



US00PP32436P2

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

(10) **Patent No.:** **US PP32,436 P2**
(45) **Date of Patent:** **Nov. 10, 2020**

(54) **STRAWBERRY PLANT NAMED ‘PS-10.1160’**

(50) Latin Name: *Fragaria ananassa*
Varietal Denomination: **PS-10.1160**

(71) Applicant: **PLANT SCIENCES, INC.,**
Watsonville, CA (US)

(72) Inventors: **Stephen M. Ackerman**, Salinas, CA
(US); **Steven D. Nelson**, Watsonville,
CA (US); **Michael D. Nelson**,
Watsonville, CA (US)

(73) Assignee: **PLANT SCIENCES, INC.,**
Watsonville, 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.: **16/602,401**

(22) Filed: **Sep. 30, 2019**

(51) **Int. Cl.**
A01H 5/08 (2018.01)
A01H 6/74 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./209**
CPC *A01H 6/7409* (2018.05)

(58) **Field of Classification Search**
USPC Plt./209
CPC *A01H 6/7409*; *A01H 5/08*
See application file for complete search history.

Primary Examiner — Keith O. Robinson
(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **ABSTRACT**

This invention relates to a new and distinct variety of
strawberry plant named ‘PS-10.1160’. This new strawberry
plant named ‘PS-10.1160’ is primarily adapted to the grow-
ing conditions of the central coast of California, and is
primarily characterized by its orange red fruit color, very
large fruit size, very high marketable fruit yield, excellent
fruit flavor, medium plant size with medium yellow green
foliage which is moderately susceptible to powdery mildew,
and very early time of first flower and fruit.

4 Drawing Sheets

1

Latin name of the genus and species of the plant claimed:
Fragaria ananassa.

Variety denomination: ‘PS-10.1160’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct straw-
berry variety named ‘PS-10.1160’. This new variety is a
result of a controlled cross made in 2010 in an ongoing
breeding program between strawberry selection designated
‘PS-3.130’ (unpatented) as the seed (female) parent, and
strawberry selection designated ‘PS-4.152’ (unpatented) as
the pollen (male) parent. The variety is botanically known as
Fragaria ananassa.

The seedling resulting from the aforementioned cross was
selected from a controlled breeding plot in Monterey
County, Calif. in the summer of 2012. After its selection, the
new variety was asexually propagated by stolons in both
Siskiyou County, Calif. and Monterey County, Calif. The
new variety was extensively tested over the next several
years in fruiting fields in Monterey County, Calif. This
propagation has demonstrated that the combination 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-10.1160’ is primarily adapted to the climate and
growing conditions of the central coast of California. The
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.

2

The following traits have been repeatedly observed and
are determined to be unique characteristics of ‘PS-10.1160’,
which in combination distinguish this strawberry plant as a
new and distinct variety:

1. Orange red fruit color;
2. Very large fruit size;
3. Very high marketable fruit yield;
4. Excellent fruit flavor;
5. Medium plant size with medium yellow green foliage
which is moderately susceptible to powdery mildew;
and
6. Very early time of first flower and fruit.

The strawberry variety that is believed to be most closely
related to the new variety ‘PS-10.1160’ is ‘PS-9271’ (U.S.
Plant Pat. No.21,415). In side-by-side comparisons to the
similar strawberry variety ‘PS-9271’, ‘PS-10.1160’ differs
by the following combination of characteristics as described
in Table 1.

TABLE 1

Characteristic	‘PS-10.1160’	‘9271’ (U.S. Plant Pat. 21,415)
Mature fruit: color	Ranges from red to orange red	Ranges from red to dark red
Fruit: season average size (gm)	30.4	28.2
Fruit: marketable yield (gm/plt)	2,167	1,860
Fruit: evenness of color	Slightly uneven	Even or very slightly uneven
Fruit: flavor	Excellent	Good
Time of first fruit	Very early	Medium

TABLE 1-continued

Characteristic	'PS-10.1160'	'9271' (U.S. Plant Pat. 21,415)
Foliage: color of upper surface	Medium yellow green	Medium green
Foliage: gloss	Absent or weak	Medium

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

'PS-10.1160' differs from its parents, 'PS-3.130' and 'PS-4.152' by the following combination of characteristics as described in Tables 2 and 3.

