



US00PP32851P2

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

(10) **Patent No.:** **US PP32,851 P2**

(45) **Date of Patent:** **Mar. 2, 2021**

(54) **INTERSPECIFIC TREE NAMED**
'FLAVORZEE-517'

(50) Latin Name: *Interspecific Prunus species*
Varietal Denomination: **Flavorzee-517**

(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)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/873,788**

(22) Filed: **Jul. 7, 2020**

(51) **Int. Cl.**
A01H 5/08 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./180**

(58) **Field of Classification Search**
USPC **Plt./180**
CPC **A01H 6/7427; A01H 5/08**
See application file for complete search history.

Primary Examiner — Keith O. Robinson

(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 medium size fruit.
3. Fruit with a high degree of attractive dark red skin color.
4. Fruit with very good flavor and eating quality.
5. Fruit with good storage and shipping ability.

1 Drawing Sheet

1

Botanical designation: Interspecific *Prunus* species.
Variety denomination: 'Flavorzee-517'.

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, 'Royal Treat' Interspecific (U.S. Plant Pat. No. 13,505) and the proprietary non-patented interspecific seedling selections '165BA516', '19MF482', '55MC104', '48MB496', '39ZD4' and '254LV124'.

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

2

Modesto, Calif. from a first generation cross between our proprietary non-patented interspecific seedling selections '165BA516' and '19MF482'. The seed parent (165BA516) originated from a cross between our proprietary non-patented interspecific seedling selections '55MC104' and '48MB496'. The pollen parent (19MF482) originated from a cross between our proprietary non-patented seedling selections '39ZD4' and '254LV124'. A large number of these first generation seedlings were grown and budded to older 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 2015 for additional asexual propagation and commercialization.

ASEXUAL REPRODUCTION OF THE VARIETY

In 2015 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 medium size, clingstone fruit. The fruit is further characterized by its firm, pale yellow flesh, attractive dark red skin color and very good flavor and eating quality. In comparison to its non-patented interspecific seed

parent '165BA516' the fruit of the new variety has pale yellow flesh compared to darker yellow and is approximately 16 days earlier in maturity. In comparison to its non-patented interspecific pollen parent '19MF482' the fruit of the new variety has pale yellow flesh compared to darker yellow and is approximately 26 days earlier in maturity. In comparison to the commercial variety 'Royal Treat' Interspecific (U.S. Plant Pat. No. 13,505) the fruit of the new variety is approximately 19 days earlier in maturity and has pale yellow flesh compared to darker yellow.

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 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 interspecific 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, 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 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 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 400 hours at or below 45° F.

Trunk:

Size.—Medium, average circumference 66.0 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 10YR 3/2.

Branches:

Size.—Medium. Average circumference 15.8 cm at 1.2 cm above ground on a 5 year old tree. 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 18 in a 25.8 square cm area. Average length 5.3 mm. Average width 1.9 mm.

Color 5YR 3/6.

Color.—New growth varies from 5GY 5/6 to 5GY 4/6.

Mature growth varies from 10YR 3/2 to 10YR 3/6, varies with age of growth.

Leaves:

Size.—Medium. Average length 85.8 mm. Average width 38.6 mm.

Form.—Elliptical.

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.—Average length 14.5 mm. Average width 1.3 mm. Longitudinally grooved. Surface — glabrous. Color 5GY 5/4.

Glands.—Type — globose. Size — small. Average length 0.1 mm. Average diameter 0.1 mm. Number varies from 1 to 4, average number 2. Located primarily on base of leaf blade and upper portion of petiole. Color 5GY 5/6.

Stipules.—None present at time of measurement.

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

Flower buds:

Size.—Medium to large. Average length 10.1 mm. Average diameter 6.3 mm.

Hardiness.—Hardy with respect to California winters.

Density.—Dense.

Form.—Conical, becoming elongated just before opening.

Pedicel.—Average length 8.0 mm. Average width 0.9 mm. Surface — glabrous. Color varies from 2.5GY 7/10 to 2.5GY 6/8.

Color.—N 9.5/(white).

Number of buds per spur.—Varies from 10 to 13, average number 11.

Flowers:

Blooming period.—Date of First Bloom Feb. 8, 2019. Date of Petal Fall Feb. 18, 2019, varies slightly with climatic conditions.

