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Ackerman et al.

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(54) **STRAWBERRY PLANT NAMED**
‘PS-13.467.089’

(50) Latin Name: *Fragaria x ananassa*
Varietal Denomination: **PS-13.467.089**

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patent is extended or adjusted under 35
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USPC **Plt./208**
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(58) **Field of Classification Search**
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CPC A01H 5/0893
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS

PP17,312 P2 12/2006 Ackerman et al.
PP21,415 P3 10/2010 Ackerman et al.

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(57) **ABSTRACT**

This invention relates to a new and distinct variety of
strawberry plant named ‘PS-13.467.089’. This new straw-
berry plant named ‘PS-13.467.089’ is primarily adapted to
the growing conditions of the central coast of California, and
is primarily characterized by its fruit that is orange red to red
in color, medium in size and very uniformly shaped; its fruit
has very good flavor with the seeds held even with the
surface of the fruit; the plant is very large in size, very early
fruiting with very high yields; its foliage is light yellow
green in color, medium in size with three leaflets; its fruiting
trusses are typically held level to beneath the foliage, with
weak pubescence and strong anthocyanins; and the plant is
resistant to *Fusarium* wilt.

5 Drawing Sheets

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Latin name of the genus and species of the plant claimed:
Fragaria x ananassa.
Variety denomination: ‘PS-13.467.089’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct straw-
berry variety named ‘PS-13.467.089’. This new variety is a
result of a controlled cross made in 2013 in an ongoing
breeding program between strawberry selection designated
‘BG-7.3065’ (unpatented) as the seed (female) parent, and
strawberry variety designated ‘PS-97.5016’ (U.S. Plant Pat.
No. 17,312) as the pollen (male) parent. The variety is
botanically known as *Fragaria x ananassa*.

The seedling resulting from the aforementioned cross was
selected from a controlled breeding plot in Monterey
County, California in the summer of 2015. After its selec-
tion, the new variety was asexually propagated by stolons in
both Siskiyou County, California and San Joaquin County,
California. The new variety was extensively tested over the
next several years in fruiting fields in Monterey County,
California. This propagation has demonstrated that the com-
bination of traits disclosed herein as characterizing the new
variety are fixed and remain true-to-type through successive
generations of asexual reproduction.

BRIEF SUMMARY OF THE INVENTION

‘PS-13.467.089’ is primarily adapted to the climate and
growing conditions of the central coast of California. The

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nearby Pacific Ocean provides the humidity and moderate
temperatures needed to produce a strong, vigorous plant and
maintain fruit quality during the spring and summer pro-
duction months.

The following traits have been repeatedly observed and
are determined to be unique characteristics of ‘PS-
13.467.089’, which in combination distinguish this straw-
berry plant as a new and distinct variety:

1. The fruit is orange red to red in color, medium in size
and very uniformly shaped;
2. The fruit has very good flavor with the seeds held even
with the surface of the fruit;
3. The plant is very large in size, very early fruiting with
very high yields;
4. The foliage is light yellow green in color, medium in
size with three leaflets;
5. The fruiting trusses are typically held level to beneath
the foliage, with weak pubescence and strong antho-
cyanins; and
6. The plant is resistant to *Fusarium* wilt.

The strawberry variety that is believed to be most closely
related to the new variety ‘PS-13.467.089’ is ‘PS-0.9271’
(U.S. Plant Pat. No. 21,415). In side-by-side comparisons to
the similar strawberry variety ‘PS-0.9271’, ‘PS-13.467.089’
differs by the following combination of characteristics as
described in Table 1.

TABLE 1

Characteristic	'PS-13.467.089'	'PS-0.9271' (U.S. Plant Pat. 21,415)
Fruit: color	Ranges from orange red to red	Ranges from red to dark red
Fruit: flavor	Very good	Good
Fruit: size	Medium	Large
Fruit: marketable yield	1,985 grams/plant	1,507 grams/plant
Fruit: time of ripening	Very early	Medium
Foliage: color of upper surface	Light yellow green	Medium green
Plant: size	Very large	Medium
Fruiting truss: anthocyanin intensity	Strong	Ranges from medium to weak

For identification, a series of molecular markers have been determined for this new variety.

'PS-13.467.089' differs from its parents, 'BG-7.3065' and 'PS-97.5016' by the following combination of characteristics as described in Tables 2 and 3.

