

US00PP34597P2

(12) **United States Plant Patent**  
**Adams**

(10) **Patent No.:** **US PP34,597 P2**

(45) **Date of Patent:** **Sep. 20, 2022**

- (54) **BLACKBERRY PLANT NAMED**  
**‘PS-BK3-17.006-13’**
- (50) Latin Name: ***Rubus L. subgenus Rubus***  
Varietal Denomination: **PS-BK3-17.006-13**
- (71) Applicant: **PLANT SCIENCES, INC.,**  
Watsonville, CA (US)
- (72) Inventor: **Scott W. Adams,** Carmel Valley, 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.: **17/503,081**
- (22) Filed: **Oct. 15, 2021**
- (51) **Int. Cl.**  
**A01H 5/08** (2018.01)  
**A01H 6/74** (2018.01)
- (52) **U.S. Cl.**  
USPC ..... **Plt./203**
- (58) **Field of Classification Search**  
USPC ..... Plt./203, 204  
CPC ... A01H 5/08; A01H 5/00; A01H 6/74; A01H  
6/749; A01H 6/7499  
See application file for complete search history.

- (56) **References Cited**  
  
U.S. PATENT DOCUMENTS  
  
PP22,449 P3 \* 1/2012 Clark ..... A01H 5/08  
Plt./203
- OTHER PUBLICATIONS  
  
Trademark Electronic Search System for PRIME-ARK, retrieved on  
Jan. 20, 2022, retrieved from the Internet at [https://tmsearch.uspto.gov/bin/showfield?f=doc&state=4805:2dh1r.3.15,2 pp. \(Year: 2022\).](https://tmsearch.uspto.gov/bin/showfield?f=doc&state=4805:2dh1r.3.15,2 pp. (Year: 2022).)\*  
  
\* cited by examiner

*Primary Examiner* — June Hwu  
(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **ABSTRACT**

This invention relates to a new and distinct everbearing variety of blackberry plant named ‘PS-BK3-17.006-13’. The new variety is primarily adapted to the growing conditions of the central coast of California and is characterized by the following: mid-season primocane production with medium sized fruit with good flesh and skin firmness. Fruit is of consistent oblong shape, with medium gloss and good flavor. Foliage is slightly convex (u-shaped) and medium green, possessing weak rugosity, weak gloss and 5-foliolate leaves. Primocanes have an absent or very weak waxy coat, low thorn density of green thorns and weak anthocyanin coloration.

**6 Drawing Sheets**

**1**

Latin name of the genus and species of the plant claimed:  
*Rubus L. subgenus Rubus.*  
Variety denomination: ‘PS-BK3-17.006-13’.

**BACKGROUND OF THE INVENTION**

The present invention relates to a new and distinct fall bearing blackberry plant designated as ‘PS-BK3-17.006-13’. This new variety is a result of a controlled cross made in 2017 in Watsonville, Calif. between blackberry variety ‘BK3 14.046-34’ (unpatented) as the female parent and blackberry variety ‘BK3 14.057-02’ (unpatented) as the male parent in an ongoing breeding program. The variety is botanically known as *Rubus L. subgenus Rubus.*

The seedling resulting from the aforementioned cross was asexually propagated by dormant canes in Santa Cruz County, Calif. and was subsequently selected by the inventor from a controlled breeding plot in Watsonville, Calif. in 2019. After its selection, the new variety was further asexually propagated by dormant canes, roots and non-dormant root shoot cuttings in Santa Cruz County, Calif., San Joaquin County, Calif. and Siskiyou County, Calif. The new variety was then extensively tested over the next several years in fruiting fields in Santa Cruz 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.

**2**

**BRIEF SUMMARY OF THE INVENTION**

‘PS-BK3-17.006-13’ is primarily adapted to the climate and growing conditions of the central coast of California. This region provides the necessary year-round temperatures required for it to produce and maintain a strong vigorous plant and to remain in fruit production from August through December on primocanes and in the ensuing year from June through August on the floricanes. The following traits have been repeatedly observed and are determined to be unique characteristics of ‘PS-BK3-17.006-13’, which in combination distinguish this blackberry plant as a new and distinct variety:

1. Primocane production
2. Berries with firm flesh and skin
3. Reduced thorn density
4. Fruit with strong adherence to receptacle
5. Good flavor

