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Castellarin et al.

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(54) **GRAPEVINE NAMED 'MERLOT KANTHUS'**

(50) Latin Name: ***Vitis×vinifera (hybrid)***
Varietal Denomination: **MERLOT KANTHUS**

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A01H 5/08 (2006.01)

(52) **U.S. Cl.**
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(57) **ABSTRACT**

A new and distinct variety of grapevine named 'MERLOT KANTHUS', primarily adapted to the growing conditions of the temperate regions, and characterized by its medium vigor; erect growth habit; medium sized, circular shaped leaves; small, conical, medium dense berry clusters with two middle size wings; blue-black berries with slightly firm flesh, none to herbaceous taste and none to very weak flesh coloration; primary use for wine; and resistance to winter temperatures (to −22° C.), resistance to downy mildew, and tolerance to powdery mildew.

4 Drawing Sheets

Latin name of the genus and species of the plant claimed: *Vitis×vinifera* (hybrid).

Variety name: 'MERLOT KANTHUS'.

BACKGROUND OF THE INVENTION

The present invention relates to a new and distinct summer/fall bearing grapevine variety, botanically known as *Vitis vinifera*, and hereinafter referred to by the name 'MERLOT KANTHUS'.

The new grapevine 'MERLOT KANTHUS' is a product of a controlled breeding program conducted by the inventors in Udine, Italy. The objective of the breeding program was to deyelop a new grapevine variety particularly characterized by resistance to cold (<−20° C.), resistance to downy mildew (*Plasmopara viticola*), and tolerance to powdery mildew (*Uncinula necator*).

The new grapevine 'MERLOT KANTHUS' originated from a cross made by the inventors in 2002 in Udine, Italy. The female or seed parent is the grapevine variety, *Vitis vinifera* cv. 'Merlot' (unpatented), and the male or pollen parent is the grapevine variety, *Vitis* cv. '20/3' (Biancax× SK77-4/5) (unpatented).

The new grapevine 'MERLOT KANTHUS' was discovered and selected by the inventors as a single flowering plant within the progeny of the stated cross in a controlled environment in 2002 in Udine, Italy. Asexual reproduction of the new grapevine variety by grafting was first performed in February 2004 in Rauscedo, Friuli Venezia Giulia region,

Italy, and has demonstrated that the combination of characteristics as herein disclosed for the new cultivar are firmly fixed and retained through successive generations of asexual reproduction. The new cultivar reproduces true to type.

SUMMARY OF THE INVENTION

'MERLOT KANTHUS' is primarily adapted to the climate and growing conditions of the temperate regions with average yearly temperature about 13° C., minimum winter temperature about −20° C., annual rainfall around 700-1500 mm of rain (e.g. North-Eastern Italy, Friuli). This region provides the necessary year-round temperatures required for it to produce and maintain a strong vigorous plant with consistent fruit production from April through November on primocanes and in the ensuing year from April through November on the floricanes.

The following traits have been repeatedly observed and are determined to be unique characteristics of 'MERLOT KANTHUS', which in combination distinguish this grapevine plant as a new and distinct variety.

1. Medium vigor;
2. Erect growth habit;
3. Medium sized, circular shaped leaves with medium to medium green upper surfaces and light green lower surfaces and medium texture;
4. Small, conical, medium dense berry clusters with two middle size wings; blue-black berries with slightly firm flesh, none to herbaceous taste, and none to very weak

flesh coloration; primarily used for wine and maturing in early September (Middle Friuli, North-Eastern Italy);

5. Primocanes and floricanes with a circular cross section, brownish colour, no lenticels, and short-medium internodes (diameter 8 mm);
6. Harvesting time in early September (Middle Friuli, North-Eastern Italy); and
7. Resistance to winter temperature (−22° C.), resistance to downy mildew, and tolerance to powdery mildew.

Plants of the new grapevine 'MERLOT KANTHUS' differ from plants of the parents, *Vitis vinifera* 'Merlot' (unpatented) and *Vitis* cross '20/3' (unpatented), in the following characteristics described in Table 1.