TABLE 2

Characteristic	'PS-13.467.089'	'BG-7.3065' (unpatented)
Fruit: size	Medium	Small
Fruit: marketable yield	Very high	Medium
Type of bearing	Non-remontant (summer-bearer)	Day-neutral

TABLE 3

Characteristic	'PS-13.467.089'	'PS-97.5016' (PP 17,312)
Fruit: color	Ranges from orange red to red	Red
Fruit: size	Medium	Small
Fruit: marketable yield	Very high	Medium
Fruiting truss: position relative to foliage	Ranges from level with to below	Above

BRIEF DESCRIPTIONS OF THE PHOTOGRAPHS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new strawberry variety 'PS-13.467.089' at various stages of development, as true as it is reasonably possible with color reproductions of this type. Color in the photographs may differ slightly from the color value cited in the botanical descriptions which accurately describe the color of 'PS-13.467.089'. The depicted plant and plant parts of the new strawberry variety 'PS-13.467.089' are approximately seven to eight months old. The photographs were taken in Monterey County, California.

FIG. 1 shows fruiting field characteristics of 'PS-13.467.089', taken in the month of July 2024;

FIG. 2 shows upper and lower surfaces of flower and flower parts of 'PS-13.467.089', taken in the month of June 2024;

FIG. 3 shows typical fruiting truss and truss parts of 'PS-13.467.089', taken in the month of July 2024;

FIG. 4 shows upper and lower surfaces of leaf and leaf parts of 'PS-13.467.089', taken in the month of July 2024; and

FIG. 5 shows internal and external mature fruit characteristics of 'PS-13.467.089', taken in the month of August 2024.

DETAILED BOTANICAL DESCRIPTION

The new variety 'PS-13.467.089' has not been observed under all possible environmental conditions. The characteristics of the new variety 'PS-13.467.089' may vary in detail, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type and location. In addition, the characteristics of any parental variety or comparison variety included in Tables 1, 2 and 3 of the present invention may vary in detail, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type and location.

The aforementioned photographs, together with the following description of the new variety 'PS-13.467.089', unless otherwise noted, are based on observations taken during the 2024 growing season in Monterey County, California. These measurements and ratings were taken from plants of 'PS-13.467.089' dug from a high-elevation nursery located in Siskiyou County, California during mid-October 2023 and planted approximately three to four weeks later in Monterey County, California. The approximate age of the observed plants is seven to eight months. Yield observations including average weight and marketable yield, along with fruit quality characteristics including soluble solids, are averaged from three years of data collected from the 2021 through 2023 growing seasons. Flower measurements and characteristics are from secondary flowers unless otherwise noted. Fruit characteristics and measurements are from secondary fruit, unless otherwise noted.

Where noted, color terminology follows The Royal Horticultural Society Colour Chart, London (2007).

The following characteristics describe fruit, plant, stolon, foliage, fruiting truss, flower, reproductive organs and pest and disease characteristics of the new strawberry 'PS-13.467.089'.

Fruit characteristics:

Color of mature fruit.—RHS 45C (ranges from orange red to red).

Color of internal flesh (excluding core).—RHS 43C (light red).

Color of core.—RHS 43D (light red).

Fruit average length (cm).—4.8.

Fruit average width (cm).—4.0.

Fruit size.—Medium.

Average length/width ratio.—1.2 (slightly longer than broad).

Hollow center average length (mm).—27.1.

Hollow center average width (mm).—7.9.

Hollow center expression.—Ranges from moderate to strong.

Season average weight (gm).—31.6.

Season marketable yield (gm/plant).—1,985.

Predominant shape.—Conical.

Difference in shape between primary and secondary fruit.—None or very slight.

Band without achenes.—Medium.

Evenness of surface.—Even or very slightly uneven.

Evenness of color.—Even or very slightly uneven.
Glossiness.—Medium.
Insertion of achenes.—Level with surface.
Average calyx diameter (cm).—4.1.
Position of calyx attachment.—Inserted.
Attitude of sepals.—Outward.
Size of calyx in relation to fruit diameter.—Same size.
Adherence of calyx (when fully ripe).—Strong.
Firmness of flesh.—Ranges from medium to firm.
Keeping quality.—Very good.
Fruit market.—Fresh.
Post-harvest fruit longevity (at 1-3 degrees celsius).—7 to 10 days.
Distribution of red color of the flesh.—Marginal and central.
Flavor.—Very good.
Soluble solids (% brix).—8.3.
Achene color, shaded side.—RHS 153D (yellow green group).
Achene color, sun-exposed side.—RHS 181B (greyed red group).
Average achene length (mm).—1.4.
Average achene width (mm).—0.7.
Average achene weight (mg).—0.52.
Average achenes per berry.—429.
Achene shape.—Elliptic.
Time of beginning flowering.—Very early (March in Monterey County, California).
Time of beginning of fruit ripening.—Very early (April in Monterey County, California).
Flowering season.—March to October (in Monterey County, California).
Harvest season.—April to November (in Monterey County, California).
Harvest maturity.—Early (June).
Plant hardiness.—Zone 10 (on USDA plant hardiness zone map).
Type of bearing.—Non-remontant (summer-bearer).

