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

(50) Latin Name: ***Fragaria* x *ananassa***
Varietal Denomination: **'DrisStrawNinetyNine'**

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CPC ***A01H 6/7409*** (2018.05)

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(56) **References Cited**

U.S. PATENT DOCUMENTS

PP1,745 P 8/1958 Lang
PP3,981 P 11/1976 Bringhurst et al.
PP4,487 P 11/1979 Bringhurst et al.
PP4,538 P 5/1980 Bringhurst et al.
PP5,262 P 7/1984 Voth et al.
PP5,265 P 7/1984 Voth et al.
PP5,266 P 7/1984 Bringhurst et al.
PP5,300 P 10/1984 Johnson, Jr. et al.
PP5,840 P 12/1986 Johnson, Jr. et al.
PP6,191 P 5/1988 Johnson, Jr. et al.
PP6,231 P 7/1988 Johnson, Jr. et al.
PP6,578 P 1/1989 Voth et al.
PP6,579 P 1/1989 Bringhurst et al.
PP7,024 P 9/1989 Johnson, Jr. et al.
PP7,172 P 2/1990 Voth et al.
PP7,522 P 5/1991 Johnson, Jr. et al.
PP7,614 P 8/1991 Bringhurst et al.
PP7,615 P 8/1991 Bringhurst et al.
PP8,086 P 1/1993 Nelson et al.
PP8,205 P 4/1993 Nelson et al.
PP8,649 P 3/1994 Sjulin et al.
PP8,661 P 3/1994 Bringhurst et al.
PP8,708 P 5/1994 Voth et al.
PP8,745 P 5/1994 Sjulin et al.
PP9,130 P 5/1995 Sjulin et al.
PP9,909 P 6/1997 Ackerman et al.
PP10,221 P 2/1998 Sjulin et al.
PP10,534 P 8/1998 Sjulin et al.
PP10,642 P 10/1998 Amorao et al.
PP11,035 P 8/1999 Mowrey et al.
PP11,277 P 3/2000 Gilford et al.
PP11,279 P 3/2000 Gilford et al.
PP11,522 P 9/2000 Amorao et al.
PP11,548 P 10/2000 Amorao et al.
PP11,554 P 10/2000 Sjulin et al.
PP11,639 P 11/2000 Mowrey et al.
PP12,186 P2 11/2001 Gilford et al.
PP12,436 P2 3/2002 Amorao et al.
PP12,577 P2 4/2002 Amorao et al.
PP12,817 P2 7/2002 Gilford et al.
PP12,899 P2 9/2002 Mowrey et al.
PP13,386 P2 12/2002 Mowrey et al.
PP13,469 P3 1/2003 Larson et al.
PP14,005 P3 7/2003 Amorao et al.
PP14,062 P3 8/2003 Amorao et al.
PP14,109 P3 8/2003 Gilford et al.
PP14,771 P3 5/2004 Amorao et al.
PP15,145 P2 9/2004 Mowrey et al.
PP15,308 P2 11/2004 Sjulin et al.
PP15,375 P2 11/2004 Mowrey et al.
PP15,435 P2 12/2004 Sjulin et al.
PP15,596 P2 3/2005 Amorao et al.
PP15,731 P2 4/2005 Amorao et al.
PP15,752 P2 5/2005 Gilford et al.
PP16,070 P2 10/2005 Gilford et al.
PP16,238 P2 2/2006 Amorao et al.
PP16,241 P2 2/2006 Mowrey et al.
PP16,298 P2 2/2006 Gilford et al.
PP16,299 P2 2/2006 Gilford et al.
PP16,475 P2 4/2006 Gilford et al.
PP16,558 P3 5/2006 Lopez
PP18,000 P2 9/2007 Meulenbroek
PP18,040 P3 9/2007 Mowrey et al.
PP18,041 P3 9/2007 Gilford
PP18,458 P2 1/2008 Ferguson et al.
PP18,575 P3 3/2008 Amorao et al.
PP18,878 P2 6/2008 Mowrey et al.
PP19,240 P2 9/2008 Gilford et al.
PP19,673 P3 2/2009 Ferguson et al.
PP19,767 P2 2/2009 Shaw et al.
PP20,248 P3 9/2009 Rogers et al.
PP20,363 P2 9/2009 Chandler
PP20,701 P2 2/2010 Gilford et al.
PP20,731 P2 2/2010 Mowrey et al.
PP20,733 P2 2/2010 Mowrey et al.
PP20,735 P2 2/2010 Ferguson
PP20,775 P2 2/2010 Mowrey et al.
PP20,922 P2 4/2010 Gilford et al.
PP21,538 P2 11/2010 Gilford et al.
PP21,559 P2 12/2010 Ferguson et al.
PP21,762 P2 3/2011 Stewart et al.
PP22,040 P3 7/2011 Stewart et al.
PP22,218 P2 11/2011 Ferguson et al.
PP22,247 P2 11/2011 Ferguson
PP23,107 P2 10/2012 Ferguson et al.
PP23,148 P2 10/2012 Gilford et al.
(Continued)