Size.—Medium to large. Average height 10.5 mm. Average diameter 17.6 mm.

Petals.—Normally 5, alternately arranged to sepals. Size — medium. Average length 8.9 mm. Average width 7.0 mm. Petal apex — rounded. Petal base — truncate. Form — elliptical. Arrangement — free. Margin — sinuate. Color N 9.5/(white). Surface — glabrous.

Sepals.—Normally 5, alternately arranged to petals. Size — small to medium. Average length 3.1 mm. Average width 2.0 mm. Shape — triangular. Apex ovate to triangular. Margin — entire. Both upper and lower surfaces glabrous. Color — upper surface varies from 2.5GY 7/6 to 2.5GY 6/6 with 5R 4/10 on

edges. Lower surface varies from 2.5GY 6/6 to 2.5GY 6/8 with 5 R 4/10 on edges.

Stamens.—Average number per flower 31. On average the stamens are above the height of the petals. Average filament length 7.8 mm. Filament color N 9.5/(white). Anther color varies from 2.5YR 4/10 to 5Y 8/10.

Pollen.—Self sterile, pollinator required. Color varies from 2.5Y 7/10 to 5Y 7/10.

Pistil.—Number — normally 1. Average length 12.0 mm. Position of stigma an average of 1.0 mm above anthers. Surface — glabrous. Color varies from 10Y 8/6 to 2.5GY 8/6.

Fragrance.—Moderate aroma.

Color.—N 9.5/(white).

Pedicel.—Average length 8.9 mm. Average width 1.0 mm. Color varies from 10Y 6/8 to 2.5GY 6/8.

Number flowers per flower bud.—Average number 3, varies from 3 to 4.

Fruit:

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

Date of first picking.—May 20, 2019.

Date of last picking.—May 30, 2019, varies slightly with climatic conditions.

Size.—Medium. Average diameter axially 50.7 mm. Average transversely in suture plane 59.2 mm. Average weight 113.6 grams, varies slightly with fertility of the soil, amount of thinning and climatic conditions.

Form.—Globose.

Suture.—Nearly smooth.

Ventral surface.—Nearly smooth.

Apex.—Slight tip.

Base.—Slightly retuse.

Stem cavity.—Rounded to slightly elongated in suture plane. Average depth 6.7 mm. Average diameter 5.3 mm.

Stem:

Size.—Small. Average length 9.1 mm. Average diameter 2.2 mm.

Color.—Varies from 10Y 5/6 to 2.5GY 5/6.

Flesh:

Ripens.—Evenly.

Texture.—Firm, meaty.

Fibers.—Few, small, tender.

Firmness.—Firm, comparable to other commercial interspecific varieties.

Aroma.—Slight aroma.

Amydgalin.—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 15.3°, varies slightly with amount of fruit per tree and climatic conditions.

Color.—Varies from 5Y 8/4 to 5Y 8/6.

Pit cavity.—Average length 27.2 mm. Average width 20.8 mm. Average depth 12.0 mm. Color varies from 5Y 8/6 to 5Y 7/6.

Skin:

Thickness.—Medium.

Surface.—Smooth.

Bloom.—Moderate amount, complete coverage.

Tendency to cracks.—Very slight.

Color.—Ground color varies from 5Y 8/6 to 5Y 7/8. Overspread with 7.5R 2/4 to 10R 2/6.

Tenacity.—Tenacious to the flesh.

Astringency.—Undetected.

Stone:

Type.—Clingstone, strong adherence to flesh.

Size.—Medium. Average length 26.2 mm. Average width 19.8 mm. Average thickness 11.0 mm.

Form.—Ovoid.

Base.—Flat.

Apex.—Pointed. Average length 1.8 mm.

Surface.—Slightly pitted throughout. One shallow groove on each side of suture extending from base to apex.

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

Ridges.—Extending from base to apex.

Tendency to split.—Very slight.

Color.—Varies from 10YR 7/6 to 10YR 6/8 when dry.

Kernel:

Size.—Small to medium. Average length 13.8 mm. Average width 11.0 mm. Average depth 5.0 mm.

Form.—Ovate.

Viability.—Viable, complete embryo development.

Skin color.—Varies from 5Y 8.5/6 to 5Y 8/8.

Use: Dessert.

Market.—Local and long distance.

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 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.

* * * * *

