US00PP21538P2

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

(10) **Patent No.: US PP21,538 P2**
(45) **Date of Patent: Nov. 30, 2010**

(54) **STRAWBERRY PLANT NAMED 'DRISSTRAWTWELVE'**

(50) Latin Name: ***Fragaria×ananassa***
Varietal Denomination: **DrisStrawTwelve**

(75) Inventors: **Kristie L. Gilford**, Lake Placid, FL (US); **Esther J. Pullen**, Valrico, FL (US); **Bruce D. Mowrey**, Watsonville, CA (US); **Philip J. Stewart**, Watsonville, CA (US)

(73) Assignee: **Driscoll Strawberry Associates, 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.: **12/587,284**

(22) Filed: **Oct. 5, 2009**

(51) **Int. Cl.**
A01H 5/00 (2006.01)

(52) **U.S. Cl.** **Plt./209**

(58) **Field of Classification Search** Plt./209
See application file for complete search history.

Primary Examiner—June Hwu
(74) *Attorney, Agent, or Firm*—Jondle & Associates, P.C.

(57) **ABSTRACT**

This invention relates to a new and distinct variety of strawberry plant named 'DrisStrawTwelve.' The new variety is primarily characterized by having high fruit yield and moderate resistance to *Botrytis* fruit rot, powdery mildew, *Xanthomonas fragariae* and high temperatures.

3 Drawing Sheets

Genus and species: *Fragaria×ananassa.*
Variety denomination: 'DrisStrawTwelve'.

BACKGROUND OF THE NEW PLANT

The present invention relates to a new and distinct strawberry cultivar designated 'DrisStrawTwelve' and botanically known as *Fragaria×ananassa*. This new strawberry cultivar was discovered in Hillsborough, Fla. in December 2004 and originated from a cross between 'Driscoll Sanibel' (U.S. Plant Pat. No. 16,298) and 'Driscoll Bonaire' (U.S. Plant Pat. No. 18,041). The original seedling of the new cultivar was first asexually propagated at a nursery in Shasta County, Calif.

'DrisStrawTwelve' was subsequently asexually propagated in Shasta County, Calif. and underwent further testing Hillsborough, Fla. for four years. The present invention has been found to retain its distinctive characteristics through successive asexual propagations.

DESCRIPTION OF THE PHOTOGRAPHS

The accompanying color photographs show typical specimens of the new cultivar at various stages of development as nearly true as it is possible to make in color reproductions. The photographs were taken from 5-month-old plants.

FIG. **1** shows overall plant habit including fruit at various stages of development.

FIG. **2** shows leaves of the plant with three leaflets.

FIG. **3** shows the fruit in longitudinal cross-section.

FIG. **4** shows the whole fruit.

FIG. **5** shows both the upper surface and lower surface of several of the flowers.

DESCRIPTION OF THE NEW CULTIVAR

The following description of 'DrisStrawTwelve' is based on observations taken in Hillsborough, Fla. from 2005 to 2008. This description is in accordance with UPOV terminology. Color designations, color descriptions, and other phenotypical descriptions may deviate from the stated values and descriptions depending upon variation in environmental, seasonal, climatic and cultural conditions. 'DrisStrawTwelve' has not been observed under all possible environmental conditions. The botanical description of 'DrisStrawTwelve' was taken from 5-month-old plants and the botanical descriptions of the comparison varieties, 'Driscoll Atlantis' (U.S. Plant Pat. No. 16,475) and 'Driscoll Sanibel' (U.S. Plant Pat. No. 16,298), were also taken from 5-month-old plants. Color terminology follows The Royal Horticultural Society Colour Chart, London (R.H.S.) (2001).

DETAILED BOTANICAL DESCRIPTION

Table 1 shows selected plant characteristics of the new variety compared with plant characteristics of 'Driscoll Atlantis' and 'Driscoll Sanibel.' Plant characteristics include plant habit, terminal leaflet length, time of flowering, and fruit production.

TABLE 1

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Plant habit	Flat	Flat globose	Flat
Terminal leaflet length	0.67 cm	0.73 cm	0.80 cm
Time of flowering	Between early and medium	Between very early and early	Medium
Fruit production, grams/plant	604	405	420

Table 2 shows plant characteristics of the new variety compared with plant characteristics of the commercial varieties 'Driscoll Atlantis' and 'Driscoll Sanibel.' Plant characteristics include plant height, diameter, number of crowns per plant, habit, the density of individual plants and the vigor.