TABLE 1

Comparison with parent varieties

Characteristic	New Cultivar 'MERLOT KANTHUS'	Female Parent 'Merlot' (unpatented)	Male Parent '20/3' (unpatented)
vigor:	medium	medium	medium
growth habit	erect	horizontal	semi-erect
leaf	small to medium, medium to dark green color (upper surface), light green color (lower surface), no hairs in both surfaces, wedge shape, medium texture,	medium, dark green color (upper surface), green color (lower surface), very few hairs in both surfaces, wedge shape, medium texture	Medium size, light green color (upper surface), green color (lower surface), no hairs in both surfaces, wedge-shaped—kidney-shaped, medium texture
cluster	low weight, conical with two middle size wings, loose or medium dense, berry skin with blue blackcolour, soft flesh, neutral taste, no flesh coloration	low weight, long, with 1-2 wings, medium, berry skin with blue black color, soft flesh, neutral taste, no flesh coloration	low weight, conical, with 1-2 wings, medium dense, berry skin with green-yellow color, slightly firm flesh, neutral taste, no flesh coloration
primocane and floricane	circular cross section, brownish colour, lenticels: absent, short-medium internodes, diameter: small (about 8 mm)	circular cross section, brownish color, lenticels: absent, short-medium internodes, diameter small (about 8 mm)	oblate cross section, brownish color, lenticels: absent, medium internodes, diameter small (about 8 mm)
harvesting time	First decade September(Middle Friuli, North-Eastern Italy),	Early-medium early September (Middle Friuli, North-Eastern Italy)	Early (end August, Middle Friuli, North-Eastern Italy)
resistances	resistant to winter temperature (−22° C.), resistant to downy resistant to downy mildew, tolerant to powdery mildew.	Average resistance to winter temperature (−22° C.), very low resistance to downy mildew, very low resistance to powdery mildew	resistant to winter temperature not checked, resistant to downy mildew, resistant to powdery mildew

Of the many commercial cultivars known to the present inventor, the most similar to the new grapevine 'MERLOT KANTHUS' is the female parent 'Merlot', to which a comparison has been provided above.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new grapevine 'MERLOT KANTHUS' showing the colors as true as is reasonably possible with colored reproductions of this type. Colors in the photographs may differ slightly from the color values cited in the detailed botanical description, which accurately describe the color of 'MERLOT KANTHUS'.

FIG. **1**A and FIG. **1**B show a typical fruit cluster of 'MERLOT KANTHUS' taken on Sep. 9, 2012, in Udine, Italy.

FIG. **2** shows a typical mature leaf (upper surface, left and lower surface, right) of 'MERLOT KANTHUS' taken on May 31, 2012, in Udine, Italy.

FIG. **3** shows a typical mature vine of 'MERLOT KANTHUS' taken on Aug. 3, 2012.

FIG. **4** shows a close-up view of typical mature fruit of 'MERLOT KANTHUS' taken on Sep. 9, 2012, in Udine, Italy.

DETAILED BOTANICAL DESCRIPTION

The following description of 'MERLOT KANTHUS' unless otherwise noted, is based on observations taken during the 2011, 2012, and 2013 growing seasons(s) in Udine, Italy and Fossalon di Grado (GO), Italy, from plants dug from a nursery located in Rauscedo (PN), Italy during the beginning of December 2007 and planted approximately 16 to 20 weeks later in Udine, Italy and Fossalon di Grado (GO), Italy. The phenotypical descriptions and color designations stated for the new variety may vary, depending upon variations in environmental factors, including weather (temperature, humidity and light intensity), day length, soil type, location and cultural conditions. 'MERLOT KANTHUS' has not been observed under all possible environmental conditions.

Color references are made to The Royal Horticultural Society Colour Chart (R.H.S.), (Edition V, 2007), except where general colors of ordinary significance are used.

