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Adams

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(54) **RASPBERRY PLANT NAMED ‘VISION’**

(50) Latin Name: *Rubus idaeus*
Varietal Denomination: **VISION**

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(57) **ABSTRACT**

This invention relates to a new and distinct everbearing
variety of raspberry plant named ‘VISION’. The new variety
is primarily adapted to the growing conditions of the central
coast of California and is characterized by the following:
early to mid-season primocane production with medium to
large sized fruit of light-red coloration. Fruit is of consistent
broad conic shape, releases easily from receptacle, is of low
gloss and fair flavor. Foliage is slightly concave; medium
green, glossy and foliage is equal 3 and 5 foliates. Primo-
canes have an absent or very weak waxy coat, medium thorn
density, purple spines and have very weak anthocyanin
coloration.

4 Drawing Sheets

1

Latin name of the genus and species of the plant claimed:
Rubus idaeus.
Variety denomination: ‘VISION’.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct fall
bearing raspberry variety designated as ‘VISION’. This new
variety is a result of a controlled cross made in 2009 in
Watsonville, Calif. between raspberry variety ‘GRAN-
DEUR’ (patented, U.S. Plant Pat. No. 20,459) as the female
parent and raspberry variety ‘04.3814’ (unpatented) as the
male parent in an ongoing breeding program. The variety is
botanically known as *Rubus idaeus*.

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
2011. After its selection, the new variety was further asexu-
ally 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.

BRIEF SUMMARY OF THE INVENTION

‘VISION’ 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

2

it to produce and maintain a strong vigorous plant and to
remain in fruit production from July through December on
primocanes and in the ensuing year from May through July
on floricanes. The following traits have been repeatedly
observed and are determined to be unique characteristics of
‘VISION’, which in combination distinguish this raspberry
plant as a new and distinct variety:

1. Dark purple spines
2. Broad conic fruit shape
3. Light red fruit color
4. Absent to very weak primocane glaucosity
5. Glossy foliage

The raspberry variety that is believed to be most closely
related to the new raspberry variety ‘VISION’ is the rasp-
berry variety ‘GRANDEUR’ (patented, U.S. Plant Pat. No.
20,459). In comparison to the similar raspberry variety
‘GRANDEUR’, ‘VISION’ differs by the following combi-
nation of characteristics described in Table 1:

TABLE 1

| Characteristic | ‘VISION’ | ‘GRANDEUR’ (U.S. Plant Pat. No. 20,459) |
|-----------------------------------|----------------------------------|--|
| Glossiness (foliage) | Strong | Weak |
| Predominate number of leaflets | Equal 3-5 | Always 3 |
| Leaf shape (cross section) | Slightly concave | Flat to slightly convex |
| Thorn coloration (tip) | RHS N186B Greyed-purple group | RHS 180C Greyed-red group |
| Thorn coloration (base) | RHS N186C Greyed-purple group | RHS 145B Yellow-green group |
| Color mature fruit | RHS 43A Light red | RHS 42A Medium red |

TABLE 1-continued

| Characteristic | 'VISION' | 'GRANDEUR' (U.S. Plant Pat. No. 20,459) |
|-------------------------|----------|---|
| Soluble solids (% Brix) | 8.8 | 10.5 |
| Flavor | Fair | Good |

'VISION' differs from its parents, 'GRANDEUR' and '04.3814', by the following combination of characteristics described in Table 2:

TABLE 2

| Characteristic | 'VISION' | 'GRANDEUR' (U.S. Plant Pat. No. 15,439) | '04.3814' |
|----------------------------|-----------------|---|-----------|
| Productivity | High | High | Medium |
| Glossiness (fruit) | Weak | High | Medium |
| Firmness (fruit) | Medium to high | High | Low |
| Adherence of receptacle | Very weak | Very weak | Medium |
| Primocane time of fruiting | Medium | Medium | Medium |
| Fruit size | Medium to large | Medium | Large |
| Flavor | Fair | Good | Excellent |

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

BRIEF DESCRIPTIONS OF THE DRAWINGS

The accompanying color photographs illustrate the overall appearance of typical specimens of the new raspberry variety, 'VISION' 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 description which accurately describes the color of 'VISION'. The depicted plant and plant parts of the new raspberry variety 'VISION' were taken in Watsonville, Calif. and are approximately 2 to 16 months old:

FIG. 1 shows typical primocane foliage and fruit color; foliate and rugosity characteristics of 'VISION' taken in the month of September 2012;

FIG. 2 shows typical gloss, coloration, and drupelet formation of primocane fruit of 'VISION' taken in the month of September 2017;

FIG. 3 shows typical harvested fruit of 'VISION' taken in the month of September 2017;

FIG. 4 shows typical dormant cane color characteristics of 'VISION' taken in the month of January 2013.

