

LIS00PP35898P2

(12) United States Plant Patent Sills et al.

(10) Patent No.: US PP35,898 P2 (45) Date of Patent: Jul. 2, 2024

(54) BLACKBERRY PLANT NAMED 'DRISBLACKTHIRTYTWO'

- (50) Latin Name: *Rubus* L. subgenus *Rubus*Varietal Denomination: **DrisBlackThirtyTwo**
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- (*) 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.: 18/481,748
- (22) Filed: Oct. 5, 2023
- (51) Int. Cl.

 A01H 5/08 (2018.01)

 A01H 6/74 (2018.01)
- (52) U.S. Cl.

See application file for complete search history.

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(57) ABSTRACT

A new and distinct variety of blackberry plant named 'DrisBlackThirtyTwo', particularly selected for its good plant health and the size, firmness, and flavor of fruit, is disclosed.

4 Drawing Sheets

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Latin name:

Botanical classification: Rubus L. subgenus Rubus.

Varietal denomination: The varietal denomination of the claimed variety of blackberry plant is 'DrisBlackThirtyTwo'.

BACKGROUND OF THE INVENTION

Blackberry is the common name for a multitude of plant species bearing dark purple to black aggregate fruit in the genus *Rubus* of the family Rosaceas. Most blackberries are within the subgenus *Rubus*.

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Native chiefly to the northern temperate regions, black-berries are now being cultivated as a valuable fruit crop in many areas of the world, particularly in Europe, North America and Central America. Recognized for their high contents of antioxidants, dietary fiber, vitamin C, and vitamin K. Blackberry fruit are typically consumed as fresh fruit, individually quick frozen fruit, or in prepared foods, such as purées, juices, jellies, jams, grocery items, baked goods, and snack foods.

Globally, Mexico is the leading producer of blackberries, with nearly the entire crop being produced for export into the off-season fresh markets in North America and Europe. The

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Mexican market is almost entirely from the cultivar 'Tupi' (unpatented) (also spelled as 'Tupy'). In the United States, Oregon is the leading commercial blackberry producer, followed by the state of California.

Blackberries are perennial plants that typically bear bien- ⁵ nial stems (known as "canes") from a perennial root system. The two cane types are primocanes, or first-year canes, which are usually vegetative, and floricanes, which are the same canes and produce fruit in the next growing season. In its first year, a new cane, the primocane, grows vigorously to its full length of three to six meters in a growth habit of erecting, arching, or trailing along the ground and bearing large compound leaves with 3, 5, or 7 leaflets; it does not produce any flowers. In its second year, the cane becomes a 15 floricane and stops elongating, but the lateral buds break to produce flowering laterals that bear fruit.

Recently, primocane-fruiting blackberry varieties have been developed that are capable of flowering and fruiting on first-year canes. Primocane-fruiting blackberry varieties 20 have several advantages, including potential of two crops on the same plant in the same year, reduction in pruning costs by mowing of canes, avoidance of winter injury, and production of fruit in an extended geographic area. However, primocane-fruiting blackberry varieties are also subject to a 25 number of challenges, such as poor heat tolerance, lesser fruit quality, and low yield.

Blackberry is an important and valuable commercial fruit crop. Accordingly, there is a need for new varieties of blackberry plant. In particular, there is a need for improved $\,^{30}$ varieties of blackberry 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 blackberry plant. In particular, the invention relates to a new and distinct variety of blackberry plant (Rubus L. subgenus Rubus), which has 40 Plant: been denominated as 'DrisBlackThirtyTwo'.

Blackberry plant variety 'DrisBlackThirtyTwo' was selected in Ciudad Guzmán, Jalisco, Mexico in January of 2013 and originated from a controlled cross between the female parent blackberry plant 'DrisBlackFive' (U.S. Plant 45 Pat. No. 24,701) and a male parent blackberry plant obtained from a bulk population designated as '2011 BQ Bulk' (unpatented). The original seedling of the new variety was first asexually propagated via root cuttings in Ciudad Guzmán, Jalisco, Mexico in January of 2013.

'DrisBlackThirtyTwo' was subsequently asexually propagated via root cuttings, and underwent testing in Ciudad Guzmán, Jalisco, Mexico from 2013 to 2019 (six years). The present variety has been found to be stable and reproduce true to type through successive asexual propagations via root 55 cuttings and tissue culture.

