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(54) **SEEDLESS GRAPEVINE NAMED 'ARDTHIRTYSEVEN'**

(50) Latin Name: *Vitis vinifera*
Varietal Denomination: **ARDTHIRTYSEVEN**

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USPC **Plt./207**
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(57) **ABSTRACT**

A new distinct variety of grapevine named 'ARDTHIRTY-SEVEN' abundantly forms attractive crunchy seedless berries with a creamy green skin coloration; lax and medium sized clusters which display an aromatic flavor. The fruit commonly is ready for harvesting during July in San Joaquin Valley of Central California, U.S.A, and displays good eating qualities as a table grape. The fruit firmness renders the fruit well amenable for handling, shipping, and storage.

1 Drawing Sheet

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

Variety denomination: The new Grapevine has a varietal denomination 'ARDTHIRTYSEVEN'.

BACKGROUND OF THE INVENTION

A breeding program was initiated during the late 90's near Bakersfield in San Joaquin Valley of Central California. In 2008, during this breeding program, a new variety of *Vitis vinifera* was created by deliberate cross breeding of two parent plants by emasculation of the pollen bearing organ of the female and introducing pollen from another male origin. The female parent of the new variety was GAW 5, which is a high fertility meaty white table grape variety (non-patented in the United States). The male parent (i.e. the pollen parent) of the new variety was 1A-46+0, which is a creamy green colored variety with a thin skin and natural sweet flavor (non-patented in the United States).

TABLE 1

ARDTHIRTYSEVEN compared with parents & closely related variety:

	ARDTHIRTY-SEVEN	GAW 5 (Maternal)	1A-46+0 (Paternal)	Thompson Seedless
Berry attachment	Very good	Very good	Good	Medium
Harvest time	Early	Mid-late	Mid	Mid
Flavor	Aromatic	Exotic	Natural sweet	Sweet

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

GAW 5 X 1A-46+0

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.

In 2009 the plant was transplanted to Bakersfield in 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 crunchy seedless berries with a creamy green skin coloration; in lax medium sized clusters which display an aromatic flavor,
(b) Commonly bears fruit during the month of July in the San Joaquin Valley of Central California, U.S.A., and
(c) Bears fruit that is firm and is well amenable for storage, handling, and shipping.
(d) Produces 62 bunches per vine, and an average of about 2 bunches per shoot, at a total of 47 lbs. fruit per vine.

The new variety during observation to date has displayed no visible disease, and has displayed an ability to well resist cold, drought, heat; but 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.

The new variety of the present invention has been found to undergo asexual propagation beginning in 2010 near Bakersfield in the San Joaquin Valley of Central California, U.S.A. by bud grafting on mature Thompson 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 ARDTHIRTYSEVEN is a green seedless table grape with a high production, e.g., about 62 bunches per vine, and an average of about 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 ARDTHIRTYSEVEN.

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 3.6 inches, measured at 10.7 inches above ground. Rough with a fibrous, shaggy exterior. Light maple brown coloring (greyed orange 177C)

Date of bud burst in Bakersfield Calif.: February 24th.

Young shoot characteristics:

Openness of tip	half open
Density of prostrate hairs on tip	very dense
Anthocyanin coloration of prostrate hairs on tip	none (green 138B)
Density of erect hairs on tip	dense

Young leaf characteristics:

Color of upper side of blade	yellow green 144B
Color of lower side of blade	yellow green 145B
Density of erect hairs between main veins on upper side of blade	dense
Density of erect hairs between main veins on lower side of blade	dense
Density of prostrate hairs on main veins on upper side of blade	very dense
Density of prostrate hairs on main veins on lower side of blade	very dense

Shoot characteristics:

Attitude (before tying)	erect
Color of dorsal side of internodes	yellow green 144A
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	dense
Density of prostrate hairs on internodes	dense
Length of tendrils	6.5 inches
Diameter of tendrils	0.08 inches
Color of tendrils	yellow green 144B
Number of tendrils at bloom	3
Positioning of first flowering and fruiting node	the first bunch is in the 3rd node
Inflorescence number per flowering shoot	2

Flower characteristics:

Reproductive organs	fully developed stamens and fully developed gynoecium
Flower length	0.25 inches
Flower diameter	0.25 inches
Pistil length	0.14 inches
Pistil color	yellow green 143C
Pollen Amount	rich
Pollen color	yellow 11A
Stamen color	yellow green 145D
Stamen length	0.17 inches
Number of stamen	6

First bloom in Bakersfield, Calif.: April 25th.