TABLE 2

Characteristic	'PS-10.1160'	'PS-3.130' (unpatented)
Fruit: marketable yield	Very high	Medium
Fruit: season average size	Very large	Large
Fruit: flavor	Excellent	Medium
Plant: size	Medium	Large

TABLE 3

Characteristic	'PS-10.1160'	'PS-4.152' (unpatented)
Fruit: marketable yield	Very high	Medium
Fruit: season average size	Very large	Large
Fruit: flavor	Excellent	Very good
Plant: size	Medium	Very large

BRIEF DESCRIPTIONS OF THE PHOTOGRAPHS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new strawberry variety 'PS-10.1160' 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-10.1160'. The depicted plant and plant parts of the new strawberry variety 'PS-10.1160' are approximately eight months old. The photographs were taken in Monterey County, Calif.

FIG. 1 shows typical fruiting field characteristics of 'PS-10.1160', taken in the month of July 2019;

FIG. 2 shows a close-up view of a typical plant of 'PS-10.1160', taken in the month of July 2019;

FIG. 3 shows typical mature and immature field fruit of 'PS-10.1160', taken in the month of July 2019; and

FIG. 4 shows typical internal and external mature fruit characteristics of 'PS-10.1160', taken in the month of July 2019.

DETAILED BOTANICAL DESCRIPTION

The new variety 'PS-10.1160' has not been observed under all possible environmental conditions. The characteristics of the new variety 'PS-10.1160' 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-10.1160', unless otherwise noted, are based on observations taken during the 2019 growing season in Monterey County, Calif. These measurements and ratings were taken from plants of 'PS-10.1160' dug from a high-elevation nursery located in Siskiyou County, Calif. during mid October 2018 and planted approximately three to four weeks later in Monterey County, Calif. The approximate age of the observed plants is eight months. Yield observations including average weight and marketable yield, along with fruit quality characteristics including soluble solids, are averaged from four years of data collected from the 2015 through 2018 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-10.1160'.

Fruit characteristics:

Color of mature fruit.—RHS 42A (ranges from orange red to red).

Color of internal flesh (excluding core).—RHS 42B (medium red).

Color of core.—RHS 37A (light red).

Average length (cm).—4.3.

Average width (cm).—4.1.

Size.—Very large.

Average length/width ratio.—1.05 (slightly longer than broad).

Average calyx diameter (cm).—5.1.

Season average weight (gm).—30.4.

Achene color, shaded side.—RHS 153C (yellow green group).

Achene color, sun-exposed side.—RHS 184B (greyed purple group).

Average achene weight (mg).—0.4.

Average achenes per berry.—337.

Season marketable yield (gm/plant).—2,167.

Predominant shape.—Conical.

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

Band without achenes.—Absent or very narrow.

Evenness of surface.—Even or very slightly uneven.

Evenness of color.—Slightly uneven.

Glossiness.—Ranges from medium to strong.

Insertion of achenes.—Level with surface.

Position of calyx attachment.—Inserted.

Attitude of sepals.—Downward.

Size of calyx in relation to fruit diameter.—Slightly larger.

Adherence of calyx (when fully ripe).—Strong.

Firmness of flesh.—Medium.

Distribution of red color of the flesh.—Marginal and central.

Hollow center expression.—Weak.

Flavor.—Excellent.

