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Johnson, Jr. et al.

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(54) **BLACKBERRY PLANT NAMED 'HJ-6'**
(50) Latin Name: ***Rubus ursinus***
Varietal Denomination: **HJ-6**
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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 17 days.

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Related U.S. Application Data

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

(52) **U.S. Cl.** **Plt./203; Plt./204**
(58) **Field of Classification Search** **Plt./203,
Plt./204**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2011/0219496 P1 * 9/2011 Johnson et al. Plt./203
* cited by examiner

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(57) **ABSTRACT**

This invention relates to a new and distinct variety of blackberry plant named 'HJ-6'. The new variety resulted from seed produced by a hand-pollinated cross of two non-patented varieties: "Obsidian" as the female, and "Eaton" as the male. The new, trailing cultivar can be distinguished by its consistent, large fruit size and appearance during the late spring and summer period for the fresh market. The fruit of this cultivar is produced on dark red, strong, thorny canes. When plants are grown and pruned correctly, yield in central California, USA can be up to 9,000 crates/acres, and the fruit ships well.

2 Drawing Sheets

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**CROSS-REFERENCE TO RELATED
APPLICATIONS**

This application claims priority from U.S. Provisional Application No. 61/311,466 filed Mar. 8, 2010, incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct trailing blackberry variety designated as 'HJ-6'. This new variety is a result of a controlled cross made by the inventors, Harold A. Johnson Jr. and Judith E. Johnson, in 2005 between the blackberry variety designated 'Obsidian' (female) and the blackberry variety designated 'Eaton' (male), both parental varieties unpatented. The variety 'HJ-6' is botanically known as *Rubus ursinus*.

The seedling resulting from the aforementioned cross was selected from a controlled breeding plot near Watsonville, Santa Cruz County, Calif. in 2007 by the inventors. After its selection, the new variety was further asexually propagated beginning in October of 2007 in Watsonville, Santa Cruz County, Calif. by tissue culture. The new variety was then tested 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.

SUMMARY OF THE INVENTION

'HJ-6' is primarily adapted to the climate and growing conditions of the Santa Cruz and Monterey Counties in Calif.,

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and is being tested in Ventura County, Calif., and in Europe. 'HJ-6' has reacted favorably to the coastal climates of northern coastal California, but for maximum fruit production, 'HJ-6' requires consistent soil moisture and adequate nutrition. 'HJ-6' reacts favorably to an environment created by plastic tunnels.

The following traits have been observed and are determined to be unique characteristics of 'HJ-6', which in combination distinguish this blackberry plant as a new and distinct variety.

1. consistent production of large in size and good quality fruit, regardless of the time of year and the age of the plant;
2. large fruit size responds favorably to careful packing when shipped in 6 oz. clamshell baskets;
3. thorny and trailing plant structure; and
4. late spring fruit production, starting in June, with peak production in late June, and continued, limited production through July and August, when grown in Santa Cruz County, Calif.

When the new blackberry variety 'HJ-6' is compared to the female parental variety 'Obsidian', the following trait differences have been observed:

1. the peak fruit production of 'HJ-6' occurs later than 'Obsidian', but earlier than most erect types;
2. in holding testing after picking, the average flavor rating was the same, but HJ-6 rated higher in appearance than Obsidian after various days in cold storage;
3. HJ-6 has produced more commercial quality fruit in crates per acre than 'Obsidian', and a smaller percentage of non-commercial quality fruit per acre;

4. the average soluble solids concentration of Obsidian is 10.8, and HJ-6 is 9.3; and
5. the average seed size of HJ-6 is 3.54 mm in length and 1.93 mm in width, and Obsidian is 3.52 mm in length and 1.93 mm in width.

