



US00PP35291P2

(12) **United States Plant Patent**
Karniel

(10) **Patent No.:** **US PP35,291 P2**

(45) **Date of Patent:** **Aug. 1, 2023**

(54) **SEEDLESS GRAPEVINE PLANT NAMED**
'ARD8'

(50) Latin Name: *Vitis vinifera Grapevine*
Varietal Denomination: **ARD8**

(71) Applicant: **AGRICULTURAL RESEARCH AND**
DEVELOPMENT LIMITED
LIABILITY COMPANY, Bakersfield,
CA (US)

(72) Inventor: **Shachar Karniel**, Bakersfield, CA (US)

(73) Assignee: **Agricultural Research and**
Development Limited Liability
Company, Bakersfield, CA (US)

(*) 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.: **17/803,915**

(22) Filed: **Jan. 18, 2023**

(51) **Int. Cl.**
A01H 5/08 (2018.01)
A01H 6/88 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./205**
CPC *A01H 6/88* (2018.05)

(58) **Field of Classification Search**
USPC Plt./205
CPC A01H 5/0812
See application file for complete search history.

Primary Examiner — Kent L Bell

(74) *Attorney, Agent, or Firm* — Lewis Roca Rothgerber
Christie LLP

(57) **ABSTRACT**

A new distinct variety of grapevine named 'ARD8' abundantly forms attractive crispy seedless berries with a red skin coloration, lax and large clusters which display a naturally sweet flavor with the fruit commonly ready for harvesting during August in San Joaquin Valley of Central California, U.S.A, and displays good eating qualities as a table grape, with firmness that renders the fruit well amenable for handling, shipping and storage.

1 Drawing Sheet

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Classification: The present invention relates to a new *Vitis vinifera* Grapevine.

Variety denomination: The new Grapevine has a varietal denomination Seedless Grapevine Plant Named 'ARD8'.

BACKGROUND OF THE INVENTION

A breeding program was initiated during the late 1990's near Bakersfield in the San Joaquin Valley of Central California. In 2011, during this breeding program, a new variety of *Vitis vinifera* was created by deliberate cross breeding of two parent plants by emasculating of the pollen bearing organ of the female and introducing pollen from another male origin. The female parent of the new variety was HO-65, which is a mid-late red seedless grape with a sweet flavor (non-patented in the United States). The male parent (i.e. the pollen parent) of the new variety was 60-85+1, a meaty and crispy red seedless variety (non-patented in the United States).

TABLE 1

'ARD8' compared with parents & closely related variety:				
	'ARD8'	HO-65	60-85+1	'Flame' (non-patented)
Harvest time	Late	Mid-late	Mid-late	Very early
Berry shape	Broad ellipsoid	Globose	Broad Ellipsoid	Globose
Density of bunch	Lax	Lax	Medium	Tight

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The parentage of the new variety can be summarized as follows:

HO-65 X 60-85+1

5 An artificial pollination was created, and the result was an embryo which possessed unique genetic qualities. The rudiments resulting from the above pollination were embryo rescued.

10 In 2012 the plant was transplanted to Bakersfield in the San Joaquin Valley of Central California.

It was found that the new grapevine of the present invention possesses the following combination of characteristics:

- (a) Forms attractive crispy seedless berries with a red skin coloration in lax and large clusters which display a naturally sweet flavor;
- (b) Commonly bears fruit during the month of August in the San Joaquin Valley of Central California, U.S.A.;
- (c) Bears fruit that is firm and is well amenable for storage, handling, and shipping; and
- (d) Produces 42 bunches per vine, and an average of about 1-2 bunches per shoot, at a total of 68 lbs. of fruit per vine.

25 The new variety during observation to date has displayed no visible disease, and has displayed an ability to well resist cold, drought and heat; but is sensitive to direct exposure to sun and wind. The fruit of the new variety has been found to display excellent handling and shipping qualities combined with desirable dessert eating qualities.