**BRIEF DESCRIPTIONS OF THE DRAWINGS**

The accompanying color photographs illustrate the overall appearance of typical specimens of the new blackberry variety, ‘PS-BK3-17.006-13’ at various stages of development as true as reasonably possible with color reproductions of this type. Color in the photographs may differ slightly from the color value cited in the detailed botanical descrip-

tion which accurately describes the color of ‘PS-BK3-17.006-13’. The depicted plant and plant parts of the new blackberry variety ‘PS-BK3-17.006-13’ were taken in Watsonville, Calif. and are approximately 2 to 16 months old:

FIG. 1 shows typical florican leaf color; foliate and rugosity characteristics of ‘PS-BK3-17.006-13’ taken in the month of March 2020;

FIG. 2 shows typical primocane coloration, thorn density and coloration of ‘PS-BK3-17.006-13’ taken in the month of October 2021;

FIG. 3 shows typical primocane flower bud and petal coloration of ‘PS-BK3-17.006-13’ taken in the month of September 2021;

FIG. 4 shows typical primocane fruit and drupelet characteristics of ‘PS-BK3-17.006-13’ taken in the month of September 2021;

FIG. 5 shows typical florican fruit characteristics of ‘PS-BK3-17.006-13’ as compared to those of its parents (female on left; male on right) taken in the month of July 2021;

FIG. 6 shows typical primocane plant height and habit of ‘PS-BK3-17.006-13’ taken in the month of October 2021.

DETAILED BOTANICAL DESCRIPTION

‘PS-BK3-17.006-13’ has not been observed under all possible environmental conditions. The characteristics of the new variety 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 raspberry variety ‘PS-BK3-17.006-13’, unless otherwise noted, are based upon observations taken during the 2020-2021 growing season in Watsonville, Calif. Primocane measurements and ratings were taken from plants of ‘PS-BK3-17.006-13’ produced from a tissue culture lab located in Watsonville, Calif. during the summer of 2020 and planted out mid-December 2020 into trial plots in Watsonville, Calif. The approximate age of the observed primocane plants is 6 to 10 months. Florican measurements and ratings were taken from the previous year’s trial plots of ‘PS-BK3-17.006-13’ planted in mid-December of 2019 and were observed at an approximate age of 16 to 18 months. Yield observations and fruit quality characteristics are averaged from three years of data collected from the 2019 through 2021 production seasons. Flower measurements and characteristics are from secondary flowers unless otherwise noted. Fruit characteristics and measurements are from secondary fruit unless otherwise noted. Foliage characteristics and measurements are from 5-foliolate foliage unless otherwise noted.

Color terminology where noted follows The R.H.S. Colour Chart Sixth Edition (2019 Reprint), Royal Horticultural Society, London, United Kingdom (1966).

The following tables 3-7 describe fruit, plant, foliage, flower and pest/disease characteristics of the new blackberry ‘PS-BK3-17.006-13’.

TABLE 3

FRUIT CHARACTERISTICS	
Characteristic	‘PS-BK3-17.006-13’
Color mature fruit	RHS 203A Black
Fruit length (mm)	25.86

TABLE 3-continued

FRUIT CHARACTERISTICS	
Characteristic	‘PS-BK3-17.006-13’
Fruit width (mm)	22.03
Length/Width ratio	1.17
	Longer than broad
Fruit predominant shape	Elliptic
Drupelets per berry	73.8
Drupe length (mm)	4.75
Drupe diameter (mm)	4.89
Relative size of drupes	Medium
Fruit size	Medium
Color achenes	RHS 162C Light yellow
Seed length (mm)	3.36
Seed width (mm)	1.60
Seed weight (mg)	3.70
Fruit per node	11.1
Abscission diameter (mm)	7.36
Abscission color	RHS 157A Pale yellow green
Glossiness	Medium
Adherence of receptacle	Strong
Firmness of flesh	Firm
Firmness of skin	Firm
Soluble Solids (% brix)	9.76
Titrateable Acidity (% as Citric Acid)	0.96
Flavor	Good