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(57) **ABSTRACT**

A new and distinct variety of strawberry plant named 'DrisStrawNinetyNine', particularly selected for its good fruit quality and flavor, large berry size, early production, and open canopy for ease of harvest, is disclosed.

6 Drawing Sheets

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP23,377	P2	2/2013	Ferguson et al.
PP23,378	P2	2/2013	Pullen et al.
PP23,382	P2	2/2013	Ferguson et al.
PP23,383	P2	2/2013	Ferguson et al.
PP23,400	P2	2/2013	Ferguson et al.
PP23,401	P2	2/2013	Pullen et al.
PP23,459	P2	3/2013	Stewart et al.
PP23,506	P3	4/2013	Ferguson et al.
PP23,517	P3	4/2013	Ferguson et al.
PP24,096	P3	12/2013	Fear et al.
PP24,317	P3	3/2014	Ferguson et al.
PP24,333	P3	3/2014	Vitten et al.
PP24,395	P3	4/2014	Vitten et al.
PP24,533	P3	6/2014	Ferguson et al.
PP24,745	P2	8/2014	Vitten et al.
PP25,408	P3	4/2015	Vitten et al.
PP25,437	P3	4/2015	Vitten et al.
PP25,698	P3	7/2015	Ferguson et al.
PP25,699	P3	7/2015	Stewart et al.
PP25,747	P3	7/2015	Kibbe et al.
PP25,866	P3	9/2015	Ferguson et al.
PP26,800	P3	6/2016	Stewart et al.
PP26,801	P3	6/2016	Stewart et al.
PP26,802	P3	6/2016	Rodriguez Alcazar et al.
PP27,442	P2	12/2016	Kibbe et al.
PP27,645	P3	2/2017	Vitten et al.
PP27,682	P3	2/2017	Kibbe et al.
PP27,711	P3	2/2017	Vitten et al.
PP27,813	P3	3/2017	Ferguson et al.
PP29,289	P3	5/2018	Vitten et al.
PP29,728	P2	10/2018	Stewart et al.
PP29,729	P2	10/2018	Kibbe et al.
PP29,730	P2	10/2018	Kibbe et al.
PP29,731	P2	10/2018	Ferguson et al.
PP29,747	P2	10/2018	Vitten et al.
PP29,748	P2	10/2018	Vitten et al.
PP29,749	P2	10/2018	Stewart et al.
PP30,775	P2	8/2019	Carrillo Mendoza et al.
PP30,789	P2	8/2019	Ferguson et al.
PP30,818	P2	8/2019	Pakozdi et al.
PP30,851	P2	8/2019	Fear et al.
PP30,936	P2	10/2019	Stewart et al.
PP31,083	P2	11/2019	Carrillo Mendoza et al.
PP31,233	P2	12/2019	Pakozdi et al.
PP31,527	P3	3/2020	Carrillo Mendoza et al.
PP31,655	P2	4/2020	Carrillo Mendoza et al.
PP31,703	P2	4/2020	Stewart et al.
PP31,827	P2	6/2020	Ferguson et al.
PP31,896	P2	6/2020	Pakozdi et al.
PP31,935	P2	7/2020	Pakozdi et al.
PP32,079	P2	8/2020	Carrillo Mendoza et al.
PP32,080	P2	8/2020	Ferguson et al.
PP32,271	P2	10/2020	Ferguson et al.
PP32,305	P3	10/2020	Pakozdi et al.
PP32,498	P2	11/2020	Carrillo Mendoza et al.
PP32,499	P3	11/2020	Jacobs et al.
PP32,500	P3	11/2020	Stewart et al.
PP32,801	P2	2/2021	Ferguson et al.
PP32,814	P2	2/2021	Stewart et al.
PP32,824	P2	2/2021	Stewart et al.
PP33,070	P2	5/2021	Mendoza et al.
PP33,090	P2	5/2021	Mendoza et al.
PP33,283	P2	7/2021	Stewart et al.
PP33,513	P2	9/2021	Stewart et al.
PP33,737	P2	12/2021	Hernandez et al.
PP33,738	P2	12/2021	Stewart et al.
PP34,072	P2	3/2022	Mendoza et al.
PP34,212	P2	5/2022	Jacobs et al.
PP34,241	P2	5/2022	Pakozdi et al.
PP34,273	P2	5/2022	Mendoza et al.
PP34,274	P2	5/2022	Ferguson et al.
2003/0079263	P1	4/2003	Gilford et al.
2013/0276182	P1	10/2013	Fear et al.