DETAILED BOTANICAL DESCRIPTION

'VISION' 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 'VISION', unless otherwise noted, are based upon observations taken during the 2016-2017 growing season in Watsonville, Calif. Primocane measurements and ratings were taken from plants of 'VISION' dug from a nursery located in Siskiyou County, Calif. during the middle of October 2015 and planted approximately 3 to 4 weeks later in Watsonville, Calif. The

approximate age of the observed primocane plants is 7 to 8 months. Floricane measurements and ratings were taken from the same planting of 'VISION' 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 2013 through 2016 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 3-foliolate foliage unless otherwise noted.

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

The following Tables 3-7 describe fruit, plant, foliage, flower and pest/disease characteristics of the new raspberry 'VISION' in comparison to the similar raspberry varieties 'GRANDEUR' (patented, U.S. Plant Pat. No. 20,459) and 'BOUNTIFUL' (patented, U.S. Plant Pat. No. 27,582).

TABLE 3

| Characteristic | FRUIT CHARACTERISTICS | | |
|----------------------------------|--------------------------------|---|--|
| | 'VISION' | 'GRANDEUR' (U.S. Plant Pat. No. 20,459) | 'BOUNTIFUL' (U.S. Plant Pat. No. 27,582) |
| Color mature fruit | RHS 43A Light red | RHS 42A Medium red | RHS 34A Light to medium red |
| Color achenes | RHS 159A Orange-white group | RHS 159A Orange-white group | RHS 159A Orange-white group |
| Fruit length (mm) | 22.89 | 22.91 | 23.30 |
| Fruit width (mm) | 21.67 | 20.12 | 21.87 |
| Length/Width ratio | 1.06 | 1.14 | 1.06 |
| Seed weight (mg) | 1.59 | 1.75 | 1.66 |
| Drupelets per berry | 105 | 93 | 82 |
| Weight of single drupe (g/drupe) | 0.059 | 0.043 | 0.058 |
| Relative size of drupes | Large | Medium | Medium |
| Fruit size | Medium to large | Medium | Medium |
| Predominant shape | Broad conical | Conical | Conical |
| Evenness of color | Even | Even | Even |
| Glossiness | Weak | Medium | Medium |
| Adherence of receptacle | Very weak | Weak | Very weak |
| Firmness of flesh | Firm | Very firm | Firm |
| Firmness of skin | Medium | Very firm | Medium |
| Soluble solids (% Brix) | 8.8 | 10.5 | 9.8 |
| Flavor | Fair | Good | Good |

TABLE 4

| Characteristic | PLANT CHARACTERISTICS | | |
|----------------|-----------------------|---|--|
| | 'VISION' | 'GRANDEUR' (U.S. Plant Pat. No. 20,459) | 'BOUNTIFUL' (U.S. Plant Pat. No. 27,582) |
| General: | | | |
| Habit | Upright | Upright | Semi-Upright |
| Size | Medium | Medium | Medium |

