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Clark et al.

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(54) **GRAPE PLANT NAMED 'JOY'**

(50) Latin Name: ***Vitis labrusca* L.×*Vitis vinifera* L.**
Varietal Denomination: **Joy**

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

(52) **U.S. Cl.**
USPC **Plt./206**

(58) **Field of Classification Search**
USPC Plt./206
See application file for complete search history.

(56) **References Cited**

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(57) **ABSTRACT**

Description and specifications of a new and distinct grapevine cultivar which originated from a hand-pollinated cross of A-1919 (non-patented, non-released breeding genotype)×A-1908 (non-patented, non-released breeding genotype). This new grapevine cultivar can be distinguished by its seedless, blue berries of exceptionally fruity flavor, medium sized clusters, moderate to high yield, medium vigor, and healthy plant.

3 Drawing Sheets

Latin name: *Vitis labrusca* L.×*Vitis vinifera* L.
Varietal denomination: 'Joy'.

BACKGROUND

The new and distinct cultivar of grape named 'Joy' is described herein. The new cultivar originated from a hand-pollinated cross of A-1919 (female parent) and A-1908 (male parent) made in 1991. The seedlings fruited in the summer of 1993 in a vineyard near Clarksville, Ark. and one was selected for its seedless, blue berries with exceptional fruity flavor. The fruit grows in large clusters, the vines have medium vigor and the plants are healthy.

SUMMARY OF THE INVENTION

The new and distinct cultivar of grapevine originated from a hand-pollinated cross of A-1919 (non-patented, non-released breeding genotype; female parent)×A-1908 (non-patented, non-released breeding genotype; male parent) made in 1991 near Clarksville, Ark. The instant cultivar is a hybrid of *Vitis labrusca* L. and *Vitis vinifera* L. The seeds resulting from this controlled hybridization were germinated in a greenhouse during the winter of 1991-92. Resulting seedlings were planted in the spring of 1992 in a vineyard near Clarksville, Ark. The seedlings fruited in the summer of 1993 and one

seedling, designated Arkansas Selection 2494, was selected for its seedless, thin-skinned, blue berries of exceptional fruity flavor, large clusters, medium vigor, and healthy plant.

During late 1993 and early 1994, the original plant selection was propagated asexually at the above-noted location, by rooting hardwood cuttings and a test planting of three vines was established. In all propagations hardwood cuttings were used and the instant cultivar rooted readily from hardwood cuttings. All propagules (resulting plants) of the instant cultivar have been observed to be true to type in that during all asexual multiplication, the vegetative and fruit characteristics of the original plant have been maintained. All vines planted from hardwood cutting propagation fruited in the second or third season of growth in the vineyard after planting.

Vines of the new cultivar have medium vigor, with a procumbent growth habit characteristic of *V. labrusca*. It has produced well as own-rooted plants in all testing and has not been evaluated on any rootstocks. Hardiness of the vines has been very good, with no winter injury to the vines to 5° F. in the most severe winters at the Arkansas test site.

The new cultivar is moderately resistant to powdery mildew (*Erysiphe necator* Schw. (syns. *Uncinula necator* (Schw.) Burr., *E. tuckeri* Berk, *U. americana* Howe, and *U. spiralis* Berk. & Curt; anamorph *Oidium tuckeri* Berk.), downy mildew (*Plasmopora viticola* Berl. & Tomi.), and anthrancnose (*Elsinoe ampelina* (d. By.) Sher), but suscep-

tible to black rot (*Guignardia bidwellii* (Ell.) V. & R.). Fungal diseases can be controlled by the use of available fungicides.

The new cultivar ripens its fruit in mid-season, average August 11. The fruit is blue in color at early maturity. It is evenly colored within the cluster. The fruit shape is elongated oval. Fruit skins are medium and adhere to the flesh (has a non-slipskin texture). The berries are medium (ca. 3.2 g). The flavor is excellent and fruity. Solids concentration of the juice at fruit maturity averages 21.1% with medium acidity. The fruit is of the stenospermocarpic type of seedlessness and can contain 0-2 small, soft seed traces that are not noticeable when eaten. Fruit clusters, borne usually two to three per shoot, are medium sized, with an average weight of 239 g. The new cultivar has been named the 'Joy' cultivar.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs show typical specimens of the new variety at 15 years old in color as nearly true as it is reasonably possible to make in a color illustration of this character.

FIG. **1** is a photograph showing typical specimens of the fruit.

FIG. **2** is a photograph showing the leaf adaxial view.

FIG. **3** is a photograph showing the leaf abaxial view.

DETAILED DESCRIPTION OF THE NEW CULTIVAR

'Joy' differs from its female parent A-1919 in that 'Joy' is seedless and has smaller berries. 'Joy' differs from it male parent A-1908 as this parent is pink, and has thicker skins.

The following is a detailed description of the botanical and pomological characteristics of the subject grapevine. Color data are presented in Royal Horticultural Society Colour Chart designations, 1986 version, second edition.