Date of full bloom in Bakersfield, Calif.: May 2nd.

Mature leaf characteristics:

Size of blade	7.5 × 7 inches
Shape of blade	pentagonal
Base descriptors	pentagonal
Leaf margin	doubly serrate
Leaf apex	acute
Blistering of upper side of blade	absent or very sparse
Depth of upper lateral sinuses	absent or very shallow
Number of lobes	three
(Only varieties with lobed leaves)	
Arrangement of lobes of upper lateral sinuses	open
Arrangement of lobes of petiole sinus	wide open
Length of teeth	0.4 inches
Ratio length/width of teeth	medium
Shape of teeth	mixture of both sides straight 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	absent or very sparse
Density of erect hairs between the main veins on upper side of blade	absent or very sparse
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	equal

-continued

Top side color	green 137B
Bottom side color	yellow green 146B
Texture of upper side of blade	rough
Texture of lower side of blade	smooth
Vein color on upper blade	yellow green 146C
Vein color on lower blade	yellow green 145C
Venation pattern for upper blade	netlike venation
Venation patten for lower blade	netlike venation
Petiole length	4.4 inches
Petiole diameter	0.13 inches
Petiole color	yellow green 146D
Petiole texture	smooth

Date of beginning of berry ripening in Bakersfield Calif.: June 25th.

Bunch characteristics:

Size (peduncle excluded)	medium
Density of berries on bunch	lax
Bunch length	9.5 inches
Bunch diameter	6.5 inches
Length of peduncle of primary bunch	6.5 inches
Diameter of peduncle of primary bunch	0.18 inches
Peduncle of primary bunch color	yellow green 145A
Peduncle texture	rough
Bunches per vine	62
Average bunch weight	0.8 lbs

Berry characteristics:

Size	small
Length	0.81 inches
Weight	0.12 oz
Diameter	0.6 inches
Shape	ovoid
Color of skin (without bloom)	yellow green 145A
Flesh color	yellow green 145D
Brix	19
Titrabable acidity percentage	0.51%
Juice	3.64 pH
Ease of detachment from pedicel	moderately easy
Thickness of skin	thin
Anthocyanin coloration of flesh	none
Firmness of flesh	moderately firm
Particular flavor	aromatic
Formation of seeds	none
Berries per bunch	105

Pedicel characteristics:

Length	0.48 inches
Diameter	0.39 inches
Color	yellow green 144C
Pedicel texture	rough

Woody shoot characteristics:

Woody shoot texture	rough
Woody shoot color	greyed orange 165C
Woody shoot length	160 inches
Diameter	0.4 inches
Internode length	4.1 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:

(E.g. number of days fruit has been stored under specific conditions): Fruit was in cold storage. Stored in poly bags inside Styrofoam boxes with sulfur pads. After 30 Days: rachises were 50% green; 0% 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 at California Seed & Plant Lab, California USA using base pairs for 10 standard microsatellite DNA markers. The data is presented hereafter.

TABLE 2

DNA profile for ARDTHIRTYSEVEN

Microsatellite DNA Marker	Allele Sizes in Base Pairs	
M1	234	236
M2	239	249
M3	185	194
M4	212	220
M5	253	273
M6	123	151
M7	189	205
M8	247	255
M9	214	214
M10	233	237

The ARDTHIRTYSEVEN 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, botanically known as *Vitis vinifera*, identified as 'ARDTHIRTYSEVEN', substantially as shown and described herein.