'DrisBlackThirtyTwo' was selected for its good plant health and the size, firmness, and flavor of fruit.

BRIEF DESCRIPTION OF THE DRAWINGS

This new blackberry plant is illustrated by the accompanying photographs. The colors shown are as true as can be reasonably obtained by conventional photographic procedures. The photographs are of plants that are two to five 65 years old.

FIG. 1 illustrates leaves of variety 'DrisBlackThirtyTwo'.

FIG. 2 illustrates a section of a cane of variety 'Dris-BlackThirtyTwo'.

FIG. 3 illustrates flowers of variety 'DrisBlackThirtyTwo' at various stages of development.

FIG. 4 illustrates fruits of variety 'DrisBlackThirtyTwo' at various stages of development.

DETAILED BOTANICAL DESCRIPTION

The following descriptions set forth the distinctive characteristics of 'DrisBlackThirtyTwo'. The data that define these characteristics are based on observations taken in Ciudad Guzmán, Jalisco, Mexico from 2013 to 2019. 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. 'DrisBlackThirtyTwo' has not been observed under all possible environmental conditions. The botanical description of 'DrisBlackThirtyTwo' was taken from plants that were two to five years 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:

Family.—Rosaceae.

Botanical.—Rubus L. subgenus Rubus.

Common name.—Blackberry.

Variety name.—'DrisBlackThirtyTwo'.

Parentage:

Female parent.—'DrisBlackFive' (U.S. Plant Pat. No. 24,701).

Male parent.—'2011 BQ Bulk' (unpatented).

Propagation.—Root cuttings and tissue culture.

Growth habit.—Semi-upright.

Height.-208 cm.

Width.—50 cm.

Height/width ratio.—4.16.

Vigor.—High.

Self-fruitfulness.—Self-fruitful.

Canes:

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Internodal distance.—13 cm.

New cane.—Strength: Strong. Glaucosity (waxy bloom): Weak.

Dormant cane.—Anthocyanin coloration: Weak. Overall coloration: RHS 148B (Moderate yellow green). Predominant distribution of branches: Over whole length. Cross-section: Rounded. Spine: Presence of spines: Present. Length: 10 mm. Width (at base): 10 mm. Number of spines on dormant cane: Many. Color: RHS 139D (Moderate yellow green). Density of spines on central third of cane: Dense. Texture: Heavy. Attitude of spine apex in relation to cane: Outwards.

Fruiting lateral.—Fruiting lateral length (4th lateral from tip): 33 cm. Number of fruits per fruiting lateral: 16.

Young shoots.—Length: 54 cm. Diameter: 3 cm. Anthocyanin coloration (during rapid growth): Strong. 5

Overall color: RHS 144A (Strong yellow green). Number of glandular hairs: Absent or few. Time of young shoot emergence: Mid-January.

Leaves:

Time of leaf bud burst.—Mid-February.

Leaf.—Predominant number of leaflets: 5. Type: Palmate. Relative position of lateral leaflets: Touching. Arrangement: Alternate. Venation: Dichotomous. Vein color: RHS 152D (Dark greenish yellow). Color of upper side: RHS 147A (Moderate olive green). Color of lower side: RHS 138B (Moderate yellow green). Profile in cross-section: Convex (margins rolled backwards). Glossiness of upper side: Medium.

Leaflet.—Type of incision of margin: Bi-serrate. Depth 15 of margin incisions: Medium.

Terminal leaflet.—Length: 8.4 cm. Width: 5.6 cm. Length/width ratio: 1.5. Shape: Oval. Base: Obtuse. Margin: Doubly serrate. Lobing: Absent. Shape in cross-section: U-shaped. Undulation of margin: 20 Strong. Blistering between veins: Weak.

Lateral leaflet (single leaflet in basal pair).—Length:16.1 cm. Width: 5.5 cm. Length/width ratio: 2.9.Shape: Ovate. Apex: Acuminate. Base: Obtuse. Margin: Doubly serrate.

Rachis (length between terminal leaflet and adjacent lateral leaflets).—2.3 cm.