When the new blackberry variety 'HJ-6' is compared to the male parental variety 'Eaton', the following trait differences have been observed:

1. the fruit size of 'HJ-6' is consistently larger than the fruit of 'Eaton';
2. the fruit shape of 'HJ-6' is medium ovate while the fruit shape of 'Eaton' is long and conic;
3. 'HJ-6' has determinate inflorescence which limits the number of peduncles as well as the length and number of each pedicel per plant leading to a limited number of berries which are larger in size, whereas 'Eaton' has indeterminate inflorescence which produces a larger number of smaller berries per plant;
4. 'HJ-6' has an abundant supply of pollen which leads to a minimum number of malformed fruit, whereas 'Eaton' lacks consistently good pollen at the end of its indeterminate inflorescences and thus often produces poorly-shaped, small fruit;
5. 'HJ-6' has larger leaves than 'Eaton'; and
6. 'HJ-6' has stronger overall vegetative strength than 'Eaton'.

When the new blackberry variety 'HJ-6' is compared to the similar variety 'HJ-7' (U.S. Ser. No. 13/385,249), the following trait differences have been observed:

1. the fruit production of 'HJ-6' occurs later in the season than 'HJ-7';
2. the overall (total season) production of 'HJ-6' is greater than that of 'HJ-7';
3. the average berry size of 'HJ-6' (8-10 g) is larger than the average berry size of 'HJ-7' (6-7 g);
4. the leaf color of 'HJ-6' is lighter in early June (7.5 GY4-4) than the leaf color of 'HJ-7' at the same point in the season (7.5 GY3-2); and
5. 'HJ-6' is considered superior to 'HJ-7' in side-by-side flavor test results.

BRIEF DESCRIPTIONS OF THE PHOTOGRAPHS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new blackberry variety, 'HJ-6' as true as reasonably possible with color reproductions of this type. Plants shown in the photographs are two years old.

FIG. 1, taken in October 2009, illustrates the typical large fruit produced by 'HJ-6' that is long-conical to oblong in shape, contains large drupelets, and has thorns on the pedicel. FIG. 1 further illustrates the typical foliage produced by HJ-6; that comprises mostly 5 leaflets, each leaflet being ovate to oblique in shape, with an acuminate to acute apex, bi-serrate serrations, and palmate venation. The leaf petiole, as well as, the fruit peduncle, as further illustrated in FIG. 1, has a red surface.

FIG. 2, taken in June 2010, illustrates the fruit size and short pedicels of a typical inflorescence that is held mainly near or on the exterior of a plant in early June. The fruit is presented mostly accessible to pickers. The drupelets are typical in size and appearance. The leaflets and their serrations are typical.

DETAILED BOTANICAL DESCRIPTION

The following description of 'HJ-6' unless otherwise noted, is based on observations taken during the 2008 and

2009 growing seasons in Santa Cruz County, Calif. The plants observed were two years old. The phenotypical descriptions and color designations stated for the new variety may vary, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type, location and cultural conditions. 'HJ-6' has not been observed under all possible environmental conditions.

Table 1 provides a botanical comparison of 'HJ-6' to the following two (2) unpatented, commercially grown varieties in Santa Cruz County, Calif.: (1) 'Obsidian', a trailing, semi-erect, thorny and early ripening variety (female parental variety), and (2) 'Chester Thornless', an erect, thornless, and late ripening variety.