STRAWBERRY PLANT NAMED 'DRISSTRAWNINETYNINE'

Latin name:

Botanical classification: *Fragaria* x *ananassa*.

Varietal denomination: The varietal denomination of the claimed variety of strawberry plant is 'DrisStrawNinetyNine'.

BACKGROUND OF THE INVENTION

Cultivated strawberry is a hybrid species of the genus *Fragaria* that is grown worldwide for its fruit. Modern strawberry was first bred in Brittany, France, in the 18th century by crossing *Fragaria virginiana* with *Fragaria chiloensis*. Strawberry fruit is an aggregate accessory fruit, with the fleshy part of the fruit being derived from the receptacle that holds the ovaries.

Strawberry varieties vary widely in color, size, shape, flavor, season of ripening, degree of fertility, and susceptibility to disease. Certain varieties vary in foliage, and some vary in the relative development of their reproductive organs. Typically, strawberry flowers appear hermaphroditic in structure, but function as either male or female. Generally, commercial production of strawberry plants involves propagation from runners and distribution as either plugs or bare root plants. Cultivation is either perennial or annual plasticulture. During the off season, strawberries can also be produced in greenhouses.

Strawberry fruit is widely appreciated for its characteristic bright red color, aroma, juicy texture, and sweetness. Strawberry fruit is a popular fruit that is generally consumed either fresh or in prepared foods, such as preserves and baked goods.

Strawberry is an important and valuable fruit crop. Accordingly, there is a need for new varieties of strawberry plants. In particular, there is a need for improved varieties of strawberry plant that are stable, high yielding, and agronomically sound.

SUMMARY OF THE INVENTION

In order to meet these needs, the present invention is directed to an improved variety of strawberry plant. In particular, the invention relates to a new and distinct variety of strawberry plant (*Fragaria* x *ananassa*), which has been denominated as 'DrisStrawNinetyNine'.

Strawberry plant variety 'DrisStrawNinetyNine' originated from a controlled cross between the proprietary female parent '48AC198' (unpatented) and the male parent 'DrisStrawSeventySeven' (U.S. Plant Pat. No. 32,271). Progeny plants from this cross, including 'DrisStrawNinetyNine', were asexually propagated via stolons in Shasta County, Calif. in April 2016. Strawberry plant variety 'DrisStrawNinetyNine' was later specifically identified and selected in Ventura County, Calif. in October 2016.

'DrisStrawNinetyNine' was subsequently asexually propagated via stolons, and has undergone testing at test plots in Ventura County, Calif. for six years (2016 to 2022). The present variety has been found to be stable and reproduce true to type through successive asexual propagations via stolons and tissue culture.