TABLE 2

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Plant height (cm)	17.5	18.8	16.0
Plant diameter (cm)	42.4	40.2	39.6
Number of crowns/plant	3	3	2
Habit	Flat	Flat globose	Flat
Density of individual plant	Medium	Medium	Medium
Vigor	Between medium and strong	Between weak and medium	Between medium and strong

Table 3 shows leaf characteristics of the new cultivar compared with leaf characteristics of 'Driscoll Atlantis' and 'Driscoll Sanibel.' Leaf characteristics include terminal leaflet length and width in centimeters, length to width ratio, number of teeth per terminal leaflet, shape of teeth, color of upper side and underside of leaf, leaf shape in cross section, leaf blistering, leaf glossiness, number of leaflets, terminal leaflet margin, terminal leaflet length to width ratio, overall leaf shape and shape of leaf apex and base.

TABLE 3

Leaf Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Terminal leaflet length (cm)	0.67	0.73	0.80
Terminal leaflet width (cm)	0.69	0.75	0.81
Terminal leaflet length/width ratio	1.0	1.0	1.0
No. teeth/terminal leaflet	25	23	20
Shape of teeth	Rounded	Rounded	Rounded
Color of upper surface of leaf	RHS 147A (Dark yellow- green)	RHS 147B (Dark green)	RHS 147A (Dark yellow-green)
Color of lower surface of leaf	RHS 148C (Light yellow-green)	RHS 148C (Light yellow-green)	RHS 148C (Light yellow-green)
Leaf shape in cross section	Slightly convex	Flat	Slightly convex
Leaf blistering	Medium	Medium	Medium
Leaf glossiness	Weak	Medium	Medium
No. leaflets	3 only	More than 3	3 only
Terminal leaflet margin profile	Revolute	Flat	Revolute
Terminal leaflet: length/width ratio	As long as broad	As long as broad	As long as broad
Terminal leaflet shape	Orbicular	Orbicular	Orbicular
Terminal leaflet base shape	Rounded	Rounded	Rounded
Terminal leaflet apex shape	Rounded	Rounded	Rounded

Table 4 shows information about the petiole, the petiolule, the bract, and the stipule of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel.' This includes petiole length in centimeters, petiole diameter in centimeters, petiole pubescence, pose of hairs on the petiole, color of the petiole, color of the petiolule, petiolule length in centimeters, petiolule diameter in centimeters, bract frequency per petiole, stipule length in centimeters, stipule width in centimeters, stipule pubescence and stipule anthocyanin coloration.

TABLE 4

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Petiole length (cm)	10.0	9.9	11.1
Petiole diameter (cm)	0.163	0.332	0.320
Petiole pubescence	Dense	Medium	Dense
Petiole pose of hairs	Upwards and outwards	Outwards	Outwards
Petiole color	RHS 145C (Light yellow-green)	RHS 145A (Light yellow-green)	RHS 145C (Light yellow-green)
Petiolule color	RHS 145C (Light yellow-green)	RHS 145B (Light yellow-green)	RHS 145C (Light yellow-green)
Petiolule length (cm)	1.208	1.023	1.033
Petiolule diameter (cm)	0.060	0.178	0.182
Bract frequency	1	2	1
Stipule length (cm)	3.0	3.3	3.0
Stipule width (cm)	0.783	1.048	0.968
Stipule pubescence	Medium	Medium	Dense
Stipule anthocyanin coloration	RHS 145D (Light yellow-green)	Between weak and medium	

Table 5 shows stolon characteristics of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel.' These characteristics include the number of stolons, average number of daughter plants, the anthocyanin coloration of the stolons, the thickness of the stolons, and the pubescence of the stolons.

TABLE 5

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Stolon Number	Medium		
Average number of daughter plants	30	53	52
Stolon Anthocyanin	RHS 60B (Dark red-purple)	RHS 60A (Dark red-purple)	RHS 53A (Dark red)
Stolon Thickness	Medium	Medium	Medium
Stolon Pubescence	Sparse	Medium	Medium

Table 6 shows inflorescence characteristics of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel.' These characteristics include inflorescence position relative to foliage, time of flowering, relative flower size, flower diameter in centimeters (measured from petal tip to petal tip), petal shape, relative spacing of petals, petal apex, base and margin, petal length in centimeters, petal width in centimeters, petal length to width ratio, number of petals, petal color, calyx diameter in centimeters (measured on back of flower from sepal tip to sepal tip), diameter of calyx relative to corolla, diameter of inner calyx relative to outer, sepal shape, apex and margin, sepal length in centimeters (measured from sepal tip to point of attachment to receptacle), sepal width in centimeters, number of sepals, receptacle color and anther color.