Plant characteristics:
Average height (cm).—34.4.
Average spread (cm).—48.2.
Size.—Very large.
Habit.—Upright.
Density.—Medium.
Vigor.—Strong.

Stolon characteristics:
Color.—RHS 146D (yellow green group).
Anthocyanin coloration.—RHS 181C (greyed red group).
Anthocyanin intensity.—Ranges from weak to medium.
Pubescence.—Medium.
Attitude of hairs.—Upward.
Average quantity in nursery (per square foot).—8 to 12 (many).
Average diameter at the bract (mm).—3.5 (medium).
Length from mother plant to first daughter (cm).—32.1.

Terminal leaflet characteristics:
Average length (cm).—8.6.
Average width (cm).—7.9.
Average area terminal (cm²).—68.0.
Average length/width ratio.—1.08 (ranges from as long as broad to longer than broad).
Shape of base.—Obtuse.
Shape of apex.—Obtuse.
Margins (shape of teeth).—Obtuse (serrate to crenate).
Average serrations per leaf.—21.8.

Foliage characteristics:
Color of upper surface.—RHS 146C (light yellow green).
Color of lower surface.—RHS 147C (yellow green group).
Color of venation, upper surface.—RHS 146D (yellow green group).
Color of venation, lower surface.—RHS 145A (yellow green group).
Number of leaflets.—3.
Leaf size.—Medium.
Average length (cm).—13.5.
Average width (cm).—17.6.
Average area foliage (cm²).—239.
Shape in cross section.—Slightly concave to flat.
Interveinal blistering.—Medium.
Texture, upper surface.—Medium.
Texture, lower surface.—Smooth.
Venation pattern.—Pinnate reticulate.
Leaf glossiness.—Medium.
Leaf variegation.—Absent.

Petiole characteristics:
Petiole color.—RHS 144B (yellow green group).
Petiole average length (cm).—24.4.
Petiole average diameter (mm).—3.7.
Average size.—Long.
Attitude of hairs.—Upward.
Frequency of bract leaflets.—None (0% occurrence).
Size of bract leaflets.—N/A.
Pubescence.—Sparse.
Petiolule color.—RHS 144B (yellow green group).
Petiolule average length (mm).—12.5.
Petiolule average diameter (mm).—2.0.

Stipule characteristics:
Color.—RHS 145A (yellow green group).
Anthocyanin coloration.—RHS 63A (red purple group).
Anthocyanin intensity.—Medium.
Average length (mm).—16.0.
Average width (mm).—9.8.
Shape.—Triangular.
Texture.—Light.
Shape of base.—N/A.
Shape of apex.—Acuminate.
Margins.—Entire (smooth).

Fruiting truss characteristics:
Anthocyanin coloration.—RHS 180B (greyed red group).
Anthocyanin intensity.—Strong.
Average length at maturity (cm).—37.3.
Position relative to foliage.—Ranges from beneath to level with.
Flower quantity (average per plant season long).—80 to 90 (many).
Fruit quantity per truss.—5.8 (medium).
Attitude at first pick.—Prostrate.
Primary pedicel color.—RHS 144C (yellow green group).
Primary pedicel length (cm).—8.5.
Primary pedicel diameter (mm).—2.4.
Pedicel attitude of hairs.—Upward.
Pedicel texture.—Weak.
Primary peduncle color.—RHS 144C (yellow green group).
Primary peduncle length (cm).—22.9.