Petiole.—Length: 5.9 cm. Diameter: 3 mm. Color of upper surface: RHS 139C (Moderate yellow green). Color of lower surface: RHS 137D (Greyish olive 30 green).

Stipule.—Length: 2 cm. Width: 1 mm. Color: RHS 147A (Moderate olive green). Orientation: Clasping. Inflorescence:

Flower bud.—Length: 6 mm. Width: 10 mm. Color: 35 RHS 191A (Greyish yellow green).

Flower.—Diameter: 32.75 mm. Number of flowers observed at 3' node from tip of lateral: 14. Fragrance: Faint.

Petal.—Length: 19.23 mm. Width: 12.71 mm. Length/ 40
 width ratio: 1.51. Number of petals per flower: 5.
 Color: RHS 155C (Greenish white). Shape: Oval.
 Apex: Complex. Base: Cuneate. Margin: Erose.

Sepal.—Length: 10 mm. Width: 7 mm. Color: RHS 138D (Light yellow green).

Flower pedicel.—Length: 40.65 mm. Diameter: 1.13 mm. Color: RHS 138C (Moderate yellow green).

Inflorescence peduncle.—Length: 32 mm. Diameter: 2 mm. Color: RHS 138C (Moderate yellow green).

Reproductive organs.—Style: Length: 2 mm. Color: 50 RHS 140A (Vivid yellowish green). Ovary: Color: RHS 143B (Strong yellow green). Stamen: Length: 4 mm. Color: RHS 145A (Strong yellow green). Pollen: Amount: Medium.

Flowering interval on previous year's cane 55 (floricane).—Mid-February.

Fruit:

Length of mature fruit.—32.82 mm. Diameter of mature fruit.—23.62 mm. Ratio of length to width.—1.38. Floricane fruit weight.—10.9 g/fruit. Sweetness/soluble solids (in ° brix).—15.4. Titratable acidity (% as citric acid).—1.3%.

Glossiness.—Medium.

Firmness.—Firm.

Fruit shape in longitudinal section.—Narrow ovate. Fruit color.—RHS 203A (Black).

Drupe.—Length of single drupe: 5 mm. Diameter of single drupe: 5 mm. Average number of drupes per fruit: 105.

Seed.—Diameter: 2 mm. Weight: 0.00474834 g/seed. Color: RHS 158C (Yellowish white). Abundance: Medium.

Fruiting on current year's cane.—Absent.

Harvest interval on previous year's cane (floricane).— Late March to mid-April.

Yield.—Up to 14 short tons (tn) of fruit per hectare per season from 24- to 36-month-old plants when grown in Los Reyes, Michoacán, Mexico.

Resistance to pests and diseases:

Redberry mite (acalitus essigi).—Moderately susceptible.

Fusarium wilt (fusarium oxysportum).—Resistant. Verticillium wilt (Verticillium spp.).—Resistant.

COMPARISON TO PARENTAL AND REFERENCE BLACKBERRY VARIETIES

'DrisBlackThirtyTwo' differs from the female parent 'DrisBlackFive' (U.S. Plant Pat. No. 24,701) in that 'DrisBlackThirtyTwo' has weak dormant cane anthocyanin coloration, palmate leaf type, the fruit shape in longitudinal section is narrow ovate, and fruits on floricanes (previous year's cane) only, whereas 'DrisBlackFive' has strong dormant cane anthocyanin coloration, odd-pinnate leaf type, the fruit shape in longitudinal section is long conical, and fruits on both floricanes (previous year's cane) and primocanes (current year's cane).

'DrisBlackThirtyTwo' differs from the proprietary male parent '2011 BQ Bulk' (unpatented) in that 'DrisBlackThirtyTwo' has a larger fruit size and higher yield potential as compared to the male parent '2011 BQ Bulk'.