TABLE 6

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Inflorescence position relative to foliage	Beneath	Level with	Beneath
Time of flowering (50% of plants at first flower)	Between early and medium	Between very early and early	Medium
Flower size	Medium	Medium	Large
Flower diameter (cm)	2.457	3.019	3.147
Petal shape	Orbicular	Orbicular	Orbicular
Petal spacing	Overlapping	Overlapping	Overlapping
Petal apex shape	Rounded	Rounded	Rounded
Petal margin	Entire	Entire	Entire
Petal base shape	Rounded	Rounded	Rounded
Petal length (cm)	1.135	1.317	1.562
Petal width (cm)	1.136	1.460	1.492
Petal length/width ratio	As long as broad	Broader than long	As long as broad
Typical and observed petal number	6	6	7
Petal color	RHS 155B (White)	RHS 155B (White)	RHS 155B (White)
Calyx diameter (cm)	2.902	3.064	4.834
Calyx diameter relative to corolla	Smaller to same size	Same size	Larger
Inner calyx diameter relative to outer	Same size	Same size	Same size
Sepal shape	Elliptical	Elliptical	Elliptical
Sepal apex shape	Truncate	Truncate	Truncate
Sepal margin	Entire	Entire	Entire
Sepal length (cm)	1.001	1.131	1.661
Sepal width (cm)	0.514	0.546	0.785
Typical and observed sepal number	12	12	14
Receptacle color	RHS 154B (Light yellow-green)	RHS 2A (Medium yellow)	RHS 150A (Light yellow-green)
Anther color	RHS 15A (Medium yellow-orange)	RHS 17B (Dark yellow-orange)	RHS 15A (Medium yellow-orange)

Table 7 shows fruit characteristics of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel.' These characteristics include fruiting truss length in centimeters, fruiting truss diameter, number of berries per truss, fruiting truss attitude, fruiting truss color, fruit length in centimeters, fruit truss width in centimeters, fruit length to width ratio, fruit hollow length and width in centimeters, fruit hollow length to width ratio, fruit weight in grams, relative fruit size, predominant fruit shape, difference in shape between primary and secondary fruits, band without achenes, unevenness of fruit surface, fruit skin color, evenness of fruit color, fruit glossiness, insertion of achenes, achene coloration (sunward and shaded sides of berry) and the number of achenes per berry.

TABLE 7

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Fruiting truss length (cm)	16.6	21.8	14.2
Fruiting truss length-general	Medium	Long	Medium
Fruiting truss diameter (cm) at base of truss	0.267	0.282	0.285
Number of berries per fruiting truss	1	2	1
Fruiting truss attitude	Prostrate	Semi-erect	Prostrate
Fruiting truss color at base of truss	RHS 144B (Medium yellow-green)	RHS 144B (Medium yellow-green)	RHS 144B (Medium yellow-green)
Fruit length (cm)	5.904	4.836	4.667
Fruit width (cm)	4.490	3.895	4.261
Fruit length/width ratio	1.3	1.2	1.1
Fruit hollow length (cm)	2.359	1.689	0.672
Fruit hollow width (cm)	0.823	0.708	0.269
Fruit hollow length/width ratio	2.9	2.4	2.5
Fruit weight (g)	37.9	27.3	39.0
Relative fruit size	Large	Medium	Medium
Predominant fruit shape	Conical to bi-conical	Conical	Conical
Difference in shape between primary & secondary fruits	None or very slight	Moderate	Marked
Band without achenes	Medium	Medium	Narrow
Unevenness of fruit surface	Medium	Medium	Strong
Fruit skin color	RHS 185A (Dark purple-red)	RHS 45A (Medium red)	RHS 46A (Dark red)
Evenness of fruit color	Slightly uneven	Even	Even
Fruit glossiness	Medium	Medium	Between medium and strong
Insertion of achenes	Below surface	Below surface	Above surface
Achene coloration-sunward side of berry	RHS 184B (Medium greyed-purple)	RHS 181C (Medium greyed-red)	RHS 184B (Medium greyed-purple)
Achene coloration-shaded side of berry	RHS 151C (Light yellow-green)	RHS 151B (Light yellow-green)	RHS 151C (Light yellow-green)
Achenes per berry	104	114	228