TABLE 1

Botanical Comparison with Comparison Varieties				
CHARACTER- ISTIC	New Variety 'HJ-6'	Comparison Variety 1 OBSIDIAN (unpatented)	Comparison Variety 2 'CHESTER THORNLESS' (unpatented)	
<u>Plant Form</u>				
Growth Habit	Trailing, semi-upright	Trailing, semi-upright	Trailing, semi-upright	Semi-erect
Plant Height	4 to 5 feet	4 to 5 feet	4 to 5 feet	5 to 6 feet
Suckering	Abundant	Abundant	Abundant	Abundant
Branching	Indeterminate	Indeterminate	Indeterminate	Indeterminate
Cane Texture	Thorny	Thorny	Thorny	Smooth
Hardiness	Very Hardy	Very Hardy	Very Hardy	Very Hardy
Canes				
Diameter	Large—1.8 cm	Medium—1.2 cm	Medium—1.2 cm	Large—1.2-2.0 cm
Floricanes	Same Diameter	Same Diameter	Same Diameter	Same Diameter
Immature	Round to	Round to	Round to	Angular
Primocane	Angular	Angular	Angular	Angular
Color				
Prickles	Red to Green	Red to Green	Red to Green	None
Mature Canes	All red 2.5 R 2/2	Upper side red 2.5 R 2/6	Upper side red 2.5 R 2/7	Upper side red 2.5 R 2/7
Foliage	Robust, large leaves	Robust, medium leaves	Robust, medium leaves	Robust, late-emergence
Predominate Number of Leaflets	Mostly 5, some 3	Mostly 3, 4 and 5	Mostly 3, 4 and 5	Mostly 5, some 3
Leaflet Shape	Mainly palmate	Odd palmate to intermediate	Odd palmate to intermediate	Mainly palmate
Leaf Type				
Upper Surface	5 GY 3/4	5 GY 3/4	5 GY 3/4	10 GY 2/4
Lower Surface	7.5 GY 5/6	7.5 GY 5/6	7.5 GY 5/6	7.5 GY 6/6
Central Leaflet Shape	Ovate with acuminate apex	Ovate with acute to acuminate apex	Ovate with acute to acuminate apex	Ovate with acuminate apex
Leaflet Relief Between Veins	Medium	Strong	Strong	Strong
Spine Attitude	Outward, some down	Mainly outward	Mainly outward	No spine
Serrations of Leaflets	Shallow	Shallow	Shallow	Shallow
Leaf Incision of Margin	Bi-serrate	Bi-serrate	Bi-serrate	Bi-serrate
Pubescence	Infrequent, no glandular hairs	Abundant, no glandular hairs	Abundant, no glandular hairs	Infrequent, no glandular hairs
Petioles				
Color	Top—2.5 R 2/2	Predom. 5 GY 2/2	Predom. 5 GY 2/2	Predom. 5 GY 2/2
Texture	Smooth, small thorns	Predom. smooth	Predom. smooth	Smooth

TABLE 1-continued

Botanical Comparison with Comparison Varieties			
CHARACTER- ISTIC	New Variety 'HJ-6'	Comparison Variety 1 OBSIDIAN (unpatented)	Comparison Variety 2 'CHESTER THORNLESS' (unpatented)
Length	4-6 cm	3-5 cm	2-3 cm
Width	2-2.5 mm	1.5-2 mm	1.5-2 mm
Flowers			
Blooming Period	Mid-March to April	Early March to April	June
Pedicels	Short—3-6 cm	Medium—3-6 cm	Short pedicels on raceme peduncle
Petals			
Number	5 to 6	5	5
Shape	Irregular elliptical	Irregular elliptical	Irregular elliptical
Color	White; N9 25/84	White; N9 25/84	Pink, 2.5 RP 5/10
Pollen	2% R	2% R	Strong
Sepals	Strong	Strong	Strong
Fruit			
Productivity	Medium-high; long picking season	High	Medium
Time of Fruiting	Late spring to summer, June-July	Late May to July	August to September
Size	Very large; avg. 8 gm	Medium-large; avg. 6 gm	Medium-large; avg. 6-8 gm

