ‘Flavorosa’ Interspecific (U.S. Plant Pat. No. 10,285). A large number of these open pollinated seedlings were budded onto older established trees of ‘Nemaguard’ Rootstock (non-patented) to enhance earlier fruit production. Under close and careful observation we recognized the desirable tree and fruit characteristics of the present seedling and selected it in 2008 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2008 asexual reproduction of the new and distinct variety of interspecific 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 interspecific tree is of large size, vigorous, upright growth and a regular and productive bearer of large size, clingstone fruit. The fruit is further characterized by its attractive, speckled red skin color, dark red flesh and having very good flavor and eating quality. In comparison to its non-patented interspecific seed parent (74LW472) the fruit of the new variety has dark red flesh compared to light red flesh and is approximately 5 days

earlier in maturity. In comparison to the commercial variety 'Flavor Supreme' Interspecific (U.S. Plant Pat. No. 6,763) the fruit of the new variety is larger in size and is approximately 12 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 interspecific 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 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 interspecific 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.—Large, pruned to 3 to 3.5 meters in height and width for economical harvesting of fruit. Varies with different cultural practices.

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

Form.—Upright growth, 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, adequate fruit set 6 consecutive years. No alternate bearing observed.

Fertility.—Self-sterile, pollinator required.

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

Hardiness.—Hardy in all stone fruit growing areas of California. Tree grown in USDA Hardiness Zone 9. Winter chilling requirement approximately 700 hours at or below 45° F.

Trunk:

Size.—Large. Average circumference 58.4 cm at 25.4 cm above ground on a 8 year old tree.

Stocky.—Medium stocky.

Texture.—Medium shaggy, roughness increases with age of tree.

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

Branches:

Size.—Medium. Average circumference 24.6 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 34 in a 25.8 square cm area. Average length 4.2 mm. Average width 1.9 mm. Color 10YR 4/6.

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

Leaves:

Size.—Medium to large. Average length 89.2 mm. Average width 46.2 mm.

Form.—Oblanceolate.

Apex.—Acuminate.

Base.—Cuneate.

Margin.—Doubly 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.—Small to medium. Average length 13.3 mm. Average width 1.7 mm. Longitudinally grooved. Surface — glabrous. Color varies from 5GY 4/6 to 5YR 3/4.

Glands.—Type — globose. Size — small to medium. Average length 1.0 mm. Average diameter 0.6 mm. Number varies from 0 to 3, average number 2. Located primarily on the base of leaf blade and upper portion of the petiole. Color varies from 10Y 6/10 to 2.5GY 6/8.

Stipules.—Average number 2. Average length 5.4 mm. Edges — pectinate. Color varies from 10Y 7/6 to 5R 4/8.

Color.—Upper surface varies from 7.5GY 3/4 to 7.5GY 2/4. Lower surface varies from 7.5GY 4/4 to 7.5GY 3/4. Midvein color varies from 5GY 8/6 to 5GY 7/6.

Flower buds:

Size.—Medium. Average length 8.7 mm. Average diameter 4.5 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Very dense.

Form.—Elongated.

Pedicel.—Average length 10.2 mm. Average width 0.8 mm. Surface — glabrous. Color varies from 2.5GY 6/8 to 7.5R 4/6.

Color.—Varies from N 9.5/(white) to 7.5RP 6/12 on upper edges.

Number of buds per spur.—Average number 10, varies from 9 to 12.

Flowers:

Blooming period.—Date of First Bloom Feb. 20, 2016. Date of Petal Fall Mar. 2, 2016, varies slightly with climatic conditions.

Size.—Medium. Average height 10.7 mm. Average diameter 17.9 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — small to medium. Average length 9.1 mm. Average width 7.3 mm. Form — elliptical. Arrangement — free. Petal apex — rounded. Petal base — truncated. Margin — sinuate. Color N 9.5/(white). Both upper and lower surfaces glabrous.

Sepals.—Normally 5, alternately arranged to petals. Size — small. Average length 2.5 mm. Average width 2.5 mm. Shape — triangular. Apex — rounded to triangular. Margin — entire. Both upper and lower surfaces glabrous. Color — upper surface varies from 10Y 6/6 to 10Y 6/8. Lower surface varies from 10Y 6/6 to 5R 4/8.