30 The new variety of the present invention has been found to undergo asexual propagation beginning in 2013 near Bakersfield in the San Joaquin Valley of Central California, U.S.A. by bud grafting on mature 'Thompson Seedless' rootstock (non-patented in the United States). Such asexual

propagation has been conducted thereafter in successive years to date and has shown that the characteristics of the new variety are strictly transmissible from one generation to another. Accordingly, the new variety undergoes asexual propagation in a true to type manner.

SUMMARY OF THE INVENTION

The new variety 'ARD8' is a red seedless table grape with a high production, e.g., about 42 bunches per vine, and an average of about 1-2 bunches per shoot.

Asexual reproduction by micro propagation of the new variety as performed near Bakersfield, Calif., U.S.A., shows that the forgoing and other distinguishing characteristics come true to form and are established and transmitted through succeeding propagations.

BRIEF DESCRIPTION OF THE DRAWING

The accompanying photographic illustration shows typical six-year-old specimens of the new variety, vegetatively propagated, in color as nearly true as it is reasonably possible to make in a color illustration of this character. Colors in the photograph may differ from the color values cited in the detailed botanical description below, which accurately describes the colors of the new Grapevine.

The drawing shows leaves, stems and grapes of 'ARD8'

DETAILED BOTANICAL DESCRIPTION

The chart used in the identification of colors is The R.H.S. Colour Chart of The ROYAL HORTICULTURAL SOCIETY (3rd Edition). The description is based on the observation of plants growing on 'Thompson Seedless' rootstock outdoors near San Joaquin Valley of Central California, U.S.A.

VINE CHARACTERISTICS:	
Vigor	Vigorous upright shoots
Productive capacity	Bearing at a natural, average capacity. Spur pruning.
Trunk	Strong and developed. Diameter is 2.3 inches at 12.3 inches above ground. Rough with a fibrous, shaggy exterior. Light maple brown coloring greyed orange 166B

Date of bud burst in Bakersfield Calif.: March 2nd

YOUNG SHOOT CHARACTERISTICS:	
Openness of tip	Wide open
Density of prostrate hairs on tip	Absent or very sparse
Anthocyanin coloration of prostrate hairs on tip	None
Density of erect hairs on tip	Absent or very sparse

YOUNG LEAF CHARACTERISTICS:	
Color of upper side of blade	Yellow green 152A
Color of lower side of blade	Yellow green 152A
Density of erect hairs between main veins on upper side of blade	Absent or very sparse

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YOUNG LEAF CHARACTERISTICS:	
Density of erect hairs between main veins on lower side of blade	Absent or very sparse
Density of prostrate hairs on main veins on upper side of blade	Absent or very sparse
Density of prostrate hairs on main veins on lower side of blade	Absent or very sparse

SHOOT CHARACTERISTICS:	
Attitude (before tying)	Semi-erect
Color of dorsal side of internodes	Yellow green 144B
Color of ventral side of internodes	Yellow green 144A
Color of dorsal side of nodes	Yellow green 144B
Color of ventral side of nodes	Yellow green 144A
Density of erect hairs on internodes	Absent or very sparse
Density of prostrate hairs on internodes	Absent or very sparse
Length of tendrils	6.7 inches
Diameter of tendrils	0.1 inches
Color of tendrils	Yellow green 145A
Number of tendrils at bloom	3
Positioning of first flowering and fruiting node	The first bunch is in the 3 rd node
Inflorescence number per flowering shoot	1-2

FLOWER CHARACTERISTICS:	
Reproductive organs	Fully developed stamens and fully developed gynoecium
Flower length	0.3 inches
Flower diameter	0.25 inches
Pistil length	0.11 inches
Pistil color	Green 143A
Pollen Amount	Poor
Pollen color	Yellow 11A
Stamen color	Yellow green 144A
Stamen length	0.15 inches
Number of stamen	6