Table 8 shows fruit characteristics of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel.' These characteristics include the harvest maturity, insertion of calyx, pose of calyx segments, size of calyx in relation to fruit, adherence of calyx, firmness of flesh, color of the fruit flesh, evenness of the flesh color, distribution of flesh color, hollow center, sweetness of fruit, acidity of fruit, texture of fruit when tasted, type of bearing, grams of fruit per plant.

TABLE 8

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Harvest maturity	Mid-December to early April	Early December to March	Mid-December to early April
Insertion of calyx	Set above fruit	Level	Level
Pose of calyx segments	Spreading to reflexed	Reflexed	Reflexed
Size of calyx in relation to fruit	From same size to larger	Same size	From same size to larger
Adherence of calyx	Strong	Strong	Strong
Firmness of flesh	Firm	Firm	Medium

TABLE 8-continued

Characteristic	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Color of the flesh	RHS 155B (White) and RHS 42B (Medium Red)	RHS 155D (White) and RHS 40A (Medium red)	RHS 155B (White) and RHS 42A (Medium red)
Evenness of flesh color	Even	Even	Even
Distribution of flesh color	Marginal and central	Marginal and central	Marginal and central
Hollow center	Small	Small	Absent to small
Sweetness	Medium	Medium	Between medium and strong
Acidity	Weak	Weak	Medium
Texture when tasted	Fine	Medium	Medium
Type of bearing	Partially everbearing	Partially everbearing	Not everbearing
Grams of fruit/plant	604	405	420

Table 9 shows pest, stress and disease characteristics of the new cultivar compared to 'Driscoll Atlantis' and 'Driscoll Sanibel'.

TABLE 9

Pest, Stress or Disease	'DrisStrawTwelve'	'Driscoll Atlantis'	'Driscoll Sanibel'
Botrytis fruit rot	Moderately resistant	Susceptible	Susceptible
Powdery mildew	Moderately resistant	Susceptible	Susceptible
Xanthomonas fragariae	Moderately resistant	Between resistant and moderately resistant	Between resistant and moderately resistant
High temperatures	Moderately resistant	Moderately resistant	Resistant

COMPARISON WITH PARENTAL AND COMMERCIAL CULTIVARS

When 'DrisStrawTwelve' is compared to the female parent 'Driscoll Sanibel' (U.S. Plant Pat. No. 16,298), 'DrisStrawTwelve' has greater fruit production, larger fruit and fewer daughter plants than does 'Driscoll Sanibel.' In addition, 'DrisStrawTwelve' has moderate resistance to *Botrytis* fruit rot and powdery mildew while 'Driscoll Sanibel' is susceptible to both diseases.

When 'DrisStrawTwelve' is compared to the male parent 'Driscoll Bonaire' (U.S. Plant Pat. No. 18,041), 'DrisStrawTwelve' is a taller plant with dark yellow-green leaves than 'Driscoll Bonaire' which has medium green leaves. In addition, 'DrisStrawTwelve' produces more fruit than 'Driscoll Bonaire' although 'DrisStrawTwelve' has fewer daughter plants. 'DrisStrawTwelve' is also moderately resistant to *Botrytis* fruit rot while 'Driscoll Bonaire' is susceptible; 'DrisStrawTwelve' is moderately resistant to powdery mildew and *Xanthomonas fargariae* while 'Driscoll Bonaire' is moderately susceptible to both diseases.