TABLE 4

PLANT CHARACTERISTICS	
Characteristic	‘PS-BK3-17.006-13’
General:	
Habit	Upright to semi-upright
Plant height (m)	2.1
Plant width (cm)	30
Time to initiate roots (days)	10-15
Canes per hill	3.6
Productivity	Medium
Self-fruitfulness	Yes
Type of bearing	On both previous season and current season canes
Primocane:	
Color (true)	RHS 144B Strong yellow green
Length (cm)	202.6
Basal diameter (mm)	20.89
Diameter central 1/3 (mm)	14.01
Lateral length at central 1/3 (cm)	38.1
No. fruiting laterals per cane	13.6
Total nodes per cane	28
Internode length at central 1/3 (mm)	64.42
Anthocyanin coloration	RHS 181A Moderate red
Anthocyanin intensity	Weak
Pubescence	Present
Vegetative bud length (mm)	4.61
Vegetative bud diameter (mm)	3.82
Vegetative bud shape	Ovate
Vegetative bud color	RHS 144B Strong yellow green
Strength of waxy coat (glaucosity)	Absent to very weak
Time of leaf burst	Medium
Time of flowering	Medium
Time of fruiting	Medium
Length of fruiting season	Long
% of total yield	59%

TABLE 4-continued

PLANT CHARACTERISTICS	
Characteristic	'PS-BK3-17.006-13'
Flowering period	Late May to Late October
Harvest period	Late August to Early December
Primocane fruit weight (g)	7.35
Primocane yield (g/plant)	3,940
Young Shoots:	
Number	2-3
Coloration	Few RHS 137C Moderate yellow green
Intensity of green	Medium
Thorns:	
Thorn presence	Present
Thorn Texture	Rigid
Thorn attitude of the tip	Downward
Thorn coloration (tip)	RHS 144B Strong yellow green
Thorn coloration (base)	RHS 144B Strong yellow green
Thorn length at central 1/3 (mm)	7.04
Thorn width of base at central 1/3 (mm)	5.35
Thorn density per cm at central 1/3	0.81
Floricane:	Few
Color (true)	RHS 187B Dark red
Length (cm)	107.22
Width at central 1/3 (mm)	14.82
Cane shape in cross section	Rounded to angular
Total nodes per cane	14.1
Internode length at central 1/3 (mm)	68.11
Fruiting lateral attitude	Erect to horizontal
Time of bud burst	Medium
Time of leaf burst	Medium
Time of flowering	Medium
Time of fruiting	Medium
Length of fruiting season	Medium
% of total yield	41%
Flowering period	Late April to Late June
Harvest period	Late May to Late July
Floricane fruit weight (g)	6.61
Floricane yield (g/plant)	2,738

TABLE 5-continued

FOLIAGE CHARACTERISTICS	
Characteristic	'PS-BK3-17.006-13' (5 Foliate)
Terminal Leaflet:	
Length (mm)	155.11
Width (mm)	102.96
Length/width ratio	1.50
Size	Longer than broad
Shape	Medium
Shape of tip	Ovate
Shape of base	Acuminate
Undulation of margin	Cordate
Shape in cross section	Weak
Presence of lobing	U-shaped
Margin: depth of incisions	Absent
Lateral Leaflet (basal pair):	4.06
Length (mm)	99.65
Width (mm)	59.74
Length/width ratio	1.7
Rachis length (mm)	Much longer than broad
Rachis diameter (mm)	58.91
Rachis anthocyanin coloration of upper surface	2.44 RHS 187B
Rachis anthocyanin intensity	Dark red
Orientation	Strong
Arrangement	Opposite
Shape	Compound
Relative position of lateral leaflets	Ovate
Shape of the base	Overlapping
Shape of the tip	Cordate
Petiole:	Acuminate
Length (mm)	
Diameter (mm)	121.05
Thorn presence	4.77
Thorn orientation	Present
Relative number of petiole thorns	Erect
Anthocyanin coloration of petiole upper surface	9.1 RHS 187B
Anthocyanin intensity of petiole upper surface	Dark red
Color of stipule	Medium
Stipule length (mm)	RHS 144A
Stipule width (mm)	Strong yellow green
Stipule size	15.95
Stipule shape	1.41
Stipule orientation	Medium
Stipule arrangement	Subulate
	Erect
	Free

TABLE 5

FOLIAGE CHARACTERISTICS	
Characteristic	'PS-BK3-17.006-13' (5 Foliate)
General:	
Color of upper surface	RHS NN137A Greyish olive green
Color of lower surface	RHS 138A Moderate yellowish green
Venation	Pinnate
Shape in cross section	Slightly convex
Arrangement	Palmate
Relief between veins (rugosity)	Weak
Glossiness	Weak
Margins	Biserrate
Number of leaflets/leaf	Five
Total leaf length (cm)	25.6
Total leaf width (cm)	25.0