Characteristic	'MERLOT KANTHUS'	'Merlot' (unpatented)
GENERAL		
Resistance to pest/disease	Resistant to downy mildew, tolerant to powdery mildew	Susceptible to downy mildew and to powdery mildew
Resistance to natural elements	Resistant to winter cold down to −23° C.	Resistant to winter cold down to −22° C.
VINE		
Vigor	medium	medium
Trunk diameter	6 cm (6 yrs-old plant)	6 cm (6 yrs-old plant)
Bark		
color	RHS 177B	Dark brown
underbark color	RHS 179B	Light brown
texture	n.a.	n.a.
Canes		
length	Internode length cm 10.5	Internode length about cm 10
width	8 mm	8 mm
Shoots		
shape	Erected, cross section: circular, surface: with stripes, nodes and internodes without hairs	Horizontal, cross section: circular, surface: smooth, nodes and internodes without hairs
color	internodes with red (RHS 185B) and green	Internodes with green colour on ventral and

-continued

Characteristic	'MERLOT KANTHUS'	'Merlot' (unpatented)
	(RHS 144B) pigmentation on both sides, nodes with red (RHS 185B) and green (RHS 144B) dorsal side and green (RHS 144B) ventral side	dorsal side, nodes with green ventral and dorsal side
Tendrils		
form	Bifid or trifid	bifid
color	RHS 143B	Green
texture	normal	normal
number	2 or <2 consecutive	2 or <2 consecutive
Buds		
size	average	average
shape	round	round
color	RHS 139C and RHS181A	Light brown
number	2/node	2/node
time of budbreak	early	early-medium
LEAVES		
Size	medium	medium
Number of leaflets	n.a.	n.a.
Glossiness	Medium	medium
Cross section shape	Twisted	Flat
Color (immature)		
Upper surface	RHS 140B and RHS 185B	Light green
Under surface	RHS 1408 and RHS 185B	green
Color (mature)		
Upper surface	RHS 143B	Dark green
Under surface	RHS 143C	green
Petiole		
Length (cm)	6.2	6.0
Color (upper surface)	RHS 145B and RHS 184D	green
Color (under surface)	RHS I45C and RHS 184D	green
Stipule orientation	n.a.	n.a.
FLOWERS		
Flowering period (time of beginning of flowering)	Early June	Early June
Sex	hermaphrodite	hermaphrodite
Size	Average	average
Diameter (cm)	0.3 (stamens)	0.3 (stamens)
Stamen color	RHS 4D	
Pistil color	RHS 149A	
Fragrance	n.a.	n.a.
Flower number (at 3rd node from tip of lateral mean and range)	n.a.	n.a.

-continued

Characteristic	'MERLOT KANTHUS'	'Merlot' (unpatented)
Petals		
Length (cm)	n.a.	n.a.
Width (cm)	n.a.	n.a.
Overall shape	calyptra	calyptra
Calyptra Color	RHS 134A	green
Sepals		
Length (cm)	n.a.	n.a.
Width (cm)	n.a.	n.a.
Overall shape	n.a.	n.a.
Color (immature)	n.a.	n.a.
Upper surface		
Under surface		
Color (mature)	n.a.	n.a.
Upper surface		
Under surface		
Pedicel		
Length (mm)	45 (cluster)	45
Color	RHS 145C	green
FRUIT		
Primocane time of fruiting (1st pick)	September 6th	September 7th
Clusters		
cluster weight	Low (g 160)	Low (g 160)
cluster shape	conical	conical
cluster length	mm 170	medium
avg. berries per cluster	180	180
avg. clusters per shoot	2	2
Berries		
Berry size	g 1.67	g 1.80
Berry length (cm)	1.60	1.50
Berry width (cm)	1.60	1.50
Overall shape of berry	broad ellipsoid	Broad ellipsoid
Berry Texture	soft	soft
Berry Skin Color (immature)	RHS 137C	green
Berry Skin Color (mature, at 19° Bx)	RHS 99A	Blue black
Berry Flesh Color	RHS 148B	
Soluble solids (%)	22.4	22.0
Titratable acidity (as g/L tartaric acid)	5.1	5.5
Sugar/acid ratio	4.4	4.0
Firmness	soft	soft
Seeds	2-3	2-3
Seed color	RHS 163A and RHS 106B	
Skin cracking?	no	rarely
Juice color	transparent	transparent
Berry taste	Neutral	neutral
Eating quality	n.a.	n.a.
Berry uses	wine	wine
Shipping quality	n.a.	n.a.

