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VandenLangenberg et al.

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(54) **STRAWBERRY PLANT NAMED ‘CBC015’**

(50) Latin Name: *Fragaria x ananassa*
Varietal Denomination: **CBC015**

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patent is extended or adjusted under 35
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A01H 5/08 (2018.01)
A01H 6/74 (2018.01)

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USPC **Plt./208**
CPC **A01H 6/7409** (2018.05)

(58) **Field of Classification Search**

USPC Plt./208, 209
CPC A01H 5/0893
See application file for complete search history.

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(57) **ABSTRACT**

A new and distinct cultivar of strawberry plant (*Fragaria x ananassa*) named ‘CBC015’ is presented here. This new short-day strawberry cultivar is characterized by moderate vigor plants which produce exceptionally large early yields of attractive conical fruit. In addition, plants of ‘CBC015’ are resistant to *Macrophomina phaseolina*.

7 Drawing Sheets

1

Latin name of the genus and species of the plant claimed:
Botanical classification: *Fragaria x ananassa*.

Variety denomination: The new strawberry variety
denomination is ‘CBC015’.

BACKGROUND OF THE INVENTION

This invention relates to a new and distinctive short-day type cultivar designated as ‘CBC015’. The new cultivar was the result of a controlled cross performed in 2015 in Huelva, Spain between the cultivar ‘Grenada’ (U.S. Plant Pat. No. 26,708) and the unpatented cultivar ‘Primoris’. ‘CBC015’ was first fruited at an experimental orchard near Oxnard, Calif. in 2016, where it was selected, originally designated 115.012-608, and propagated asexually by runners. Following selection and during testing, the plant of this selection was later designated ‘CBC015’. Asexual propagules from this original source have been evaluated in Watsonville, Calif., in Oxnard, Calif., and to a limited extent in grower fields starting in 2020. The cultivar is stable and reproduces true to type in successive generations of asexual reproduction.

2

Comparison With Parents

The female parent ‘Grenada’ is a short-day cultivar that was selected for its overall high appearance score and large, firm fruit. Plants of ‘Grenada’ are smaller than ‘CBC015’. The male parent ‘Primoris’ is a short-day cultivar that was selected for its high early season yield. Plants of ‘Primoris’ are larger in size than ‘CBC015’.

SUMMARY OF THE INVENTION

‘CBC015’ is a short-day cultivar that produces fruit over an extended period when treated appropriately in arid, sub-tropical climates. When treated with appropriate planting regimes, ‘CBC015’ has larger fruit and produces individual plant yields greater than that of either parent. The following traits have been repeatedly observed over multiple testing years and locations and are determined to be unique characteristics of ‘CBC015’. These characteristics in combination distinguish ‘CBC015’ as a new and distinct Strawberry plant:

- 1. Large sized plant.
- 2. Early flowering habit.

- 3. Exceptional fruit flavor.
- 4. Large to medium glossy red fruit.
- 5. Fruit is firm throughout the growing season.
- 6. Fruit postharvest longevity is good.
- 7. Excellent freezer crop.

1 The cultivar ‘CBC015’, when planted under appropriate conditions, is an early fruiting short-day cultivar with exceptionally high total yields. Fruit quality is good with excellent flavor. Early yield is of increased interest to fresh market strawberry sales companies as return prices on fruit volume are substantially higher. In addition to its early yield performance, ‘CBC015’ is resistant to *Macrophomina phaseolina*, the causal agent of charcoal rot.

BRIEF DESCRIPTION OF THE FIGURES

The accompanying color photographs, identified as FIGS. 1 through 7, show the appearance of typical specimens of the new strawberry cultivar designated ‘CBC015’. These Figures depict the colors, as nearly true as it is reasonably possible given differences in color illustrations of this character. Accordingly, color in the photographs may differ slightly from the colors discussed in the botanical description.

- FIG. 1 shows a typical leaf and petiole structure.
- FIG. 2 shows a typical plant and fruit early season.
- FIG. 3 shows typical fruit in a box in early season.
- FIG. 4 shows typical fruit in a plastic box.
- FIG. 5 shows a cross-section of representative fruit mid-season.
- FIG. 6 shows a typical plot in the field of plants and fruit.
- FIG. 7 shows a typical plot in the field of plants and fruit later in season.