TABLE 6

FLOWER CHARACTERISTICS	
Characteristic	'PS-BK3-17.006-13'
Petal color (upper surface)	RHS NN155B Pinkish white
Petal color (margin)	RHS 69C Very pale purple
Flower diameter (mm)	44.16
Petal Length (mm)	21.63
Petal width (mm)	13.66
Petal length/width ratio	1.58
Petal shape in cross section	Longer than broad
Petal shape (overall)	Flat
Petal shape (apex)	Obovate
Petal shape (base)	Ovate
Petal margin	Obtuse
	Crenate

TABLE 6-continued

FLOWER CHARACTERISTICS	
Characteristic	'PS-BK3-17.006-13'
Petal texture	Glabrous
No. petals/flower	5.0
No. sepals/flower	5.0
Sepal length (mm)	9.65
Sepal width at base (mm)	6.40
Sepal shape	Widely deltate
Sepal shape (apex)	Acuminate
Sepal coloration (upper surface)	RHS 143C Strong yellow green
Sepal coloration (lower surface)	RHS 142C Light yellow green
Sepal margin	Entire
Sepal texture	Pubescent
No. stamen/flower	115
Filament length (mm)	5.87
Filament color	RHS 155C Greenish white
Pollen quantity	High
Pollen color	RHS 155B Yellowish white
Anther length (mm)	1.11
Anther diameter (mm)	0.50
Anther coloration (pre-dehiscence)	RHS 155C Greenish white
Anther coloration (post-dehiscence)	RHS 165A Moderate brown
Stigma shape	Lobed
Stigma length (mm)	0.11
Stigma diameter (mm)	0.42
Pedicle length (mm)	22.89
Pedicle diameter (mm)	0.98
Pedicle coloration	RHS 144B Strong yellow green
Pedicle anthocyanin coloration	RHS 181D Dark yellowish pink
Pedicle anthocyanin intensity	Absent to very weak
Relative number of pedicel thorns	1.8 Few
Peduncle anthocyanin presence	Present
Peduncle anthocyanin coloration	RHS 184C Moderate purplish red
Peduncle anthocyanin intensity	Absent to very weak
Peduncle length (mm)	88.42
Peduncle diameter (mm)	3.11
Relative number of peduncle thorns	4.2
Peduncle thorn length (mm)	4.67
Peduncle thorn width at base (mm)	2.39

TABLE 7

PEST AND DISEASE REACTIONS	
Characteristic	'PS-BK3-17.006-13'
Spotted wing drosophila ( <i>Drosophila suzukii</i> )	Susceptible
Two spotted spider mite ( <i>Tetranychus urticae</i> )	Susceptible
Red berry mite ( <i>Acahthus essigi</i> )	Susceptible
Grey fruit mold ( <i>Botrytis cinerae</i> )	Susceptible
Powdery mildew ( <i>Podosphaera aphanis</i> var. <i>aphanis</i> )	Moderately resistant
Downy mildew ( <i>Peronospora sparsa</i> )	Susceptible
Orange rust ( <i>Arthuromyces peckianus</i> ) ( <i>Gymnoconia nitens</i> )	Moderately resistant

COMPARISON WITH PARENTAL AND COMMERCIAL VARIETIES

'PS-BK3-17.006-13' differs from the proprietary female parent 'BK3 14.046-34' (unpatented) in that 'PS-BK3-17.006-13' has slightly larger, less narrowly oblong fruit shape, smaller drupelet size, a more upright plant habit and later fruit production.

'PS-BK3-17.006-13' differs from the proprietary male parent 'BK3 14.057-02' (unpatented) in that 'PS-BK3-17.006-13' has a less round fruit shape, glossier berries, sweeter flavor and a larger overall primocane yield.

'PS-BK3-17.006-13' differs from the commercial variety 'APF-45' (patented, U.S. Plant Pat. No. 22,449) in that 'PS-BK3-17.006-13' has a smaller, less glossy berry with smaller seeds and sweeter flavor. 'PS-BK3-17.006-13' also has a slightly less upright habit, less overall vigor with both fewer and smaller thorns than 'APF-45'.