Where dimensions, sizes, colors and other characteristics are given, it is to be understood that such characteristics are approximations of averages set forth as accurately as practicable.

The descriptions reported herein are from specimens grown near Clarksville, Ark. Vines used for measurement were irrigated using trickle (drip) irrigation. The data collection was from vines that were 15 years old.

Vine:

Size.—Medium.

Growth.—Moderately vigorous.

Density of foliage.—Medium.

Productivity.—Moderate to highly productive.

Rootstock.—None; vines tested were own-rooted vines.

Cold hardiness.—Hardy to 5° C. (−15° C.); possibly more hardy as this was the coldest temperature experienced at the test site.

Shoots (*current-season canes*).—Color of shoots Yellow-Green Group (144A) consistent on all sides. Anthocyanin is not usually present, but if it is it is on the shoot sides exposed to direct sunlight. Shoot attitude is procumbent.

Canes (*mature measured in winter*).—Color of mature cane: base mostly Greyed-Orange Group (177 A and B); midpoint. Greyed Orange Group (177B); terminal Greyed-Orange Group (177B); anthocyanin not observed on mature canes at base, midpoint, or terminal. Length average 2.9 m with range of 1.8 to 4.8 m. Diameter of mature cane: base 0.92 cm, midpoint 0.60 cm, terminal 0.24 cm. Internode length: base 4.5 cm, midpoint 7.9 cm, terminal 2.6 cm. Lenticels present on mature canes at medium density and small (less than 0.5 mm in diameter). Canes mature to tips in the fall.

Trunk:

Shape.—Slender.

Trunk straps.—Long, split.

Surface texture.—Shaggy.

Inner bark color.—Greyed-orange group (166A).

Outer bark color.—Grey group (201A).

Foliage:

Leaves.—Leaves simple and alternate; shape palmate; number of lobes 1; petiole sinus shape open; venation palmate-pinnate; margin serrated with shape of teeth convex and teeth medium in size. The leaf surface has a waxy/smooth texture. Color of mature leaves: base abaxial — Yellow-Green Group (147B); base adaxial — Green Group (137B); midpoint abaxial — Yellow-Green Group (147B); midpoint adaxial — Green Group (137B); terminal abaxial — Yellow-Green Group (147B and occasionally 146A); terminal adaxial — Green Group (137B and occasionally 146B). No anthocyanin on upper or lower surfaces of leaves or on leaf veins. Color of young leaves: base abaxial — Yellow-Green Group (146D); base adaxial — Yellow-Green Group (146B); midpoint abaxial — Yellow-Green Group (146D); midpoint adaxial — Yellow-Green Group (146C); terminal abaxial — Yellow-Green Group (150D); terminal adaxial — Yellow-Green Group (151C).

Petioles.—Color on young leaves — Yellow-Green Group (144A). Color of mature petioles — Yellow-Green Group (147B and occasionally 146C). Petiole anthocyanin present on mature leaves on areas most exposed to sunlight. Sinus of mature leaf is 3.5 cm deep and 15.6 cm at widest point. Mature leaves have sparse pubescence. Young leaves have light sparse pubescence on midrib, main veins and secondary veins.

Tendrils.—Found on the 6th node, opposite. Length 22.3 cm. Texture smooth and usually forked and curled on distal end. Color of mature tendril Greyed-Orange Group 177B. No anthocyanins present.

Buds.—Average number of buds on a current, single-season cane 46. Dormant bud (compound bud or eye) width 6.4 mm; shape triangular. Color Greyed-Orange Group (165A) and Brown Group (200D). Texture smooth with some rough area.

Disease resistance: Moderately resistant to powdery mildew, and downy mildew; susceptible to black rot. Other disease or pest susceptibilities not known.

Flowers:

Sex.—Hermaphrodite.

Date of bloom.—May 9 (first); May 12 (full).

Flowers per cluster.—532.

Stamens.—Number: 5 to 6 and erect. Color: Anther is Yellow-Orange Group (15A) and Filament is Green-White Group (157A).

Pistil.—Number: 1. Length: 3.1 mm. Color: Yellow-Green Group (144A).

Pollen.—Color: Yellow Group (2A), normal and fertile.

Petal.—Cap of 6 fused petals in tubular shape. Color: Yellow-Green Group (144A).

Sepal.—None.

Fruit:

Maturity.—Midseason; average first ripe dates August 11.

Berry.—Shape — Elongated oval. Color — Blue Group (103A) to Black Group (202A) and just before complete ripeness are Red-Purple Group (59A). Size — Diameter at equator: 1.5 cm. Diameter at base: 1.4 cm. Diameter at apex: 1.3 cm. Length: 2.4 cm. Weight: 3.23 g. Texture — Non-slipskin. Skin thickness — thin. Seeds — Seedless with 0 to 2 soft textured seeds. Brush length — 3.51 mm. Flavor — Exceptional fruity flavor. Soluble solids — 21.1%.