TABLE 4-continued

| PLANT CHARACTERISTICS | | | |
|--------------------------------------|----------------------------------|---|--|
| Characteristic | 'VISION' | 'GRAN-DEUR' (U.S. Plant Pat. No. 20,459) | 'BOUN-TIFUL' (U.S. Plant Pat. No. 27,582) |
| Productivity | High | High | High |
| Self-fruitfulness | Yes | Yes | Yes |
| Type of bearing | Everbearing | Everbearing | Everbearing |
| <u>Primocane:</u> | | | |
| Color (true) | RHS 145A Yellow-green group | RHS 145B Yellow-green group | RHS 145B Yellow-green group |
| Length (cm) | 149.9 | 143.6 | 198.6 |
| Basal diameter (mm) | 13.55 | 21.80 | 16.98 |
| Diameter central 1/3 (mm) | 10.42 | 12.55 | 10.31 |
| Lateral length at central 1/3 (cm) | 33.5 | 43.6 | 35.2 |
| No. fruiting laterals per cane | 11.6 | 17.4 | 15.2 |
| Internode length at central 1/3 (mm) | 39.68 | 48.84 | 50.34 |
| Anthocyanin coloration | RHS 59B Red-purple group | RHS 59B Red-purple group | n/a |
| Anthocyanin intensity | Absent to very weak | Weak | Absent |
| Pubescence | Absent | Absent | Absent |
| Length of vegetative bud (mm) | 6.38 | 11.01 | 6.82 |
| Strength of waxy coat (glaucosity) | Absent to very weak | Absent to very weak | Absent to very weak |
| Time of flowering | Medium | Medium | Late |
| Time of fruiting | Early to medium | Medium | Late |
| Length of fruiting season | Long | Long | Long |
| % of total yield | 52% | 50% | 47% |
| Flowering period | Late June to Late November | Late June to Late November | Late June to Late November |
| Harvest period | Late July to Mid December | Late July to Mid December | Late July to Late December |
| Primocane fruit weight (g) | 5.3 | 3.8 | 4.8 |
| Primocane yield (g/plant) | 2,595 | 2,662 | 3,495 |
| <u>Young Shoots:</u> | | | |
| Number (per meter) | 15-20 | 15-20 | 25-30 |
| Anthocyanin presence | Medium | Medium | Medium |
| Anthocyanin coloration | Present | Present | Present |
| Anthocyanin intensity | RHS 179A Red-purple group | RHS 179A Greyed-red group | RHS 179B Red-purple group |
| Thorns: | Weak to medium | Medium | Absent to very weak |
| <u>Thorn coloration (tip)</u> | | | |
| Thorn coloration (tip) | RHS N186B Greyed-purple group | RHS 180C Greyed-red group | RHS 179C Greyed-red group |
| <u>Thorn coloration (base)</u> | | | |
| Thorn coloration (base) | RHS N186C Greyed-purple group | RHS 145B Yellow-green group | RHS 145B Yellow-green group |
| Thorn length at central 1/3 (mm) | 0.91 | 0.76 | 1.92 |
| Thorn base at central 1/3 (mm) | 0.73 | 1.53 | 1.34 |
| Thorn presence | Present | Present | Present |
| Thorn density per cm at central 1/3 | 6.71 | 3.38 | 7.36 |
| | Dense | Medium | Dense |

TABLE 4-continued

| PLANT CHARACTERISTICS | | | |
|---------------------------------|---------------------------------|--|---|
| Characteristic | 'VISION' | 'GRAN-DEUR' (U.S. Plant Pat. No. 20,459) | 'BOUN-TIFUL' (U.S. Plant Pat. No. 27,582) |
| Thorn texture | Rigid | Rigid | Rigid |
| Attitude of the tip | Horizontal | Horizontal | Horizontal |
| <u>Floricanes:</u> | | | |
| Color (true) | RHS 164A Greyed-orange group | RHS 164A Greyed-orange group | RHS 165B Greyed-orange group |
| Length (cm) | 109.8 | 119.8 | 139.7 |
| Fruiting lateral attitude | Erect | Erect | Horizontal to drooping |
| Time bud burst | Medium | Medium | Medium |
| Time of flowering | Medium | Medium | Medium |
| Time of fruiting | Medium | Medium | Medium |
| Length of fruiting season | Medium to long | Medium to long | Medium to long |
| % of total yield | 48% | 50% | 53% |
| Flowering period | Late April to Late June | Late April to Late June | Late April to Late June |
| Harvest period | Late May to Late July | Late May to Late July | Late May to Late July |
| Floricanes fruit weight (g) | 5.0 | 3.7 | 4.6 |
| Floricanes yield (g/plant) | 2,396 | 2,680 | 4,010 |
| <u>TABLE 5</u> | | | |
| <u>FOLIAGE CHARACTERISTICS</u> | | | |
| Characteristic | 'VISION' (3 Foliate) | 'GRAN-DEUR' (U.S. Plant Pat. No. 20,459) (3 Foliate) | 'BOUN-TIFUL' (U.S. Plant Pat. No. 27,582) (3 Foliate) |
| <u>General:</u> | | | |
| Color of upper surface | RHS 139A Green group | RHS N137A Green group | RHS N137B Green group |
| Color of lower surface | RHS 190B Greyed-green group | RHS 190B Greyed-green group | RHS 190B Greyed-green group |
| Shape in cross section | Slightly concave | Flat to slightly convex | Flat to slightly concave |
| Arrangement | Compound | Compound | Compound |
| Relief between veins (rugosity) | Medium | Strong | Weak |
| Glossiness | Strong | Weak | Weak |
| Number of leaflets/leaf | Equal 3-5 | Always 3 | Equal 3-5 |
| <u>Terminal Leaflet:</u> | | | |
| Length (mm) | 130.2 | 127.5 | 133.3 |
| Width (mm) | 102.7 | 91.6 | 83.6 |
| Length/Width Ratio | 1.3 | 1.4 | 1.6 |
| | Longer than broad | Longer than broad | Longer than broad |
| Size | Medium | Medium | Medium |
| Shape | Cordate | Cordate | Cordate |
| Shape of base | Cordate | Cordate | Rounded |
| Shape of tip | Acuminate | Acuminate | Acuminate |
| Margins | Biserrate | Biserrate | Biserrate |
| <u>Lateral Leaflet:</u> | | | |
| Length (mm) | 105.3 | 105.5 | 113.9 |
| Width (mm) | 74.7 | 65.1 | 65.8 |
| Length/width | 1.4 | 1.4 | 1.7 |