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

I claim:

1. A new and distinct variety of blackberry plant named 'PS-BK3-17.006-13', substantially as illustrated and described herein.

\* \* \* \* \*

FIG. 1

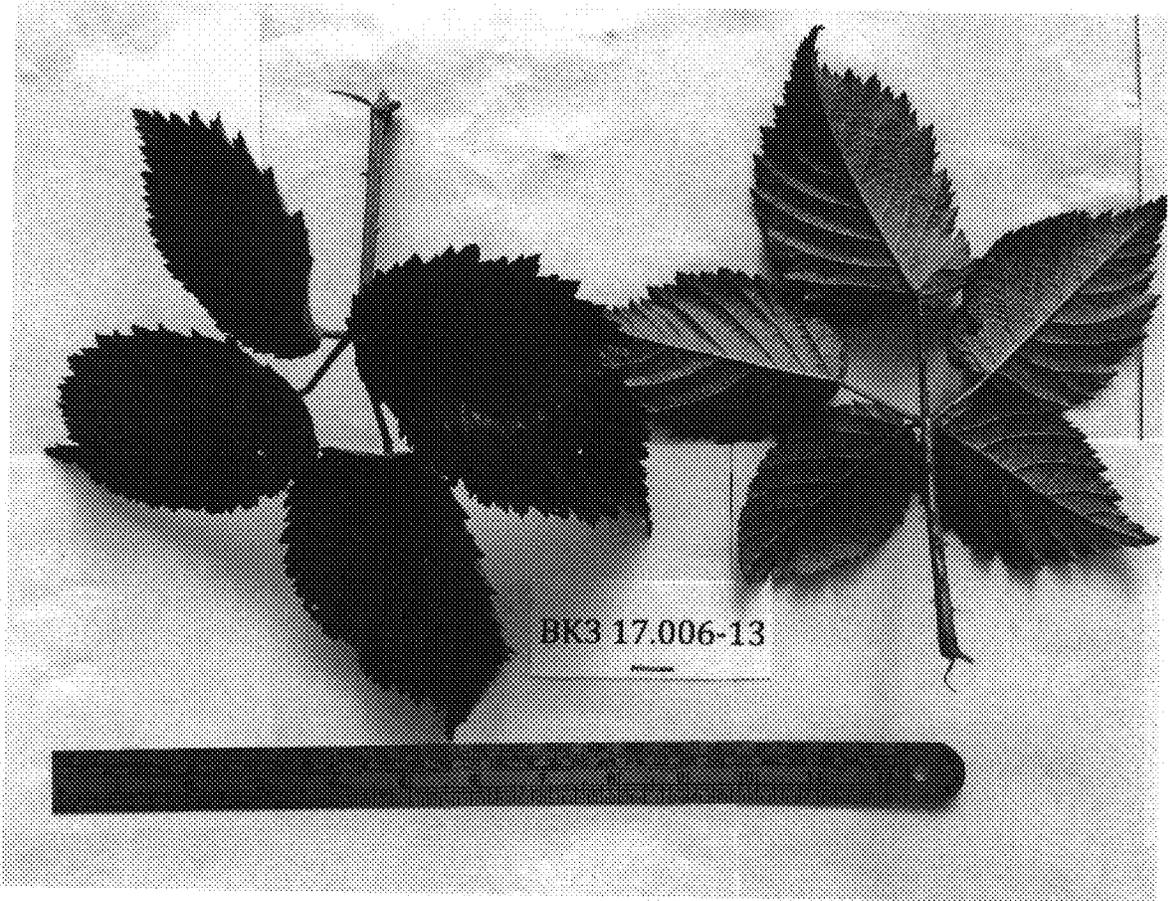


FIG. 2

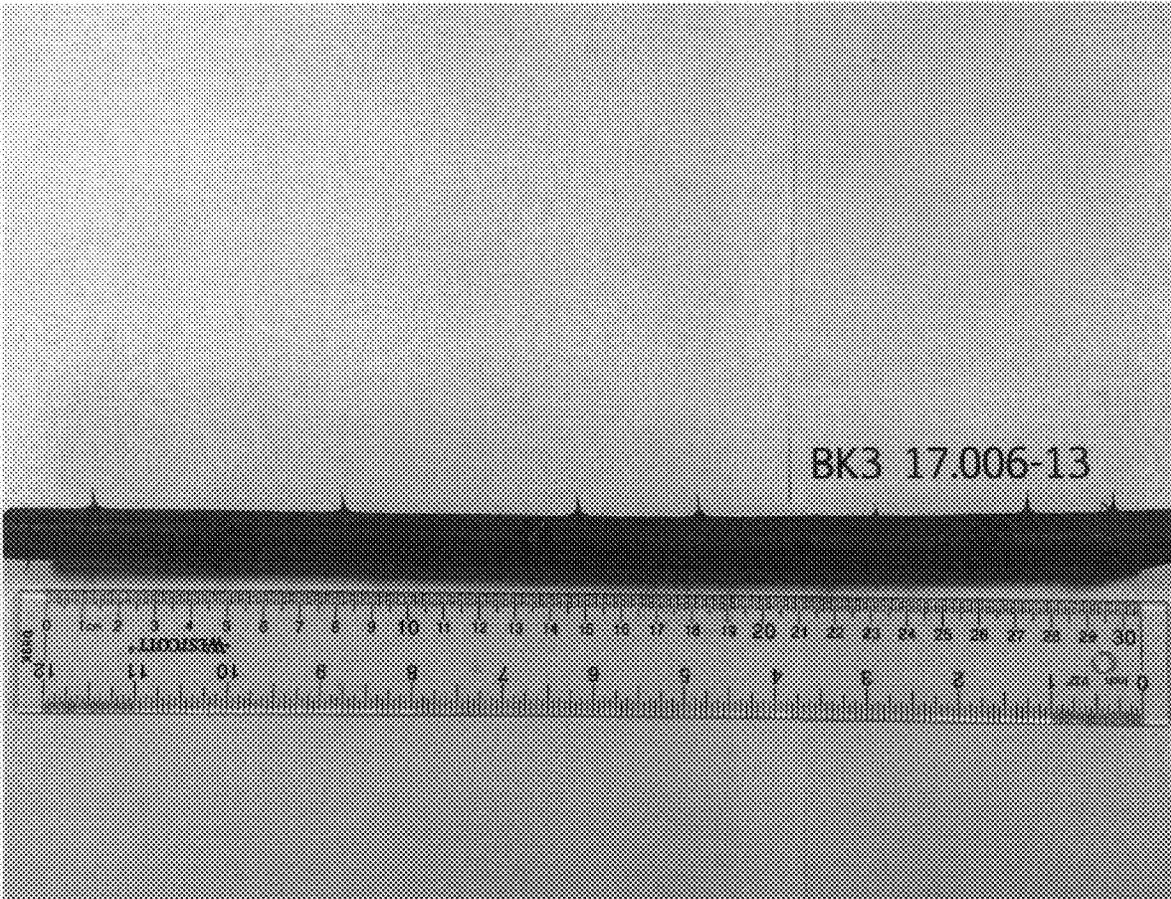


FIG. 3

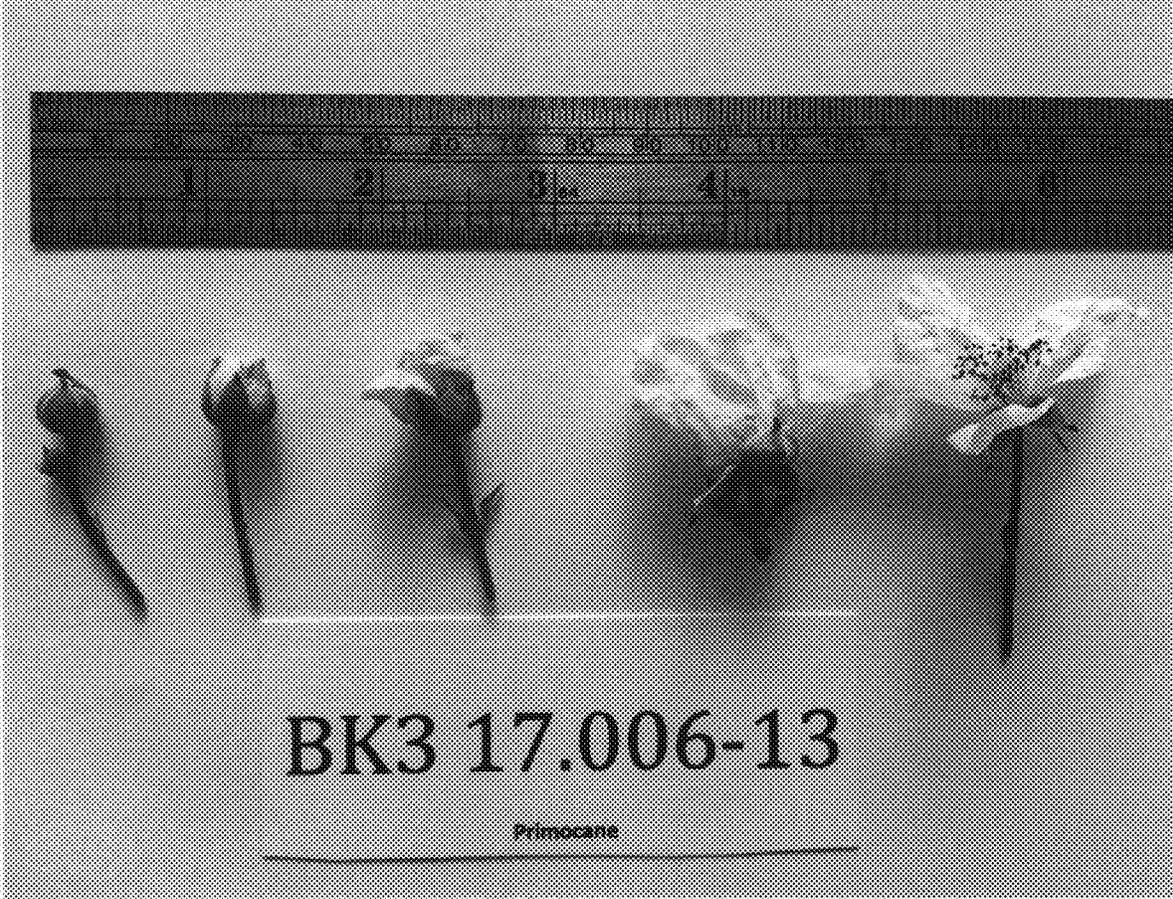