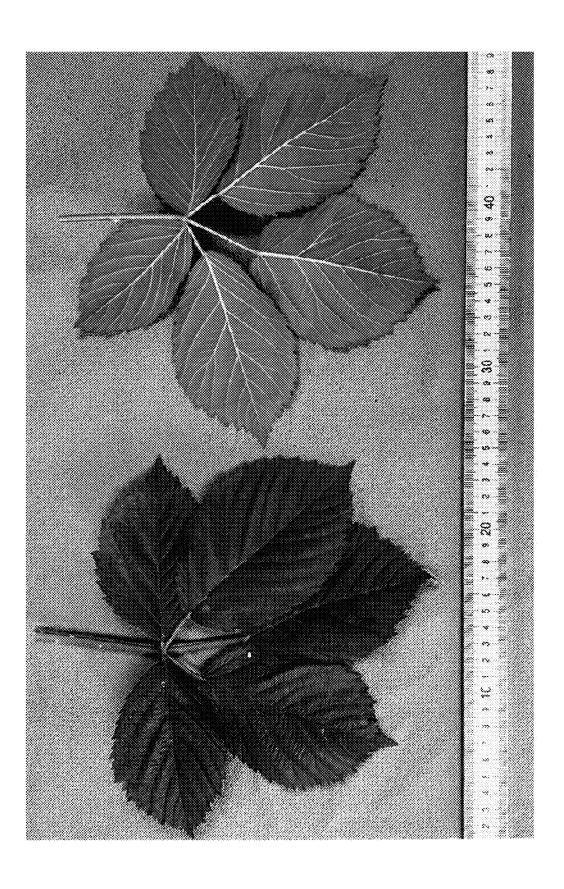
'DrisBlackThirtyTwo' differs from the reference variety 'DrisBlackTwenty' (U.S. Plant Pat. No. 31,826) in that 'DrisBlackThirtyTwo' has strong anthocyanin coloration on young shoots, spines present on dormant cane, weak blistering between veins on terminal leaflets, and the fruit width is broad, whereas 'DrisBlackTwenty' has absent or very weak anthocyanin coloration on young shoots, spines absent on dormant cane, medium blistering between veins on terminal leaflets, and the fruit width is very broad.

'DrisBlackThirtyTwo' differs from the reference variety 'DrisBlackNineteen' (U.S. Plant Pat. No. 31,825) in that 'DrisBlackThirtyTwo' has many spines on dormant cane, U-shaped cross-section of terminal leaflets, the attitude of the spine apex in relation to the cane is outwards, and the anthocyanin coloration of the young shoot during rapid growth is strong, whereas 'DrisBlackNineteen' has few spines on dormant cane, V-shaped cross-section of terminal leaflets, the attitude of the spine apex in relation to the cane is downwards, and the anthocyanin coloration of the young shoot during rapid growth is very weak.

What is claimed is:

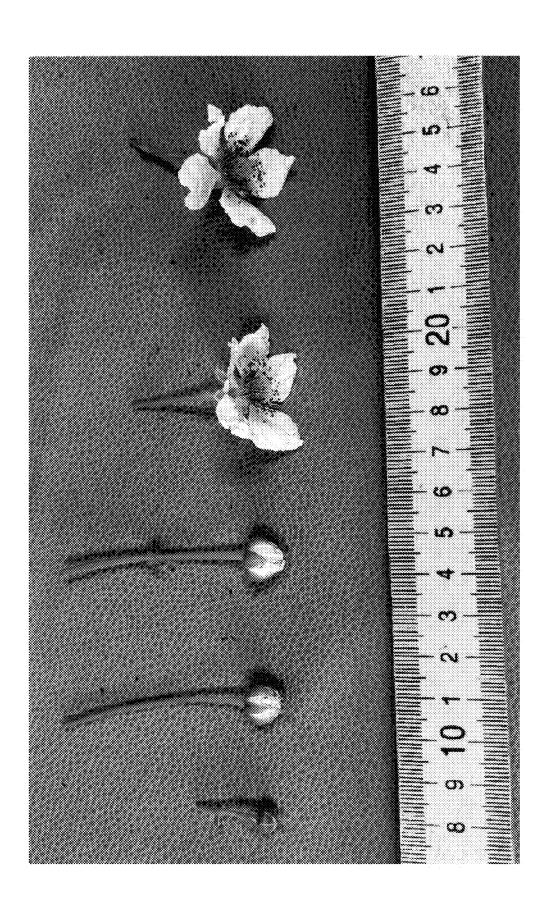
1. A new and distinct variety of blackberry plant designated 'DrisBlackThirtyTwo' as shown and described herein.

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