'DrisStrawNinetyNine' was particularly selected for its good fruit quality and flavor, large berry size, early production, and open canopy for ease of harvest.

DESCRIPTION OF THE DRAWINGS

This new strawberry plant is illustrated by the accompanying photographs. The colors shown are as true as can be reasonably obtained by conventional photographic procedures. Unless otherwise indicated, the photographs are of plants that are six months old.

FIG. **1** illustrates whole fruit of variety 'DrisStrawNinetyNine'.

FIG. **2** illustrates longitudinal sections of fruit of variety 'DrisStrawNinetyNine'.

FIG. **3** illustrates the upper surface (top row) and lower surface (bottom row) of flowers of variety 'DrisStrawNinetyNine'.

FIG. **4** illustrates the lower surface (top row) and upper surface (bottom row) of leaves of variety 'DrisStrawNinetyNine'.

FIG. **5** illustrates an aerial view of a whole plant of variety 'DrisStrawNinetyNine'.

FIG. **6** illustrates a side view of a whole plant of variety 'DrisStrawNinetyNine'.

DETAILED BOTANICAL DESCRIPTION

The following detailed descriptions set forth the distinctive characteristics of 'DrisStrawNinetyNine'. The data which define these characteristics is based on observations taken in Ventura County, Calif. from 2016 to 2022. 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. 'DrisStrawNinetyNine' has not been observed under all possible environmental conditions. The botanical description of 'DrisStrawNinetyNine' was taken from plants that were six months old. The indicated values represent averages calculated from measurements of several plants. Color references are primarily to The R.H.S. Colour Chart of The Royal Horticultural Society of London (R.H.S.) (2015 edition). Descriptive terminology follows the *Plant Identification Terminology, An Illustrated Glossary,* 2nd edition by James G. Harris and Melinda Woolf Harris, unless where otherwise defined.

Classification:

Species.—*Fragaria* x *ananassa*.

Common name.—Strawberry.

Denomination.—'DrisStrawNinetyNine'.

Parentage:

Female parent.—Proprietary strawberry plant '48AC198' (unpatented).

Male parent.—'DrisStrawSeventySeven' (U.S. Plant Pat. No. 32,271).

Plant:

Height.—25 cm.

Diameter.—31.4 cm.

Height/width ratio.—0.80.

Number of crowns per plant.—5.

Growth habit.—Upright.

Density of foliage.—Sparse.

Vigor.—Medium.

Stolon:

Diameter (at bract).—4.9 mm.

Overall color.—RHS 146D (Moderate yellow green).

Anthocyanin coloration.—Medium.

Anthocyanin color.—RHS 58A (Moderate purplish red).

Density of pubescence.—Medium.

Fruiting truss:

Length (from crown to base of terminal flower or fruit).—17.8 cm.

Diameter (at base of truss).—1.2 cm.

Number of berries per truss.—8.
Attitude at first picking.—Semi-erect.
Color (at base of truss).—RHS 146D (Moderate yellow green).

Leaf:
Number of leaflets.—Three only.
Color of leaf upper surface.—RHS 137A (Moderate olive green).
Color of leaf lower surface.—RHS 138B (Moderate yellow green).
Blistering.—Medium.
Glossiness.—Medium.
Variegation.—Absent.
Terminal leaflet.—Length: 7.6 cm. Width: 7.1 cm. Length/width ratio: 1.07. Number of teeth per terminal leaflet: 23. Overall shape: Orbicular. Shape of base: Obtuse. Shape of apex: Rounded. Margin: Crenate. Margin profile: Revolute (Margins rolled backwards). Shape in cross section: Concave.
Petiole.—Length: 20.5 cm. Diameter: 4.5 mm. Overall color: RHS 144C (Strong yellow green). Pubescence: Dense. Attitude of hairs: Slightly outwards. Bract frequency (number present on each petiole): 0.
Petiolule.—Length: 6.4 mm. Diameter: 1.9 mm. Color: RHS 144C (Strong yellow green).
Stipule.—Length: 36.7 mm. Width: 10.1 mm. Stipule color: RHS 137A (Moderate olive green). Anthocyanin coloration: Absent or very weak. Pubescence: Medium.