FIG. 4

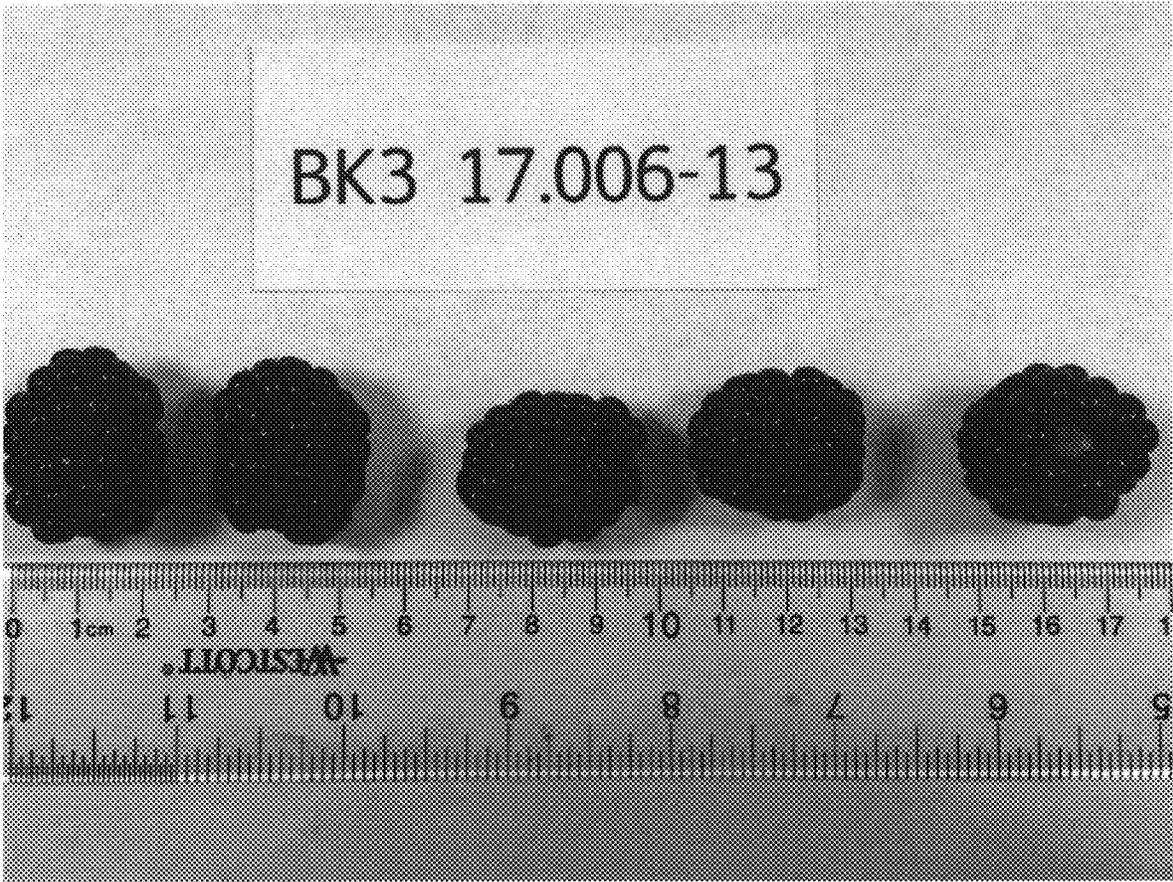


FIG. 5

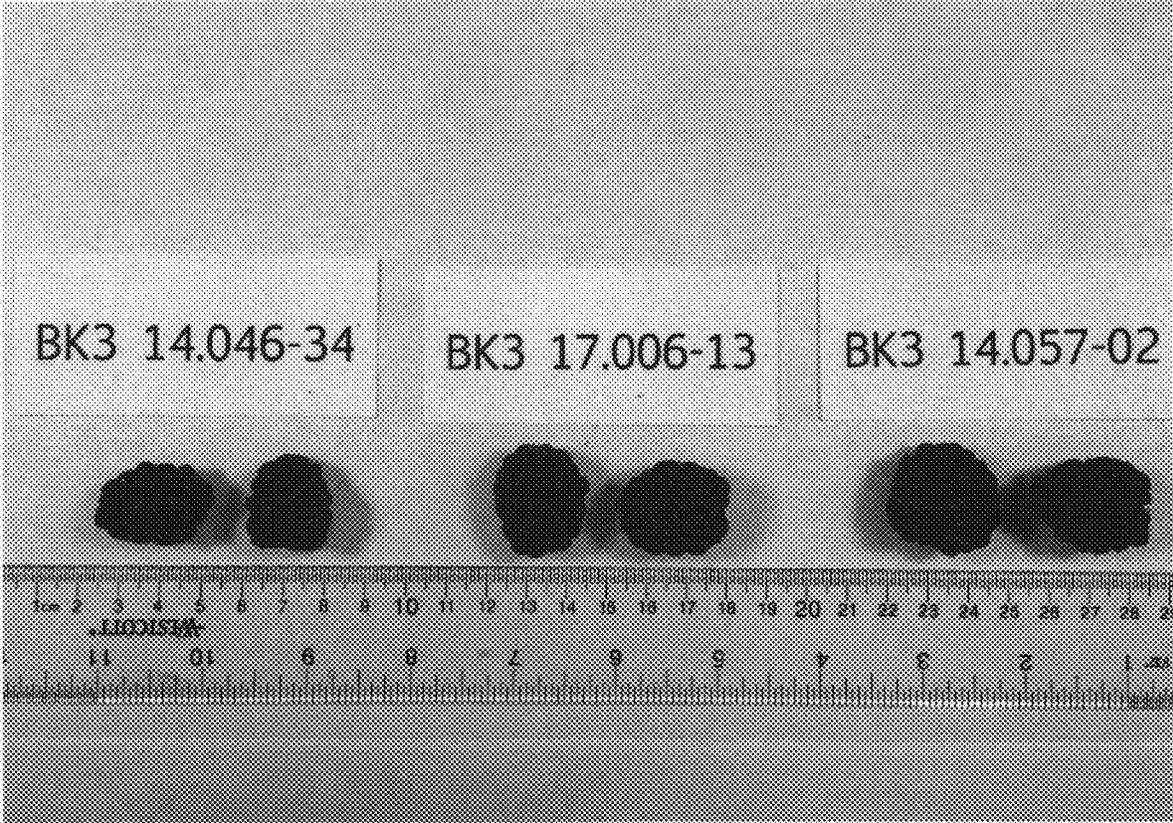


FIG. 6