TABLE 5-continued

| FOLIAGE CHARACTERISTICS | | | |
|---|---------------------------------|---|--|
| Characteristic | 'VISION' (3 Foliate) | 'GRAN- DEUR' (U.S. Plant Pat. No. 20,459) (3 Foliate) | 'BOUN- TIFUL' (U.S. Plant Pat. No. 27,582) (3 Foliate) |
| ratio | Longer than broad | Longer than broad | Much longer than broad |
| Rachis length (mm) | 34.9 | 36.2 | 37.1 |
| Orientation | Opposite | Opposite | Opposite |
| Arrangement | Compound | Compound | Compound |
| Shape | Ovate | Ovate | Ovate |
| Overlapping | Touching | Touching | Free |
| Shape of the base | Rounded | Oblique rounded | Acute |
| Shape of the tip | Acuminate | Acuminate | Acuminate |
| Margins | Biserrate | Biserrate | Biserrate |
| Petiole: | | | |
| Length (mm) | 60.65 | 59.00 | 63.82 |
| Width (mm) | 2.76 | 3.99 | 3.22 |
| Thorn presence | Yes | Yes | Yes |
| Thorn orientation | Erect | Erect | Erect |
| Anthocyanin coloration of upper surface | RHS 184B Greyed-purple group | RHS 184C Greyed-purple group | RHS 184B Greyed-purple group |
| Anthocyanin intensity of upper surface | Absent to very weak | Weak | Absent to very weak |
| Stipule length (mm) | 10.29 | 10.23 | 11.19 |
| Stipule orientation | Erect | Erect to horizontal | Erect |

TABLE 6

| FLOWER CHARACTERISTICS | | | |
|--------------------------|------------------------|--|---|
| Characteristic | 'VISION' | 'GRAN- DEUR' (U.S. Plant Pat. No. 20,459) | 'BOUN- TIFUL' (U.S. Plant Pat. No. 27,582) |
| Petal color | 155C White group | 155C White group | 155C White group |
| Flower diameter (mm) | 21.77 | 22.55 | 24.53 |
| Petal Length (mm) | 8.28 | 6.42 | 6.62 |
| Petal width (mm) | 3.20 | 3.1 | 2.89 |
| Petal length/width ratio | 2.59 | 2.06 | 2.29 |
| ratio | Much longer than broad | Much longer than broad | Much longer than broad |

TABLE 6-continued

| FLOWER CHARACTERISTICS | | | |
|-----------------------------------|---------------------|--|---|
| Characteristic | 'VISION' | 'GRAN- DEUR' (U.S. Plant Pat. No. 20,459) | 'BOUN- TIFUL' (U.S. Plant Pat. No. 27,582) |
| No. petals/flower | 5.0 | 5.2 | 5.4 |
| No. sepals/flower | 5.0 | 5.2 | 5.4 |
| Relative number of pedicel thorns | 12.5 | 16.2 | 25.8 |
| Peduncle anthocyanin presence | Medium | Medium | Many |
| Peduncle anthocyanin coloration | Present | Present | Present |
| Peduncle anthocyanin intensity | RHS 184C | RHS 184A | RHS 184A |
| anthocyanin coloration | Greyed-purple group | Greyed-purple group | Greyed-purple group |
| Peduncle anthocyanin intensity | Weak | Medium | Weal |

TABLE 7

| PEST AND DISEASE REACTIONS | | | |
|---|----------------------|--|---|
| Characteristic | 'VISION' | 'GRAN- DEUR' (U.S. Plant Pat. No. 20,459) | 'BOUN- TIFUL' (U.S. Plant Pat. No. 27,582) |
| Spotted wing <i>drosophila</i> (<i>Drosophila suzukii</i>) | Susceptible | Susceptible | Susceptible |
| Two-spotted spider mite (<i>Tetranychus urticae</i>) | Susceptible | Susceptible | Susceptible |
| Grey fruit mold (<i>Botrytis cinerea</i>) | Susceptible | Susceptible | Susceptible |
| Powdery mildew (<i>Podosphaera aphanis</i> var. <i>aphanis</i>) | Moderately resistant | Moderately susceptible | Moderately susceptible |
| Yellow rust (<i>Phragmidium rubi-idaei</i>) | Susceptible | Moderately susceptible | Moderately susceptible |

The invention claimed is:
 1. A new and distinct raspberry variety named 'VISION', as herein described and illustrated by the characteristics set forth above.

* * * * *

FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 4