Juice.—pH — 3.9. Titratable acidity — 3 g/L tartaric acid. Soluble solids — 21.1%.

Cluster.—Weight — 154-333 g. mean=239 g. Length — 23.7 cm. Width — 10.2 cm. Berries per cluster — 92-136, mean=118. Cluster per vine — 40. Clusters per shoot — usually two. Peduncle length — 2.24 cm. Pedicle: Length — 1.12 cm. Diameter — 0.15 cm. Color — Yellow-Green Group (145A). Use — Fresh consumption as a table grape is the primary use with market intended for local markets or home gardens. No processing evaluations done.

The cultivar: The most distinctive features of the cultivar are its seedless, blue berries of exceptional fruity flavor, medium sized clusters, moderate to high yield, medium vigor, and healthy plant.

We claim:

1. A new and distinct cultivar of grape plant named 'Joy' substantially as illustrated and described.

* * * * *

Figure 1

Figure 2

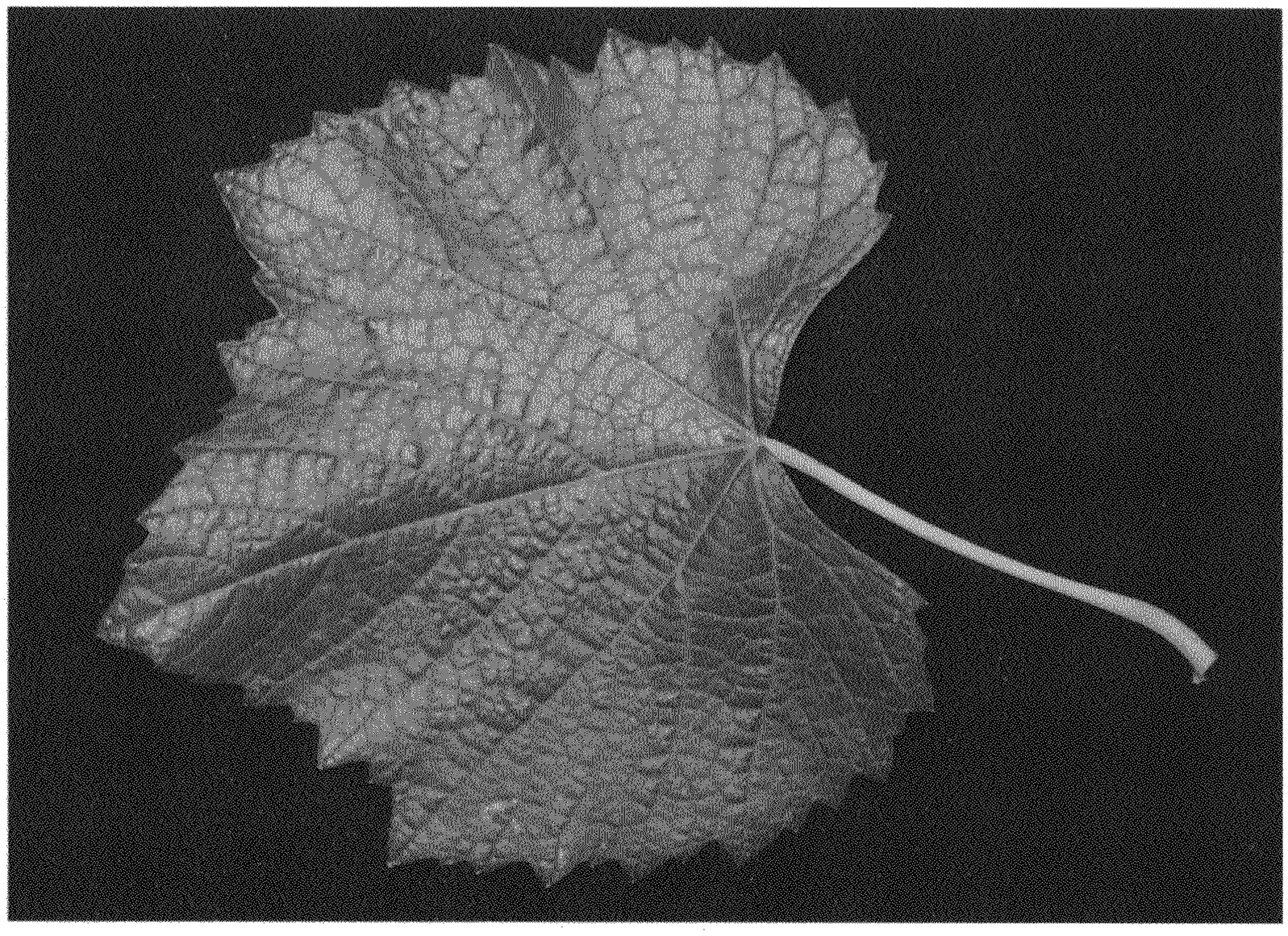

Figure 3