First bloom in Bakersfield, Calif.: April 30th

Date of full bloom in Bakersfield, Calif.: May 5th

MATURE LEAF CHARACTERISTICS:	
Size of blade	7.5 inches x 7.5 inches
Shape of blade	Pentagonal
Base descriptors	Pentagonal
Leaf margin	Doubly serrate
Leaf apex	Acute
Blistering of upper side of blade	Weak
Depth of upper lateral sinuses	Absent or very shallow
Number of lobes (Only varieties with lobed leaves)	Five
Arrangement of lobes of upper lateral sinuses	Closed
Arrangement of lobes of petiole sinus	Wide open
Length of teeth	0.65 inches
Ratio length/width of teeth	Medium
Shape of teeth	Both sides convex
Density of prostrate hairs between main veins on lower side of blade	Absent or very sparse
Density of erect hairs on main veins on lower side of blade	Medium
Density of erect hairs between the main veins on upper side of blade	Absent or very sparse

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Density of prostrate hairs on main veins on upper side of blade	Absent or very sparse
Length of petiole compared to length of middle vein	Moderately shorter
Top side color	Green 137A
Bottom side color	Yellow green 147B
Texture of upper side of blade	Rough
Texture of lower side of blade	Rough
Vein color on upper blade	Yellow green 145B
Vein color on lower blade	Yellow green 145D
Venation pattern for upper blade	Netlike venation
Venation pattern for lower blade	Netlike venation
Petiole length	6 inches
Petiole diameter	0.14 inches
Petiole color	Yellow green 145A
Petiole texture	Smooth

Date of beginning of berry ripening in Bakersfield Calif.: July 28th

BUNCH CHARACTERISTICS:

Size (peduncle excluded)	Large
Density of berries on bunch	Lax
Bunch length	9 inches
Bunch diameter	7 inches
Length of peduncle of primary bunch	1.1 inches
Diameter of peduncle of primary bunch	0.14 inches
Peduncle of primary bunch color	Yellow green 144C
Peduncle texture	Smooth
Bunches per vine	42
Average bunch weight	1.62 lbs

BERRY CHARACTERISTICS:

Size	Large
Length	1.2 inches
Weight	0.39 oz
Diameter	0.98 inches
Shape	Broad ellipsoid
Color of skin (without bloom)	Red 53A
Flesh color	Greyed green 192C
Brix	23.1
Titration acidity percentage	0.49%
Juice	3.86 pH
Ease of detachment from pedicel	Moderately easy
Thickness of skin	Thin
Anthocyanin coloration of flesh	None
Firmness of flesh	Moderately firm
Particular flavor	Naturally sweet
Formation of seeds	None
Berries per bunch	79

PEDICEL CHARACTERISTICS:

Length	0.42 inches
Diameter	0.09 inches
Color	Yellow green 145C
Pedicel texture	Smooth

WOODY SHOOT CHARACTERISTICS:

Woody shoot texture	Rough
Woody shoot color	Greyed orange 177B
Woody shoot length	164 inches
Diameter	0.43 inches
Internode length	4.48 inches

Market use of observed plants: Fresh market

AGE AND GROWING CONDITIONS

Six years growing under Y system in South Joaquin Valley (hot, dry summers).

SHIPPING CHARACTERISTICS

Fruit was in cold storage. Stored in poly bags inside Styrofoam boxes with sulfur pads. After 60 Days: rachises were 90% green; 20% berry shattering; no berry wrinkling or cracks were apparent.

DNA PROFILE

To further the characterize the new variety DNA was extracted from plant samples and a DNA profile was obtained in California USA using base pairs for 10 standard microsatellite DNA markers. The data is presented hereafter.

TABLE 2

DNA profile for 'ARDS'

Microsatellite DNA Marker	Allele Sizes in Base Pairs	
M1	228	236
M2	249	253
M3	181	194
M4	212	216
M5	251	273
M6	151	151
M7	189	189
M8	247	247
M9	214	214
M10	247	247

The 'ARD8' variety has not been observed under all possible environmental conditions to date. Accordingly, it is possible that the phenotypic expression may vary somewhat with changes in light intensity and duration, cultural practices, and other environmental conditions.

Additional information relating to plant and fruit disease and pest resistance or susceptibility has not been observed to date. Specification of the plant hardiness zone and the heat/cold resistance has not been observed to date.

What is claimed is:

1. A new and distinct grapevine plant, botanically known as *Vitis vinifera*, identified as 'ARD8', substantially as shown and described herein.

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