DETAILED BOTANICAL DESCRIPTION OF THE PLANT

‘CBC015’ is a new and distinct short-day cultivar of strawberry, genus and species *Fragaria x ananassa*. Plants of ‘CBC015’ do not bloom continuously in higher elevation plantings, and do not bloom in the heat of low elevation nursery locations such as French Camp, CA, consistent with other short-day varieties. The plants of the new cultivar have a moderate vigor and produce multiple crowns during the growing season. ‘CBC015’ exhibits several characteristics which are improvements over one or both of its parent varieties, and other cultivars known to the Inventors. These characteristics are compared with other cultivars in Table 2, 3, and 4.

The fruit size of ‘CBC015’ is moderately large, with a seasonal average of 35.5 g, slightly larger than its parents. The fruit size of ‘CBC015’ is generally good since it is not too large to be damaged in shipping containers, but not too small to allow for efficient picking and packing. The ‘CBC015’ fruit also hangs down on the shoulder of the bed later in the season, which makes for greater visibility and ease of picking. Storability of the fruit has not been measured but in informal observations the fruit retains good physical characteristics and appearance for several days after harvest at room temperature and up to at least a week in common refrigerator conditions of roughly 3° C.

‘CBC015’ produces mostly long conic fruit like its parent ‘Grenada’. The fruit of ‘CBC015’ generally ripens evenly from the tip to the shoulders of the berry, resulting in a uniform red color over the whole fruit. In contrast, the fruit of ‘Grenada’ may have a blotchy color during the ripening

process. The fruit of ‘CBC015’ can be exceptionally large early in the season, with weekly average of 60 grams per fruit.

5 The data set for ‘CBC015’ set forth below was collected in May 2023 from plants grown at a test plot in Oxnard, CA. Yield, size, and firmness data is either averaged over the entire 2022-2023 growing season or presented as monthly totals at the same location. Description data was collected on 10 five-month-old plants.

The observed characteristics of ‘CBC015’ are set forth in Table 1, 2, 3, and 4 below. Color terminology is noted in accordance with Pantone Color Formula Guide GP1601A. 15 The observed characteristics of ‘CBC015’ are also compared to known cultivars ‘Fronteras’ (U.S. Plant Pat. No. 26,709) and ‘San Andreas’ (U.S. Plant Pat. No. 19,975) in Table 2, 3, and 4. Table 5 sets forth the test results of DNA fingerprinting using eight SSR markers for ‘CBC015’ and for the recently patented variety ‘CBC005’ (U.S. Plant Pat. No. 35,197) for comparison.

TABLE 1

Detailed Description of Characteristics of ‘CBC015’	
SPECIFICATION:	
Genus/Species	<i>Fragaria X ananassa</i>
Market Name	Strawberry
PARENTS:	
Female	‘Grenada’
Male	‘Primoris’
PLANT:	
Type	Short-day, non-everbearing
Growth Habit	Semi-upright
Foliage density	Moderate
Vigor	Moderate
Height	Average 29 cm; range 25-32 cm
Width	Average 21 cm; range 16-24 cm
Disease tolerance	Test plots have shown tolerance to <i>Macrophomina phaseolina</i>
Disease susceptibility	Susceptible to <i>Phytophthora cactorum</i>
LEAF:	
Width	13 cm
Color	Adaxial surface: Pantone 574 C Abaxial surface: Pantone 575 C
Pubescence	Slight density
Glossiness	Low
Variation	Not present
TERMINAL LEAFLET	
Length	Average 71 mm; range 54-82 mm
Width	Average 57 mm; range 46-63 mm
Ratio (length/width)	1.2
Margins	Crenate to serrate
Leaflet shape	Obovate
Base shape	Cuneate
Cross-section shape	Concave
PETIOLE	
Pubescence	Medium density
Petiole color	Pantone 2300 C
Petiole length	Average 22 cm; range 17-30 cm
Petiole diameter	Average 3.7 mm; range 2.5-4.7 mm
STIPULE	
Anthocyanin coloration	Medium
Length	Average 24 mm; range 20-32 mm
Width	Average 9 mm, range 6-12 mm