We claim:

1. A new and distinct variety of strawberry plant as described and shown herein.

* * * * *

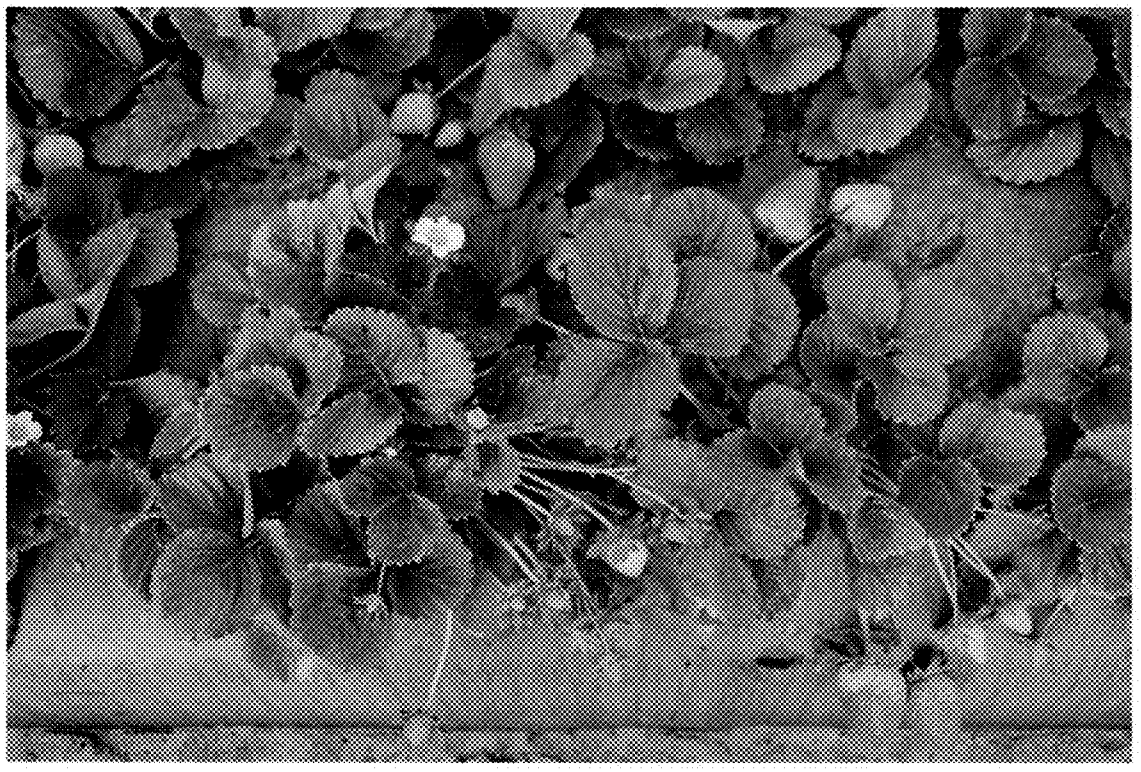

FIG. 1

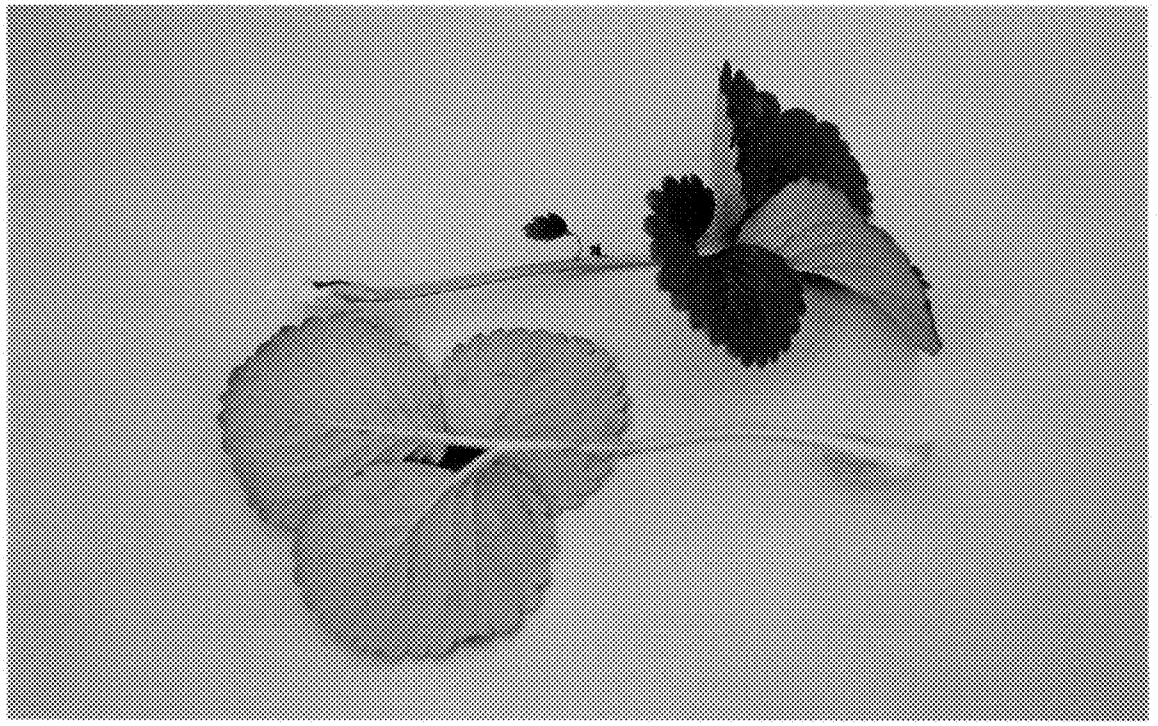

FIG. 2

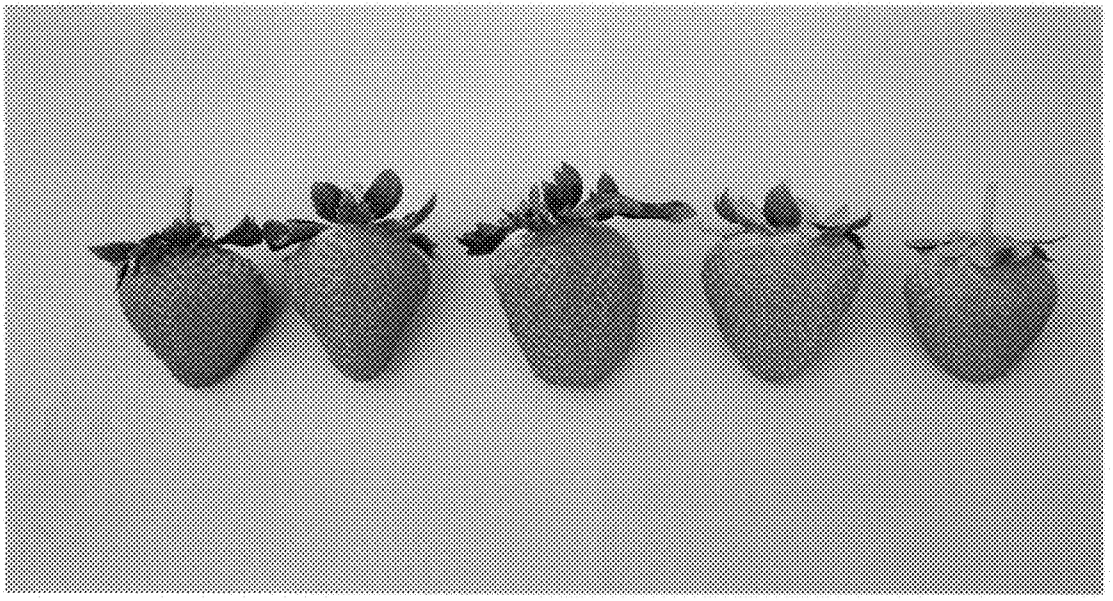