- Stamens*.—Average number 38. On average, the stamens are above the height of the petals. Average filament length 7.6 mm. Filament color N 9.5/ (white). Anther color varies from 10R 4/10 to 5Y 8/10.
- Pollen*.—Self-sterile, pollinator required. Color varies from 10Y 7/6 to 2.5GY 7/6.
- Pistil*.—Number — normally one. Average length 9.5 mm. Position of stigma an average of 1.0 mm above the anthers. Surface — glabrous. Color varies from 10Y 7/6 to 2.5GY 7/6.
- Fragrance*.—Heavy.
- Color*.—Varies from N 9.5/(white) to 7.5RP 6/12 on petal edges.
- Pedicel*.—Average length 12.7 mm. Average width 0.8 mm. Surface — glabrous. Color varies from 2.5GY 6/8 to 7.5R 4/6.
- Number flowers per flower bud*.—Average number 3, varies from 1 to 4.
- Fruit:**
- Maturity when described*.—Firm ripe and ready for consumption.
- Date of first picking*.—Jun. 25, 2016.
- Date of last picking*.—Jul. 5, 2016, varies slightly with climatic conditions.
- Size*.—Large. Average diameter axially 59.0 mm. Average transversely in suture plane 64.8 mm. Average weight 139.2 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.
- Form*.—Globose.
- Suture*.—Nearly smooth.
- Ventral surface*.—Nearly smooth.
- Apex*.—Nearly rounded.
- Base*.—Flat.
- Stem cavity*.—Rounded to slightly elongated in suture plane. Average depth 8.9 mm. Average diameter 4.5 mm.
- Stem:**
- Size*.—Large. Average length 18.3 mm. Average diameter 2.2 mm.
- Color*.—Varies from 10YR 3/4 to 7.5GY 5/6.
- Flesh:**
- Ripens*.—Evenly to slightly earlier at the apex.
- Texture*.—Firm, meaty.
- Fibers*.—Few, small, tender.
- Firmness*.—Very good, comparable to other commercial interspecific varieties.
- Aroma*.—Moderate.
- Amygdalin*.—Undetected.
- Eating quality*.—Very good.
- Flavor*.—Very good, with a good balance between acid and sugar.
- Juice*.—Heavy amount, enhances flavor.
- Acidity*.—Not available.
- Brix*.—Average Brix 16.0°, varies slightly with amount of fruit per tree and climatic conditions.
- Color*.—Varies from 7.5R 3/8 to 2.5Y 8/6.
- Pit cavity*.—Average length 25.0 mm. Average width 18.6 mm. Average depth 5.0 mm. Color varies from 5R 3/8 to 7.5R 3/8.
- Skin:**
- Thickness*.—Medium.
- Surface*.—Smooth.
- Bloom*.—Moderate amount.
- Tendency to crack*.—None.
- Color*.—Ground color varies from 7.5Y 6/6 to 10Y 6/4. Overspread with 5R 2/4 to 7.5R 2/8. Small, randomly spaced areas of ground color showing, leaving a speckled pattern to skin.
- Tenacity*.—Tenacious to the flesh.
- Astringency*.—Undetected.
- Stone:**
- Type*.—Clingstone, medium adherence to flesh.
- Size*.—Medium. Average length 24.6 mm. Average width 18.1 mm. Average thickness 9.1 mm.
- Form*.—Obovoid.
- Base*.—Flat.
- Apex*.—Pointed. Average length 1.9 mm.
- Surface*.—Slightly pitted throughout. One shallow groove on each side of suture extending from base to apex.
- Sides*.—Unequal, one side extending further outward from suture plane.
- Ridges*.—Small, extending from base toward apex.
- Tendency to split*.—None.
- Color*.—Varies from 7.5YR 5/6 to 7.5YR 5/8 when dry.
- Kernel:**
- Size*.—Medium. Average length 13.7 mm. Average width 10.3 mm. Average thickness 5.8 mm.
- Form*.—Ovoid.
- Viability*.—Viable, complete embryo development.
- Skin color*.—Varies from 5Y 8.5/6 to 5Y 8/6.
- Use:**
- Dessert*.—Market — local and long distance.
- Keeping quality:** Good, held firm in cold storage for 3 weeks at 38° to 42° F. without internal breakdown of flesh or appreciable loss of eating quality.
- 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 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 interspecific 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 interspecific tree, substantially as illustrated and described.