TABLE 1-continued

Detailed Description of Characteristics of 'CBC015'	
INFLORESCENCE:	
Flowering time	Early
Position	Mostly at or above canopy
Petal arrangement	Slightly overlapping
Calyx size	Larger than corolla
Number of blooms	15
Length	2.5 cm
Flower diameter	Average 30 mm; range 25-42 mm
Petal number	Average 5.5; range 5-6
Petal length	Average 10 mm; range 8-12 mm
Petal width	Average 8.5 mm; range 8-10 mm
Petal color	Adaxial surface: Pantone 11-0601 Abaxial surface: Pantone 11-4300
Ratio (length/width)	1.2
Calyx color	Adaxial surface: Pantone 2465 C Abaxial surface: Pantone 2264 C
Stamens length	Average 25 mm; range 21-28 mm
PEDICEL	
Pubescence	Medium density
Length	Average 131 mm; range 114-153 mm
Width	Average 2.6 mm; range 1.5-3.8 mm
Ratio (length/width)	50
Color	Pantone 365 C
FRUIT:	
Bearing	Short-day, non-everbearing
Harvest Season	December 15 th to June in Southern California
Length	Average 5 cm; range 4.5-5.5 cm
Width	Average 4 cm; range 3.5-4.5 cm
Individual fruit weight	Seasonal average: 35.5 g
Shape	Mostly conic
Achenes	Just below fruit surface
Glossiness	Medium/high
External color evenness	Even
External color	Pantone 1805 C
Internal color	Pantone 7417 C
Band at top without achenes	Narrow width
Fruit Yield	Grams per plant: 1222 g
Firmness	0.69 kg/force
Achene color	Pantone 4211 C

TABLE 2

Marketable yield of 'CBC015' compared to other known cultivars in Oxnard, CA during the 2022-2023 season.							
Marketable yield (g/plant)							
Cultivar	Dec-ember	Jan-uary	Feb-ruary	March	April	May	Total
'Fronteras'	2	180	194	356	319	478	1529
'San Andreas'	24	135	84	202	324	247	1016
'CBC015'	5	113	184	500	424	405	1628

TABLE 3

Size of 'CBC015' fruit compared to other known cultivars in Oxnard, CA during the 2021-2022 season.							
Fruit size (g/fruit)							
Cultivar	Dec-ember	Jan-uary	Feb-ruary	March	April	May	Average
'Fronteras'	49.0	46.2	43.8	30.6	24.7	23.8	36.3
'San Andreas'	35.4	31.1	33.8	29.4	24.6	25.1	29.9
'CBC015'	49.0	35.7	41.0	34.9	24.4	27.9	35.5

TABLE 4

Firmness of 'CBC015' compared to other known cultivars in Oxnard, CA during the 2021-2022 season.				
Firmness (kg/force)				
Cultivar	March	April	May	Average
'Fronteras'	0.49	0.51	0.48	0.49
'San Andreas'	0.61	0.62	0.58	0.60
'CBC015'	0.67	0.62	0.59	0.63

TABLE 5

DNA finger printing results of eight SSR markers for 'CBC015' and 'CBC005'								
Allelic Fingerprint Analysis								
Cultivar	M1	M2	M3	M4	M5	M6	M7	M8
'CBC015'	202, 214, 224, 229	259, 269, 271	182, 188, 190, 216	279, 289, 292	154	238, 242, 251, 257, 264	121, 124, 130	215, 222, 228
'CBC005'	212, 224, 229	259, 264, 269, 271, 275	190, 232	279, 289, 292	154, 156	242, 257, 261	121, 130	215, 222, 228

We claim:

1. A new and distinct strawberry plant named 'CBC015' as described and illustrated herein.

* * * * *

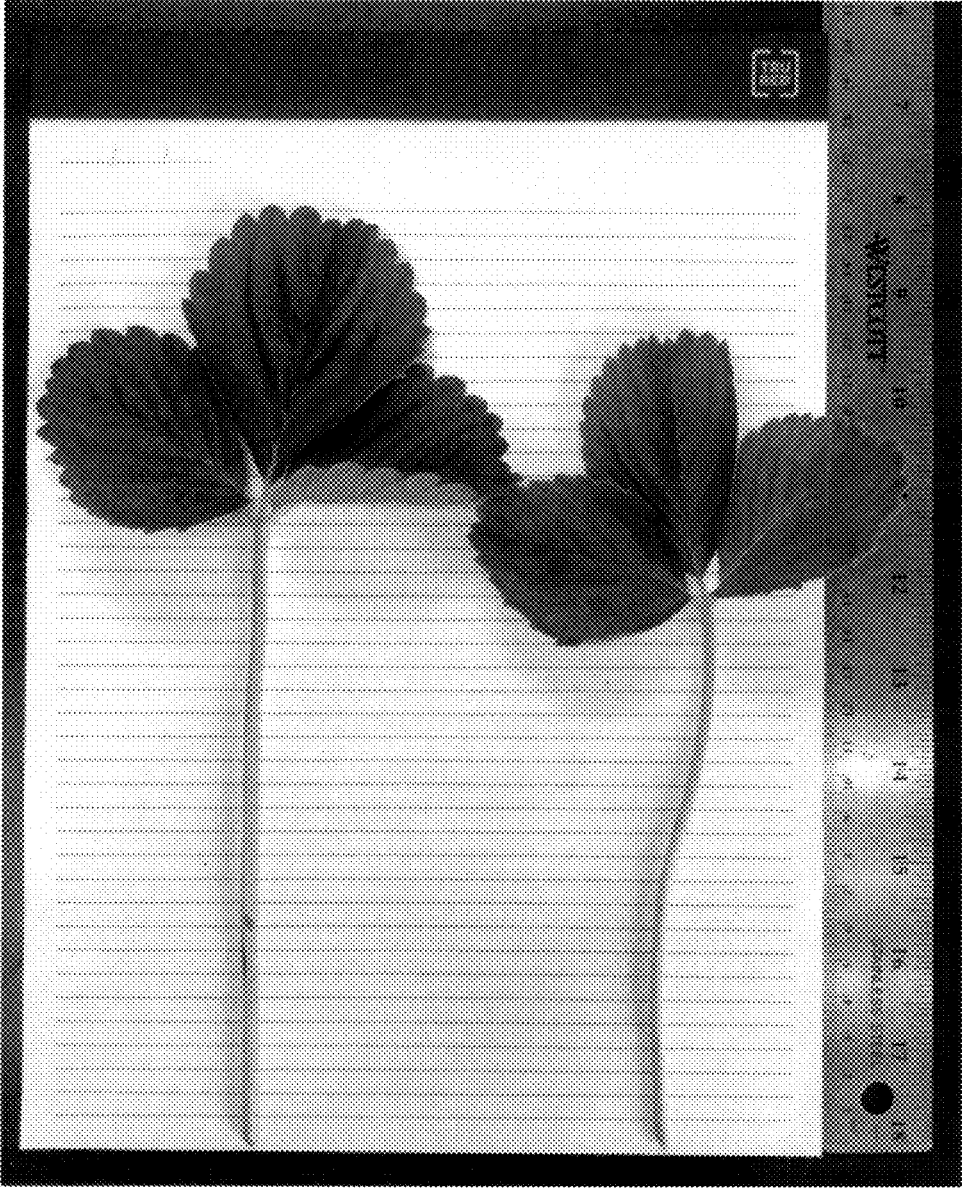