TABLE 1-continued

Botanical Comparison with Comparison Varieties			
CHARACTER- ISTIC	New Variety 'HJ-6'	Comparison Variety 1 OBSIDIAN (unpatented)	Comparison Variety 2 'CHESTER THORNLESS' (unpatented)
Shape	Oblong to conic	Elliptical, some circular	Oblong to conic
Color			
Immature	Green to red	Green to red	Green to red
Mature	N 1.75/2.5% R	N 1.75/2.5% R	N 1.75/2.5% R
Glossiness	Medium to Full	Medium to Full	Very glossy
Weight	6 to 12 gm	6 to 8 gm	6 to 10 gm
Length	30 to 35 mm	25 to 30 mm	25 to 30 mm
Diameter	20 to 25 mm	20 to 25 mm	20 to 30 mm
Drupelets			
Size	3 to 4 mm	2.5 to 3 mm	3 to 4.5 mm
Seed			
Length	3.54 mm	3.52 mm	3.35 mm
Width	1.93 mm	1.92 mm	1.96 mm
Soluble Solids	9.2%	10.8%	
pH			
Yield	9343 crates/acre avg.	6824 crates/acre avg.	
Disease/Pest	Red mite	Red mite	Red mite
Resistance	susceptible	susceptible	susceptible
Uses	Fresh market	Fresh market; processing	Fresh market

30 When color is identified, the Munsell Book of Color (March 1976) is used.
Yield—crates/acre (crate = 4.5 lb)

What is claimed is:

1. A new and distinct plant of *Rubus Ursinus*, as herein described and illustrated by the characteristics set forth above.

* * * * *

FIG. 1

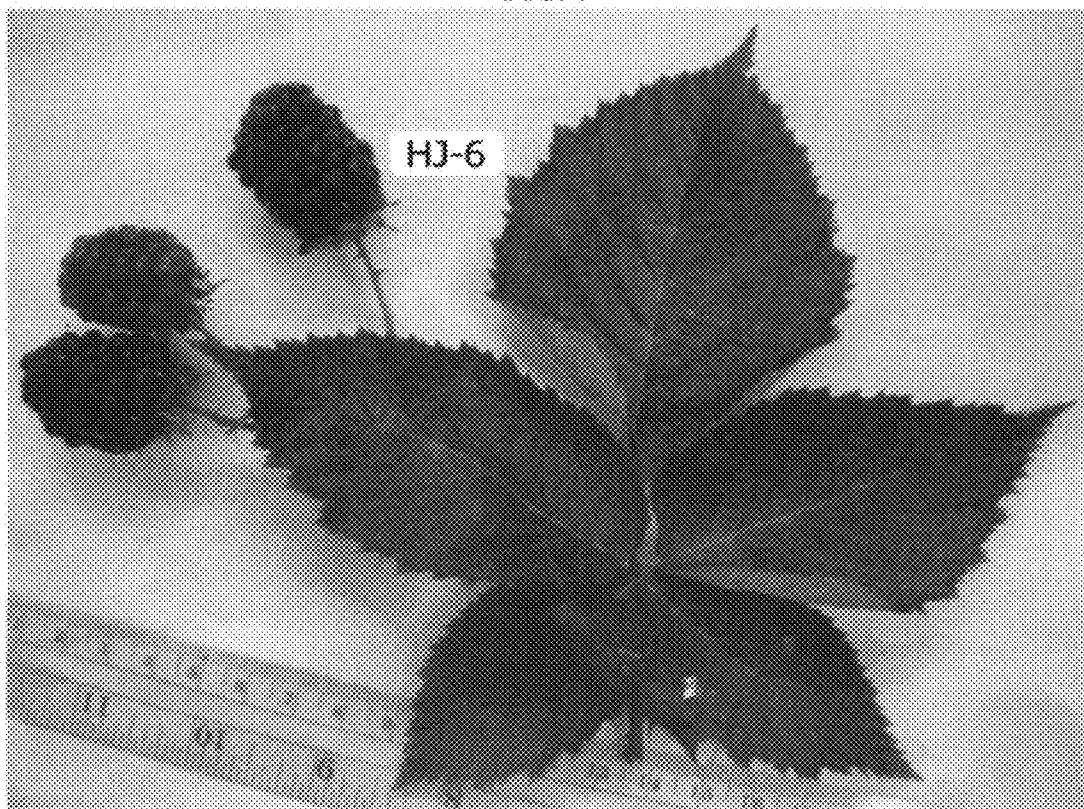


FIG. 2