- Soluble solids (% Brix)*.—8.5.
Time of first flowering.—Very early (March in Monterey County, Calif.).
Time of first fruit.—Very early (April in Monterey County, Calif.).
Harvest period.—Early April to November (in Monterey County, Calif.).
Harvest maturity.—Early season (June).
Type of bearing.—Partially remontant (June bearing).
- Plant characteristics:
Average height (cm).—25.6.
Average spread (cm).—35.0.
Size.—Medium.
Habit.—Upright.
Density.—Medium.
Vigor.—Medium.
- Stolon characteristics:
Color.—RHS 146D (yellow green group).
Anthocyanin coloration.—RHS 181B (greyed red group).
Anthocyanin intensity.—Medium.
Pubescence.—Dense.
Attitude of hairs.—Slightly outward.
Average quantity in nursery (per square foot).—8 to 10 (ranges from medium to many).
Average diameter at the bract (mm).—3.5 (thick).
- Terminal leaflet characteristics:
Average length (cm).—8.3.
Average width (cm).—8.2.
Average area terminal (cm²).—68.4.
Average length/width ratio.—1.02 (ranges from as long as broad to longer than broad).
Shape of base.—Obtuse.
Margins (shape of teeth).—Obtuse (serrate to crenate).
Average serrations per leaf.—20.5.
- Foliage characteristics:
Color of upper surface.—RHS 146A (medium yellow green).
Color of underside.—RHS 147C (yellow green group).
Number of leaflets.—3.
Leaf size.—Ranges from medium to large.
Average length (cm).—13.3.
Average width (cm).—17.3.
Average area foliage (cm²).—232.
Shape in cross section.—Slightly concave to flat.
Interveinal blistering.—Medium.
Leaf glossiness.—Absent or weak.
Leaf variegation.—Absent.
- Petiole characteristics:
Petiole color.—RHS 145A (yellow green group).
Average length (cm).—20.5.
Average diameter (mm).—3.5.
Petiolule color.—RHS 145A (yellow green group).
Petiolule average length (mm).—16.0.
Attitude of hairs.—Slightly outward.
Frequency of bract leaflets.—None (0% occurrence).
Size of bract leaflets.—N/A.
Pubescence.—Ranges from moderate to sparse.

- Stipule characteristics:
Color.—RHS 145C (yellow green group).
Anthocyanin coloration.—RHS 58A (red purple group).
Anthocyanin intensity.—Medium.
Average length (mm).—16.2.
Average width (mm).—8.9.
- Fruiting truss characteristics:
Anthocyanin coloration.—RHS 181C (greyed red group).
Anthocyanin intensity.—Weak.
Average length at maturity (cm).—27.8.
Position relative to foliage.—Ranges from beneath to level with.
Flower quantity (average per plant season long).—90 to 100 (many).
Pedicel attitude of hairs.—Strongly outward.
Pubescence.—Strong.
Attitude at first pick.—Prostrate.
- Flower characteristics:
Petal color.—RHS NN155C (white group).
Sepal color.—RHS 146A (yellow green group).
Corolla (flower) average diameter (mm).—32.7 (medium).
Calyx average diameter (mm).—40.7.
Petal average length (mm).—13.5.
Petal average width (mm).—12.6.
Petal average length/width ratio.—1.07 (longer than broad).
Average petals per flower.—5.8.
Sepal average length (mm).—15.6.
Sepal average width (mm).—6.7.
Sepal average length/width ratio.—2.33.
Average sepals per flower.—11.3.
Size of calyx relative to corolla.—Larger.
Size of inner calyx relative to outer calyx.—Larger.
Relative position of petals (flowers with 5 or 6 petals).—Overlapping.
- Reproductive organs:
Receptacle color.—RHS 147C (yellow green group).
Pollen color.—RHS 14A (yellow orange group).
Stamen.—Present.
Pollen amount.—Abundant.
- Disease and pest reactions:
Powdery mildew (Sphaerotheca macularis).—Moderately susceptible.
Angular leaf spot (Xanthomonas fragariae).—Susceptible.
Botrytis fruit rot (Botrytis cinerea).—Moderately susceptible.
Fusarium wilt (Fusarium oxysporum).—Resistant.
Anthracnose crown rot (Colletotrichum fragariae).—Susceptible.
Two-spotted spider mite (Tetranychus urticae).—Moderately susceptible.
- We claim:
 1. A new and distinct strawberry plant named 'PS-10.1160', as herein described and illustrated by the characteristics set forth above.

FIG. 1



FIG. 2



FIG. 3



FIG. 4