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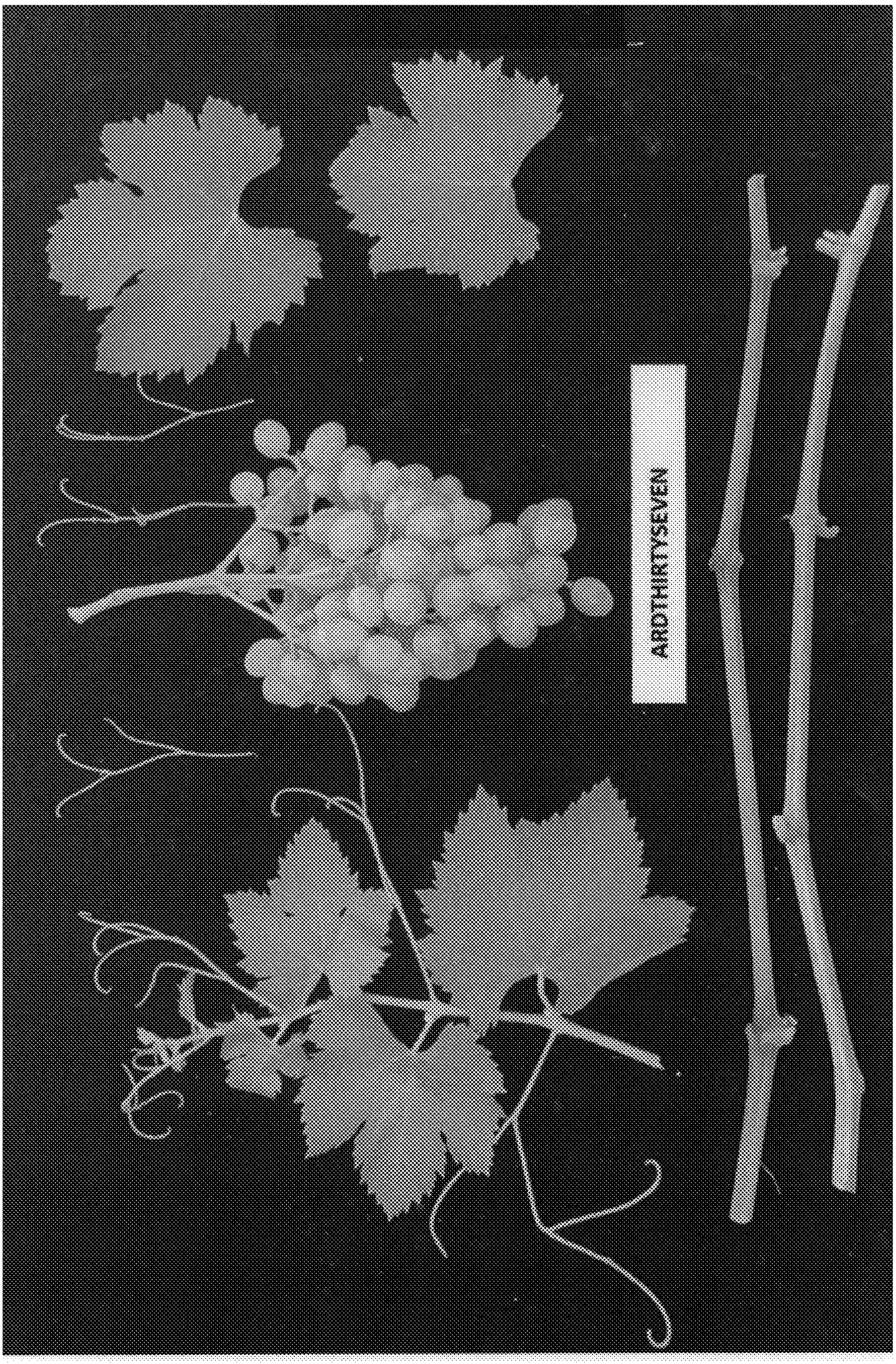
ARDITHRTYSEVEN