What is claimed is:

1. A new and distinct grapevine, referred to as 'MERLOT KANTHUS', as herein described and illustrated by the characteristics set forth above.

* * * * *

FIG. 1A

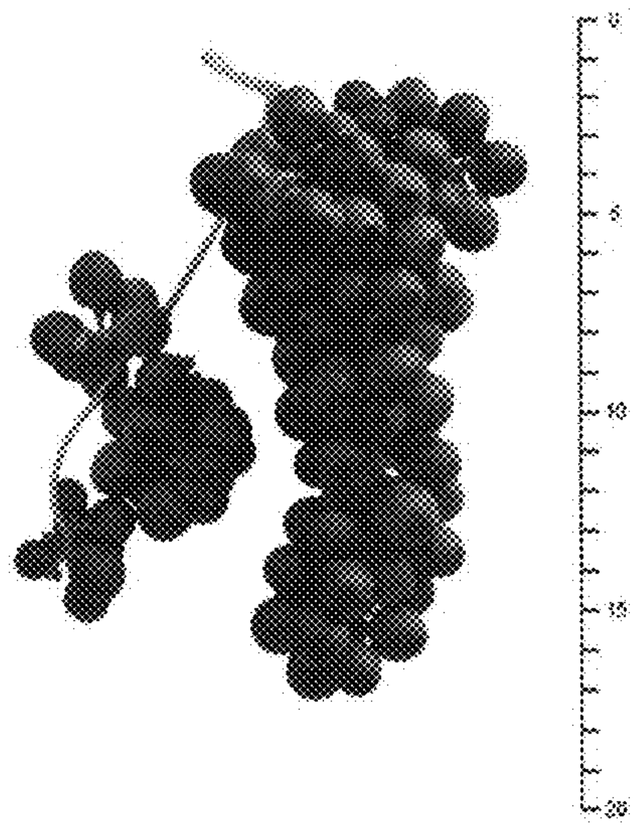

FIG. 1B

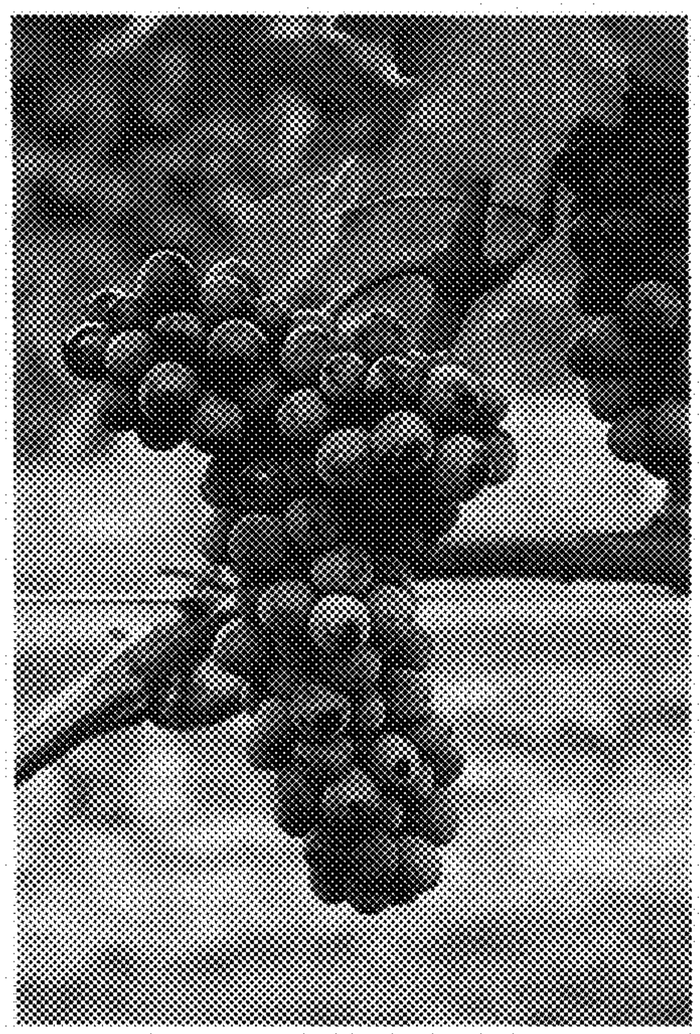

FIG. 2

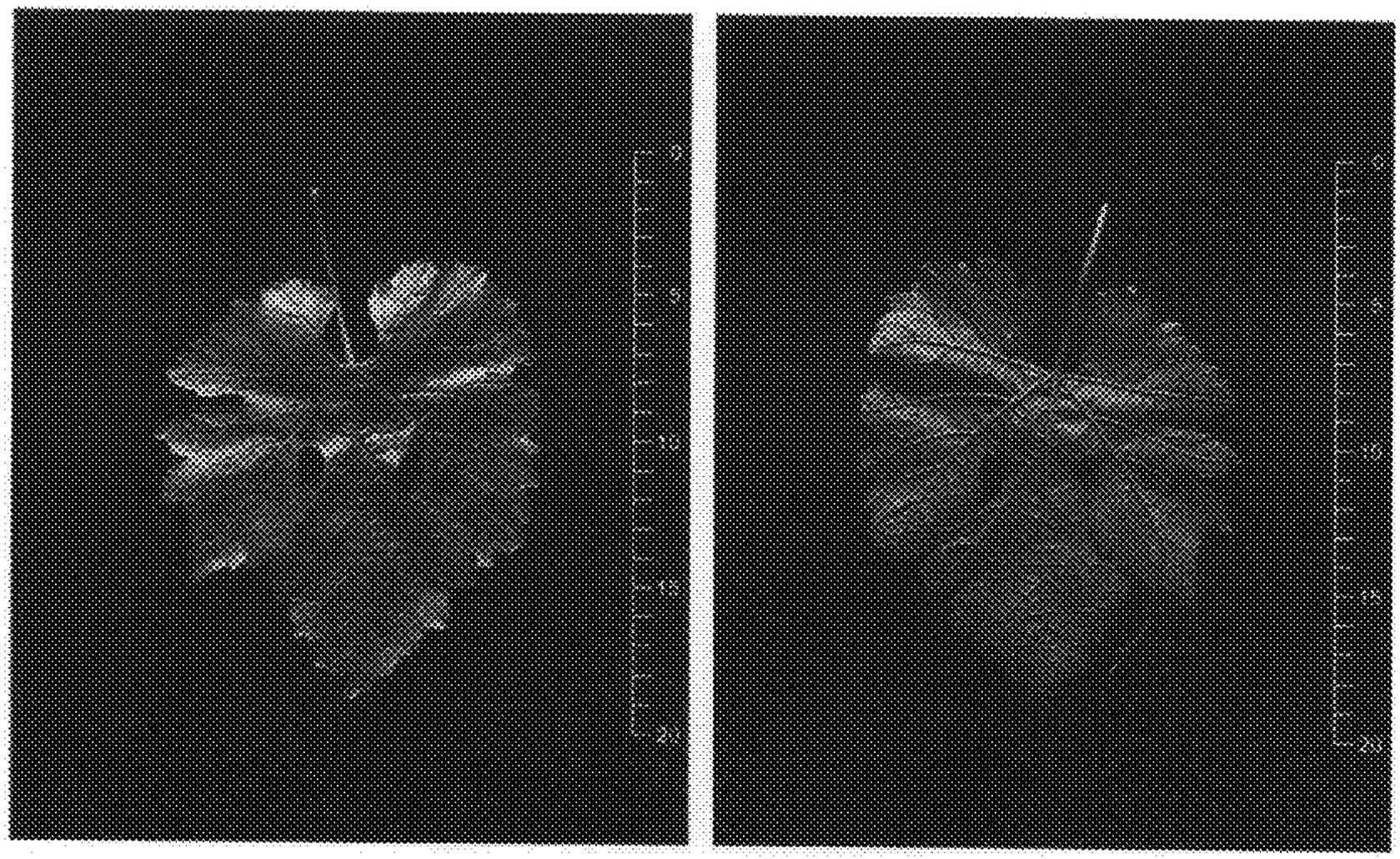

FIG. 3

FIG. 4