Primary peduncle diameter (mm).—4.5.
Peduncle texture.—Weak.
 Flower characteristics:
Petal color, upper surface.—RHS NN155C (white group).
Petal color, lower surface.—RHS NN155C (white group).
Petal average length (mm).—12.0.
Petal average width (mm).—11.8.
Petal average length/width ratio.—1.02 (as long as broad).
Average petals per flower.—5.8.
Petal shape.—Obovate.
Petal texture.—Smooth.
Petal shape of base.—Obtuse.
Petal shape of apex.—Rounded.
Petal margins.—Entire (smooth).
Sepal color, upper surface.—RHS 137B (green group).
Sepal color, lower surface.—RHS 146D (yellow green group).
Sepal average length (mm).—11.6.
Sepal average width (mm).—5.7.
Sepal average length/width ratio.—2.04.
Average sepals per flower.—11.7.
Sepal shape.—Elliptical.
Sepal texture.—Light.
Sepal shape of apex.—Obtuse.
Sepal margins.—Entire (smooth).
Flower bud color.—RHS 145A (yellow green group).
Flower bud shape.—Cup.
Flower bud average length (mm).—14.7.
Flower bud average width (mm).—8.9.
Corolla (flower) average diameter (mm).—30.5 (medium).
Average flower depth (mm).—13.3 (medium).

Calyx average diameter (mm).—34.0.
Size of calyx relative to corolla.—Larger.
Arrangement of petals.—Ranges from free to touching.
Size of inner calyx relative to outer calyx.—Smaller.
 5 Reproductive organs:
Anther color.—RHS 14A (yellow orange group).
Filament color.—RHS 145C (yellow green group).
Stamen.—Present.
Filament average length (mm).—2.3.
Anther average length (mm).—1.4.
Anther average width (mm).—0.8.
Anther shape.—Elliptic.
Pollen amount.—Abundant.
 15 *Ovary color.*—RHS 147C (yellow green group).
Style color.—RHS 151D (yellow green group).
Pistil average quantity per flower.—429.
Pistil average length (mm).—1.7.
Style average length (mm).—1.5.
 20 *Stigma average diameter (mm).*—0.4.
Stigma shape.—Rounded.
 Disease and pest reactions:
Powdery mildew (sphaerotheca macularis).—Moderate.
 25 *Botrytis fruit rot (botrytis cinerea).*—Moderate.
Fusarium wilt (fusarium oxysporum).—Resistant.
Two-spotted spider mite (tetranychus urticae).—Moderate.
 30 We claim:
 1. A new and distinct strawberry plant named 'PS-13.467.089', as herein described and illustrated by the characteristics set forth above.
 35 * * * * *