FIG. 1



FIG. 2



FIG. 3

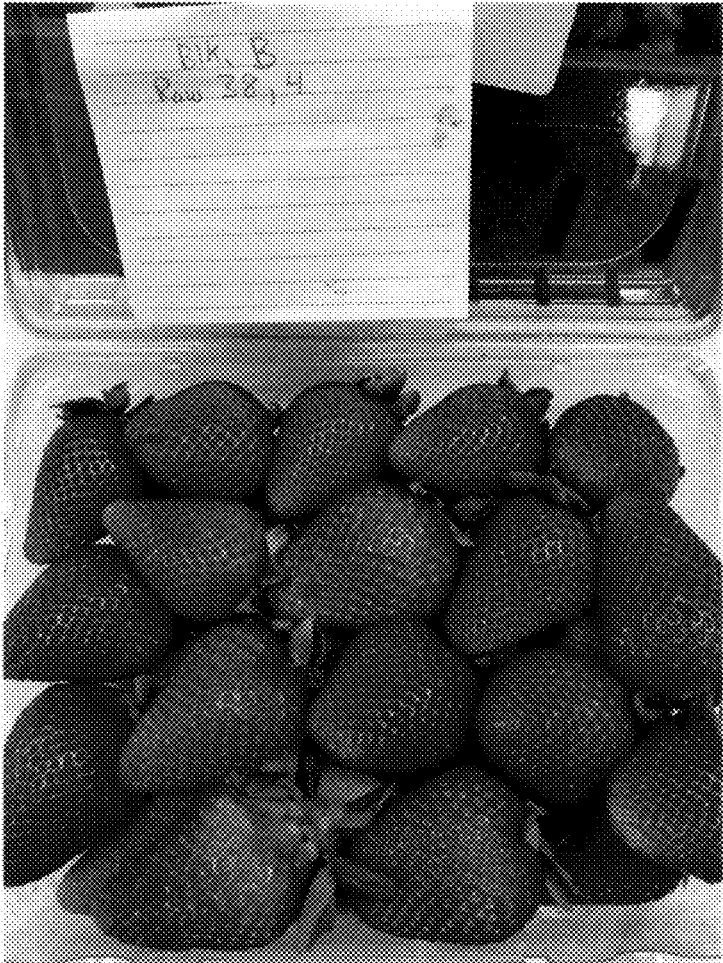


FIG. 4

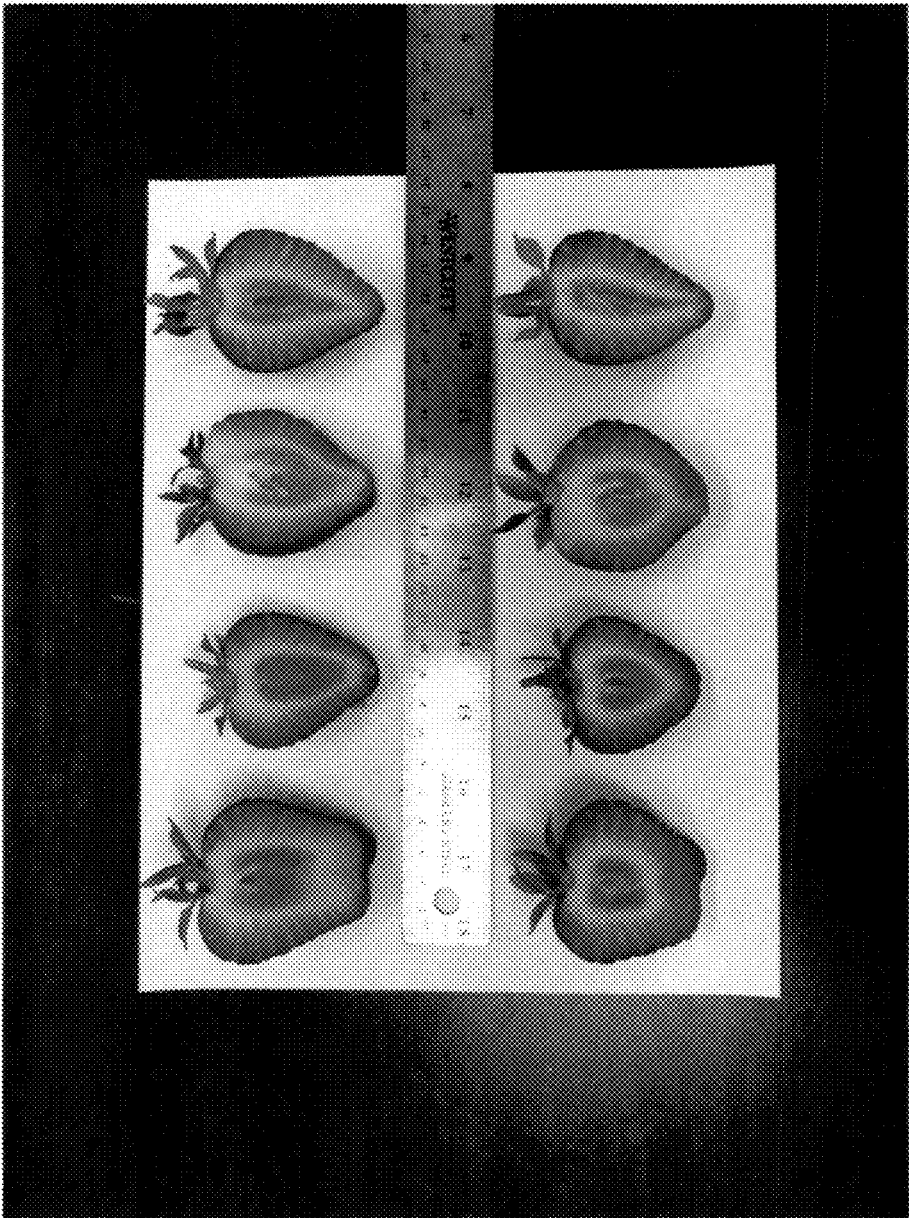


FIG. 5



FIG. 6



FIG. 7