FIG. 3

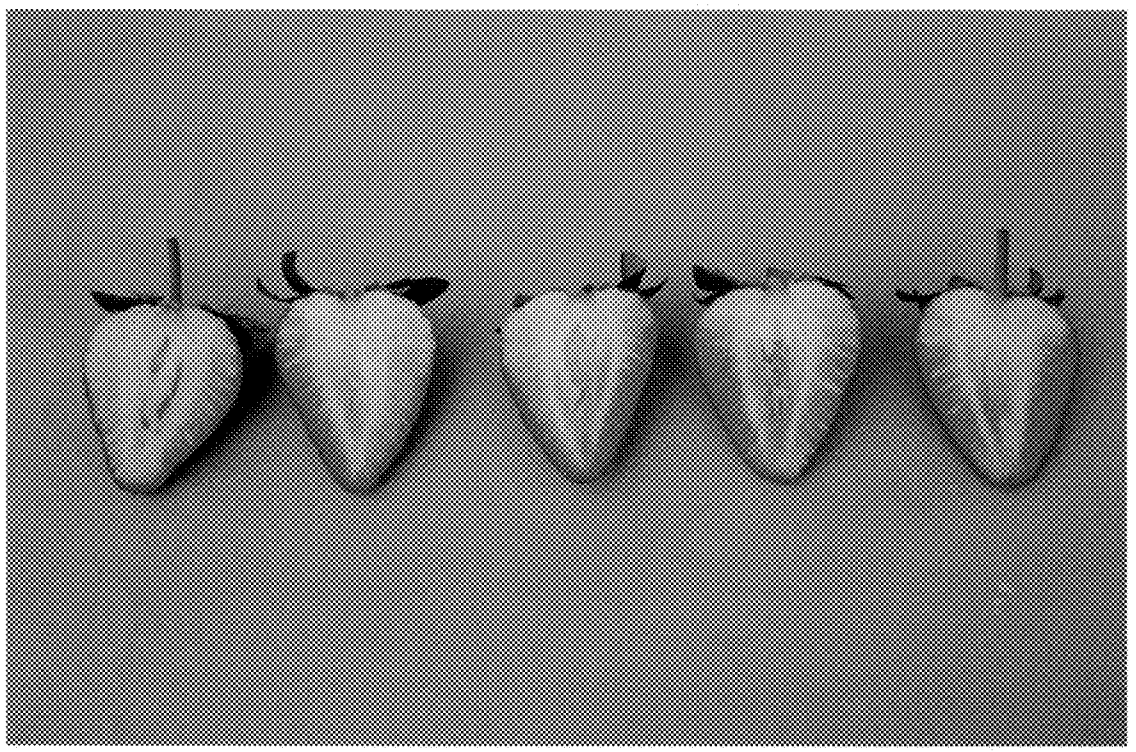

FIG. 4

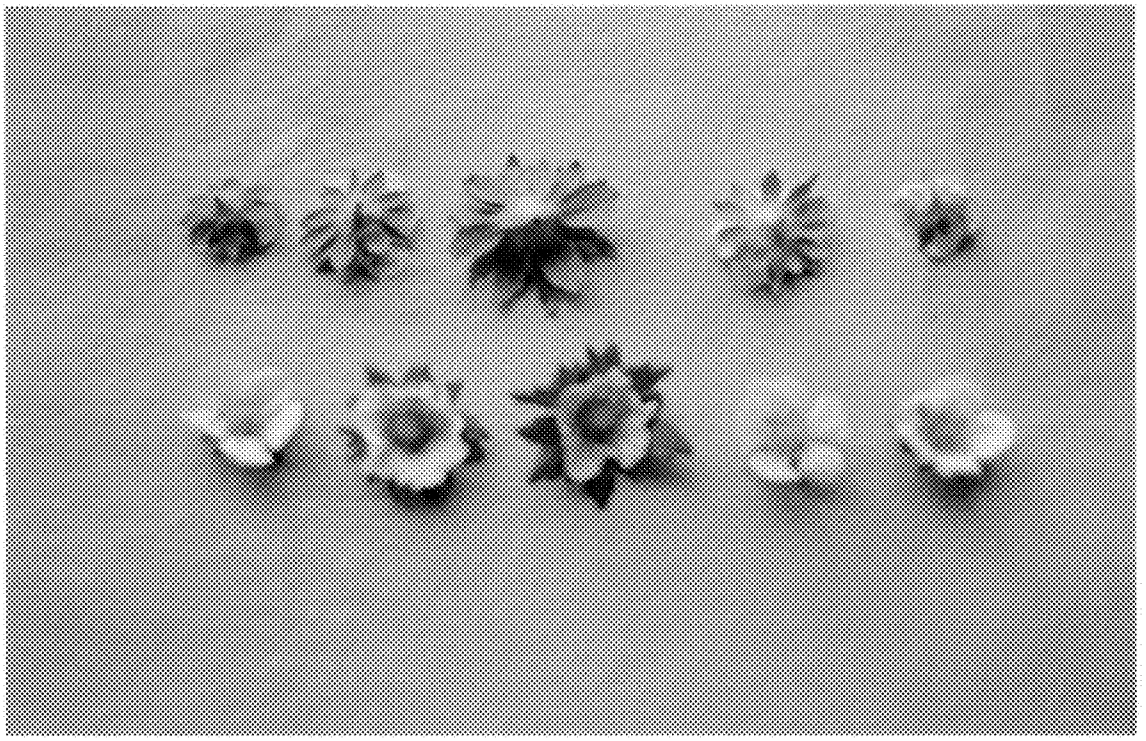

FIG. 5