Inflorescence:
Number of flowers per plant.—11.
Position of inflorescence in relation to foliage.—Same level.
Flowering interval.—November to June.
Pedicel.—Attitude of hairs: Slightly outwards.
Flower.—Flower diameter (petal tip to petal tip on non-flattened flower): 27.5 mm. Arrangement of petals: Overlapping. Size of calyx in relation to corolla: Larger. Stamen: Present. Receptacle color: RHS 144B (Strong yellow green). Anther color: RHS 153B (Strong greenish yellow).
Petal.—Length: 13.3 mm. Width: 13.5 mm. Length/width ratio: 0.99. Number of petals per flower: 7. Color of upper surface: RHS NN155B (White). Color of lower surface: RHS NN155C (White). Overall shape: Orbicular. Shape of apex: Rounded. Margin: Entire. Shape of base: Convex.
Calyx.—Diameter (sepal tip to sepal tip, measured on back of flower): 43.9 mm.
Sepal.—Length: 18.6 mm. Width: 8.8 mm. Number of sepals per flower: 12. Overall shape: Elliptical. Margin: Entire.

Fruit:
Fruit size.—Length: 49.2 mm. Width: 38.3 mm. Length/width ratio: 1.28.
Fruit hollow.—Length: 26.3 mm. Width: 11.3 mm. Length/width ratio: 2.34.
Shape.—Cylindrical.
Difference in shape of terminal and other fruits.—Slight.
Fruit color.—RHS N45 (Moderate red).
Evenness of color.—Even or very slightly uneven.
Glossiness.—Medium.
Evenness of surface.—Even or very slightly uneven.

Width of band without achenes.—Narrow.
Position of achenes.—Level with surface.
Position of calyx attachment.—Raised.
Attitude of sepals.—Upwards.
Diameter of calyx in relation to diameter of fruit.—Slightly larger.
Adherence of calyx.—Strong.
Firmness.—Medium firm.
Color of flesh (excluding core).—RHS 35A (Moderate reddish orange).
Evenness of flesh color.—Uneven.
Distribution of flesh color.—Marginal and central.
Color of core.—RHS 35B (Moderate reddish orange).
Sweetness/soluble solids (in °Brix).—8.7.
Titratable acidity (% as citric acid).—0.70%.
Individual fruit weight.—29.6 g/fruit.
Achenes.—Number of achenes per fruit: 357. Weight: 0.00075 g/achene. Color of upper (sunward) side: RHS 53A (Deep red). Color of lower (shaded) side: RHS 144B (Strong yellow green).
Fruiting.—Harvest interval: December to May. Type of bearing: Partially remontant. Productivity: 15,246 kg to 33,911 kg of fruit per hectare per season from six-month-old plants when grown in Ventura County, Calif.

Resistance to abiotic stress, pests, and diseases:
Two-spotted spider mite (tetranychus urticae).—Moderately resistant.
Botrytis fruit rot (botrytis cinerea).—Moderately resistant.
Powdery mildew (podosphaera macularis).—Moderately resistant.
Anthracnose crown rot (colletotrichum acutatum).—Moderately resistant.

COMPARISON WITH PARENTAL AND REFERENCE VARIETIES

'DrisStrawNinetyNine' differs from the female parent proprietary strawberry plant '48AC198' (unpatented) in that 'DrisStrawNinetyNine' has larger fruit size, more uniform fruit appearance, and more open plant canopy than '48AC198'.

'DrisStrawNinetyNine' differs from the male parent and reference variety 'DrisStrawSeventySeven' (U.S. Plant Pat. No. 32,271) in that 'DrisStrawNinetyNine' has sparse density of foliage, large flower diameter, cylindrical fruit shape, and absent or very weak stipule anthocyanin coloration, whereas 'DrisStrawSeventySeven' has medium density of foliage, medium flower diameter, cordate fruit shape, and medium stipule anthocyanin coloration.

