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- (54) **SEEDLESS GRAPEVINE NAMED ‘ARDTHIRTYNINE’**
- (50) Latin Name: *Vitis vinifera*  
Varietal Denomination: **ARDTHIRTYNINE**
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- (52) **U.S. Cl.**  
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See application file for complete search history.

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(57) **ABSTRACT**  
A new distinct variety of grapevine named ‘ARDTHIRTY-NINE’ abundantly forms attractive meaty and Crunchy seedless berries with a green skin coloration; medium density in large clusters which display a sweet muscat flavor, the fruit commonly is ready for harvesting during July-August 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**

**1**

Classification: The present invention relates to a new *Vitis vinifera* Grapevine.  
Variety denomination: The new Grapevine has a varietal denomination ‘ARDTHIRTYNINE’.

**BACKGROUND OF THE INVENTION**

A breeding program was initiated during the late 1990’s near Bakersfield in San Joaquin Valley of Central California. In 2013, 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 93B-9+6 which is a white, meaty & soft variety with good berry attachment (non-patented in the United States). The male parent (i.e. the pollen parent) of the new variety was 30-5+1, a meaty white variety with soft berry texture (non-patented in the United States).

**TABLE 1**

ARDTHIRTYNINE compared with parents & closely related variety:				
	ARDTHIRTY-NINE	93B-9+6 (Maternal)	30-5+1 (Paternal)	Thompson seedless
Bunch density	medium	medium-dense	medium	very tight
Berry flavor	sweet muscat	none	sweet muscat	sweet
Skin	medium	medium	thin	tender

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

93B-9+6 X 30-5+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 2014 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:
- 15 (a) Forms attractive meaty and crunchy seedless berries with a green skin coloration; in medium density, medium clusters which display a sweet muscat flavor,
- (b) Commonly bears fruit during the month of July-August in the San Joaquin Valley of Central California, U.S.A.,
- 20 (c) Bears fruit that is firm and is well amenable for storage, handling, and shipping, and
- (d) Produces 81 bunches per vine, and an average of about 1-2 bunch per shoot, at a total of 64 lbs 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, 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.
- 30 The new variety of the present invention has been found to undergo asexual propagation beginning in 2015 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 ARDTHIRTYNINE is a green seedless table grape with a high production, e.g., about 81 bunches per vine, and an average of about 1-2 bunch 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 ARDTHIRTYNINE

DETAILED BOTANICAL DESCRIPTION

The chart used in the identification of colors is The R.H.S. Colour Chart of The ROYAL HORTICULTURAL SOCIETY (3<sup>rd</sup> 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 2.5 inches, measured at 5.5 inches above ground. Rough with a fibrous, shaggy exterior. Light maple brown coloring (greyed orange 175C)

Date of bud burst in Bakersfield Calif.: 2<sup>nd</sup> March.

Young shoot characteristics:

Openness of tip	wide open
Density of prostrate hairs on tip	sparse
Anthocyanin coloration of prostrate hairs on tip	none (yellow green 144A)
Density of erect hairs on tip	sparse

Young leaf characteristics:

Color of upper side of blade	yellow green 152A
Color of lower side of blade	yellow green 152C

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Density of erect hairs between main veins on upper side of blade	absent or very sparse
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 144C
Color of dorsal side of nodes	yellow green 144B
Color of ventral side of nodes	yellow green 144C
Density of erect hairs on internodes	absent or very sparse
Density of prostrate hairs on internodes	absent or very sparse
Length of tendrils	5.9 inches
Diameter of tendrils	0.06 inches
Color of tendrils	yellow green 144C
Number of tendrils at bloom	3
Positioning of first flowering and fruiting node	the first bunch is in the 3 <sup>rd</sup> node
Inflorescence number per flowering shoot	1-2

Flower characteristics:

Reproductive organs	fully developed stamens and fully developed gynoecium
Flower length	0.27 inches
Flower diameter	0.1 inches
Pistil length	0.14 inches
Pistil color	green 143B
Pollen Amount	rich
Pollen color	yellow 8C
Stamen color	yellow green 144B
Stamen length	0.1 inches
Number of stamen	6

First bloom in Bakersfield, Calif.: 1<sup>st</sup> May.  
Date of full bloom in Bakersfield, Calif.: 9<sup>th</sup> May.  
Mature leaf characteristics:

Size of blade	6 × 5.5 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	shallow
Number of lobes (Only varieties with lobed leaves)	seven
Arrangement of lobes of upper lateral sinuses	closed
Arrangement of lobes of petiole sinus	wide open
Length of teeth	0.6 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	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	sparse



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Length of petiole compared to length of middle vein	moderately shorter
Top side color	green 137B
Bottom side color	green 138B
Texture of upper side of blade	smooth
Texture of lower side of blade	smooth
Vein color on upper blade	yellow green 145C
Vein color on lower blade	yellow green 145D
Venation pattern for upper blade	netlike venation
Venation patten for lower blade	netlike venation
Petiole length	4 inches
Petiole diameter	0.12 inches
Petiole color	yellow green 145B
Petiole texture	rough

Date of beginning of berry ripening in Bakersfield Calif.:  
15<sup>th</sup> July.

Bunch characteristics:

Size (peduncle excluded)	medium
Density of berries on bunch	medium
Bunch length	7.5 inches
Bunch diameter	5.5 inches
Length of peduncle of primary bunch	1.5 inches
Diameter of peduncle of primary bunch	0.12 inches
Peduncle of primary bunch color	yellow green 144A
Peduncle texture	smooth
Bunches per vine	81
Average bunch weight	0.8 lbs.

Berry characteristics:

Size	large
Length	0.9 inches
Weight	0.21 oz
Diameter	0.8 inches
Shape	broad ellipsoid
Color of skin (without bloom)	yellow green 153B
Flesh color	yellow green 145D
Brix	19
Titrabable acidity percentage	5.5%
Juice	3.4 ph
Ease of detachment from pedicel	difficult
Thickness of skin	medium
Anthocyanin coloration of flesh	none
Firmness of flesh	moderately firm
Particular flavor	muscat
Formation of seeds	rudimentary
Berries per bunch	90

Pedicel characteristics:

Length	0.4 inches
Diameter	0.08 inches

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Color	yellow green 144A
Pedicel texture	rough

Woody shoot characteristics:

Woody shoot texture	little rough
Woody shoot color	greyed orange 164B
Woody shoot length	120 inches
Diameter	0.37 inches
Internode length	3.7 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 30 Days: rachises were 40% green; 2% 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 'ARDTHIRTYNINE'			
Microsatellite DNA Marker		Allele Sizes in Base Pairs	
35	M1	238	238
	M2	187	189
	M3	239	249
	M4	212	220
	M5	151	151
	M6	265	273
	M7	179	194
	M8	255	257
	M9	214	214
	M10	221	237

The 'ARDTHIRTYNINE' 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 'ARDTHIRTYNINE', substantially as shown and described herein.

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