FIG. 1



FIG. 2



FIG. 3

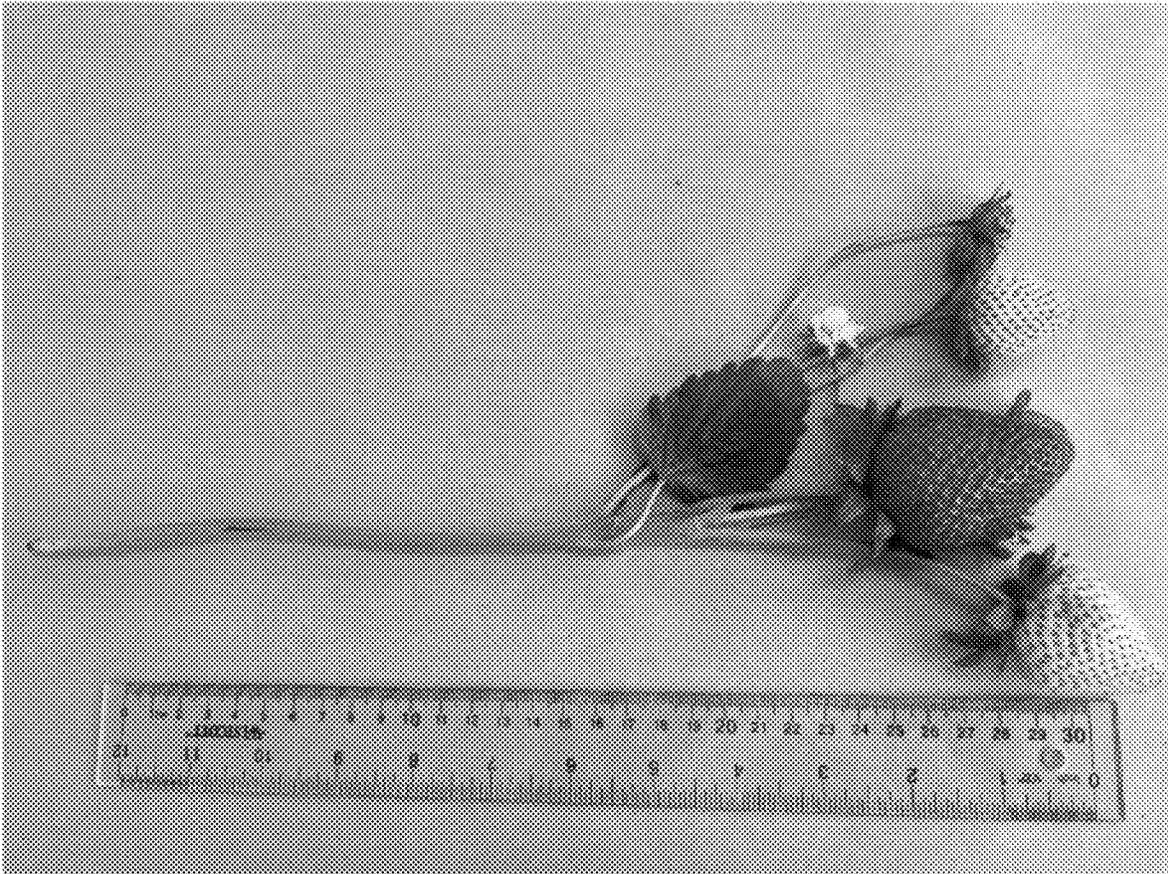


FIG. 4

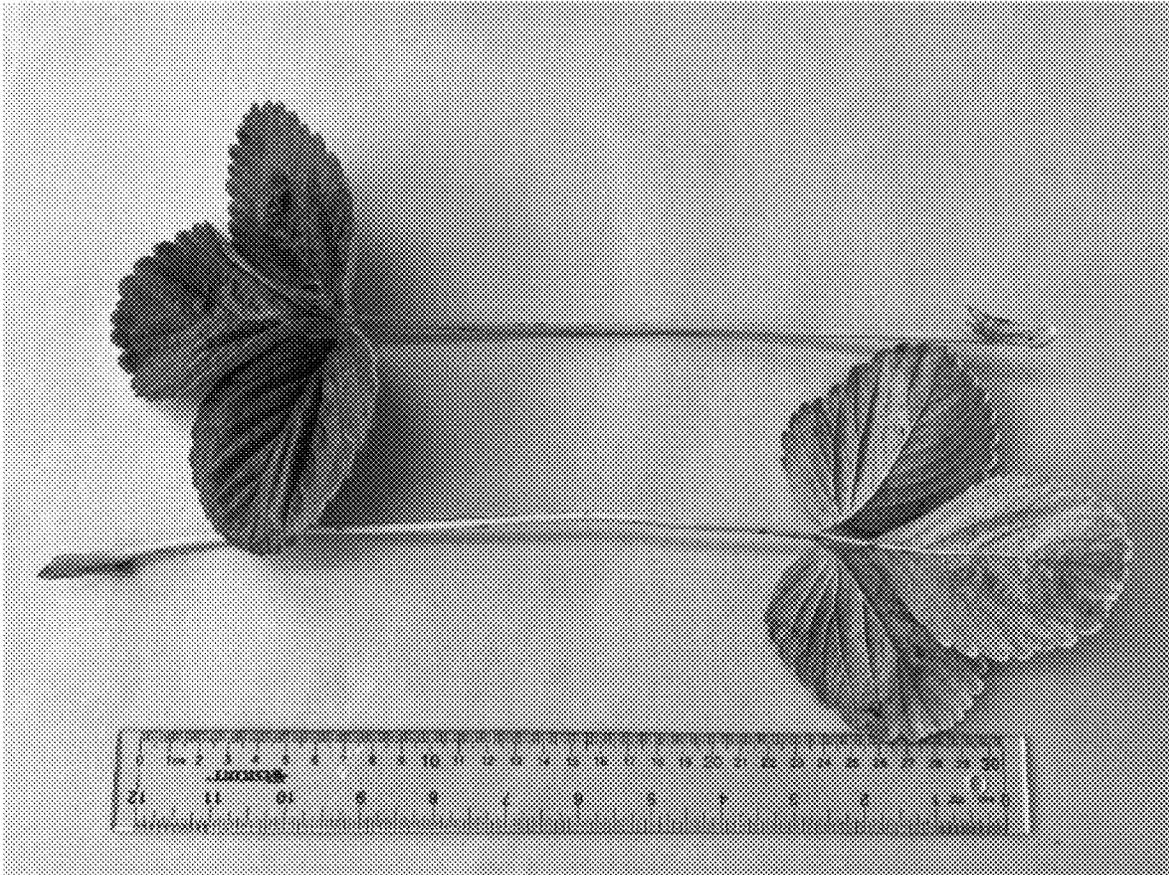


FIG. 5