'DrisStrawNinetyNine' differs from the reference variety 'DrisStrawTwentySeven' (U.S. Plant Pat. No. 23,400) in that 'DrisStrawNinetyNine' has medium stolon anthocyanin coloration, crenate terminal leaflet margins, cylindrical fruit shape, and the width of band without achenes on the fruit is narrow, whereas 'DrisStrawTwentySeven' has strong stolon anthocyanin coloration, serrate leaflet margins, conical fruit shape, and the width of band without achenes on the fruit is very broad.

We claim:

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

* * * * *

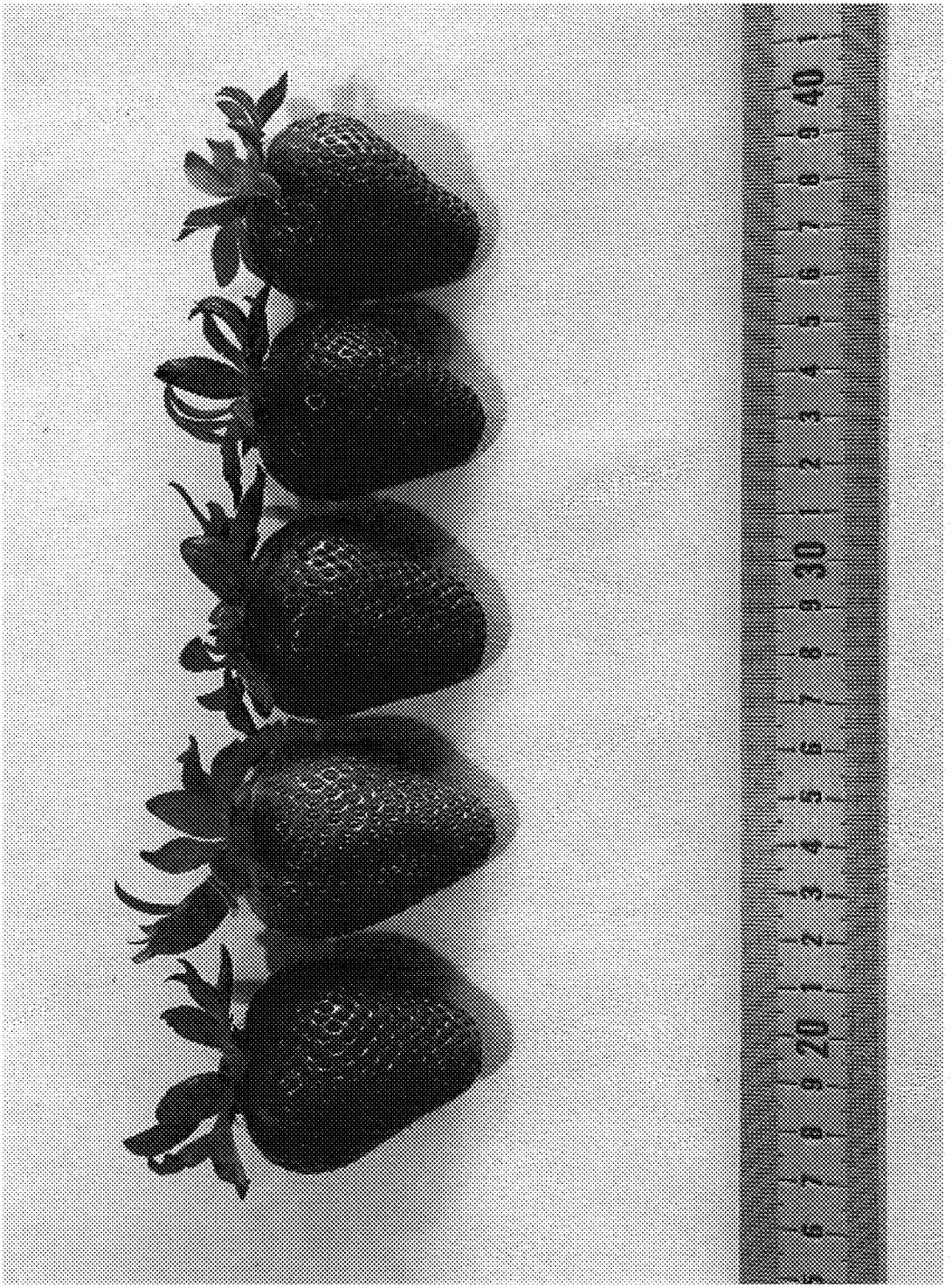

FIG. 1

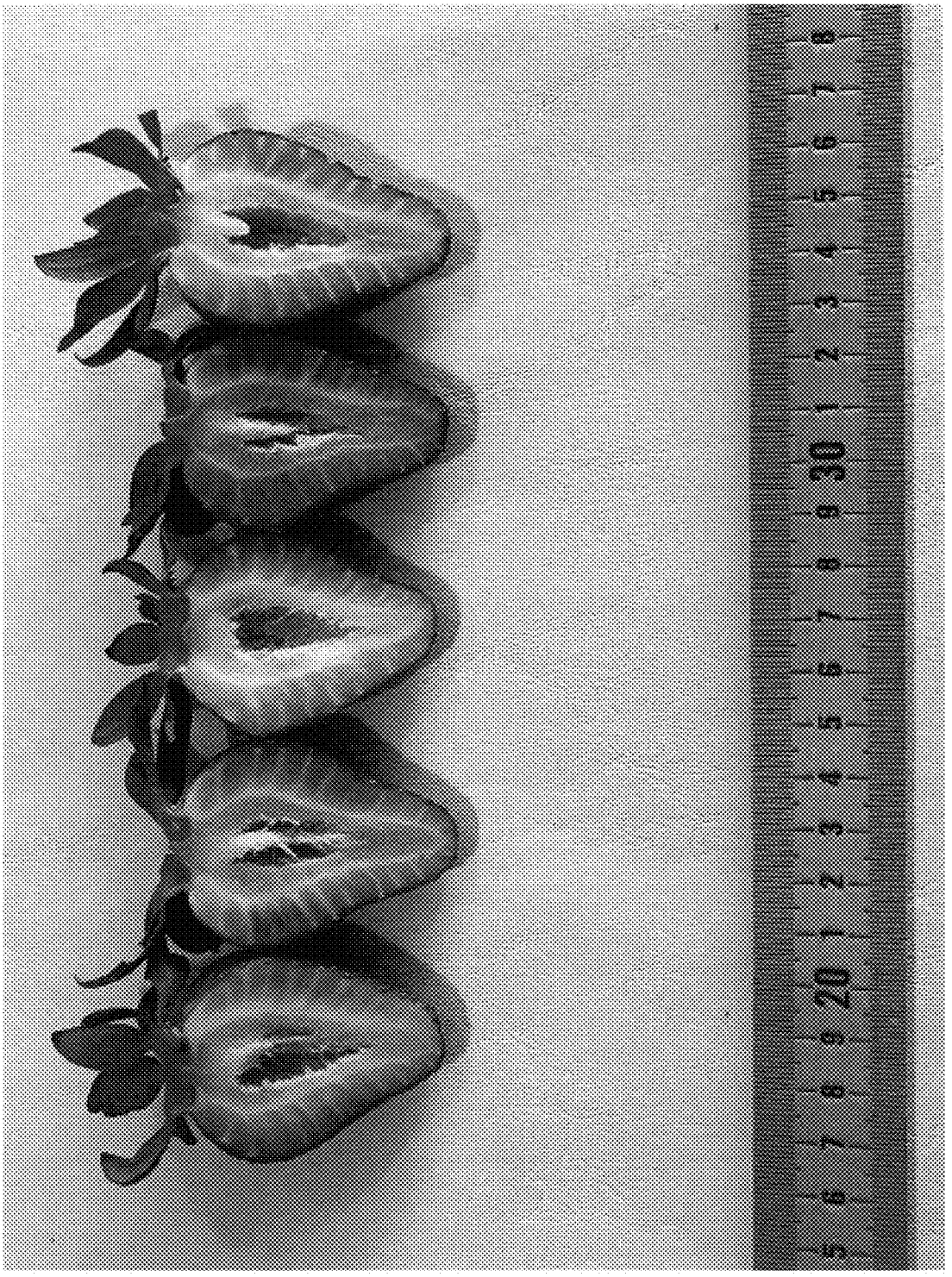

FIG. 2

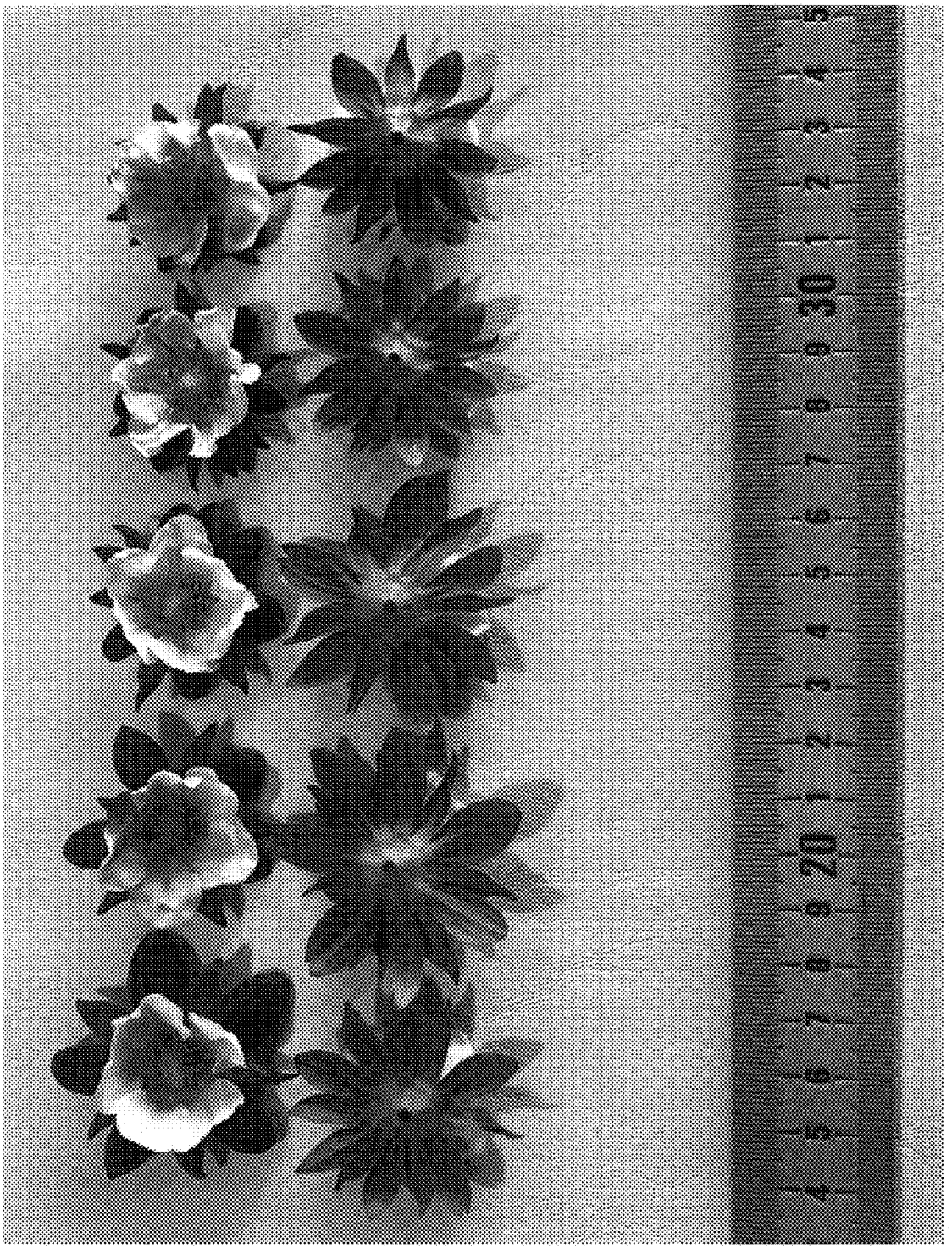

FIG. 3

FIG. 4

FIG. 5

FIG. 6