



US00PP28057P3

(12) **United States Plant Patent**  
Castellarin et al.

(10) **Patent No.:** US PP28,057 P3  
(45) **Date of Patent:** May 30, 2017

(54) **GRAPEVINE NAMED 'SORÉLI'**

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

(71) Applicants: **Università degli Studi di Udine**, Udine  
UD (IT); **Istituto di Genomica  
Applicata**, Udine UD (IT)

(72) Inventors: **Simone Diego Castellarin**, Vancouver  
(CA); **Guido Cipriani**, Faedis (IT);  
**Gabriele Di Gaspero**, Cividale del  
Friuli UD (IT); **Michele Morgante**,  
Tricesimo UD (IT); **Enrico  
Peterlunger**, Codroipo UD (IT);  
**Raffaele Testolin**, Udine (IT)

(73) Assignees: **Università degli Studi di Udine**, Udine  
(IT); **Istituto di Genomica Applicata**,  
Udine (IT)

(\*) 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.: **14/545,112**

(22) Filed: **Mar. 27, 2015**

(65) **Prior Publication Data**

US 2016/0242341 P1 Aug. 18, 2016

(30) **Foreign Application Priority Data**

Feb. 13, 2015 (QZ) ..... PBR 2015/0361

(51) **Int. Cl.**

**A01H 5/08** (2006.01)

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

USPC ..... **Plt./207**

(58) **Field of Classification Search**

USPC ..... **Plt./207**

See application file for complete search history.

*Primary Examiner* — Annette Para

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

(57) **ABSTRACT**

A new and distinct variety of grapevine, primarily suited to the growing conditions of the temperate regions, and characterized by its medium-strong vigor; horizontal growth habit; medium-sized, wedge-shaped to circular-shaped leaves; very low to low weight berry clusters; berries with slightly firm flesh, neutral taste, and no flesh coloration; primarily used for wine; and resistance to winter temperatures (to -24° C.), resistance to downy mildew, and tolerance to powdery mildew.

**4 Drawing Sheets**

**1**

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

**BACKGROUND OF THE INVENTION**

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

The new grapevine 'SORÉLI' is a product of a controlled breeding program conducted by the inventors in Udine, Italy. The objective of the breeding program was to develop 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 'SORÉLI' 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. 'Tocai Friulano' (unpatented), and the male or pollen parent is the grapevine variety, *Vitis* cv. '20/3' (Bianca×SK77-4/5) (unpatented).

The new grapevine 'SORÉLI' was discovered and selected by the inventor 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

5

10

15

20

25

30

**2**

retained through successive generations of asexual reproduction. The new cultivar reproduces true to type.

**SUMMARY OF THE INVENTION**

'SORÉLI' is primarily adapted to the climate and growing conditions of the temperate regions with average yearly temperature about 13° C., minimum winter temperature about -21° 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 'SORÉLI', which in combination distinguish this grapevine plant as a new and distinct variety.

1. Medium-strong vigor;
2. Horizontal growth habit;
3. Medium wedge-shaped to circular shaped leaves with dark green upper surfaces and, green lower surfaces and medium texture;
4. Very low to low weight, medium-dense, conical-shaped berry clusters with two middle size wings; green-yellow berries with slightly firm flesh, neutral taste, and no flesh coloration; primarily used for wine; and early maturity (late August in Middle Friuli, North-Eastern Italy);

5. Primocanes and floricanes with elliptic cross section, brownish color, no lenticels, and medium-sized internodes (diameter: 8 mm);
6. Early harvesting time (late August in Middle Friuli, North-Eastern Italy); and
7. Resistance to winter temperature ( $-24^{\circ}\text{C}$ ), resistance to downy mildew, and tolerance to powdery mildew.

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

TABLE 1

Comparison with parent varieties			
Characteristic	New Cultivar 'SORÉLI'	Female Parent 'Tocai Friulano' (unpatented)	Male Parent '20/3' (unpatented)
vigor: growth habit	medium-strong horizontal	strong semi-erect	medium semi-erect
leaf	medium, dark green color (upper surface), green color (lower surface), no hairs in both surfaces, wedge-shaped to circular shape, medium texture	medium size, light green color (upper surface), green color (lower surface), very few hairs in both surfaces, circular 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	Very low-low weight, conical shape with 1-2 middle size wings, medium dense, berry skin with green-yellow color, slightly firm flesh, neutral taste, no flesh coloration	low weight, conical, with 1-2 wings, dense, berry skin with green-yellow 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 floricanes	elliptic cross section, brownish color, lenticels: absent, 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	early (last decade of August in Middle Friuli, North-Eastern Italy),	Early (last decade (early September, Middle Friuli, North-Eastern Italy)	Early (last decade (early September, Middle Friuli, North-Eastern Italy)
resistances	resistant to winter temperature ( $-24^{\circ}\text{C}$ ), resistant to downy mildew, tolerant to powdery mildew.	Average resistance to winter temperature ( $-15^{\circ}\text{C}$ ), susceptible to downy mildew, susceptible 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 'SORÉLI' is the female parent 'Tocai Friulano', to which a comparison has been provided above.

#### BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying photographs illustrate the overall appearance of the new grapevine 'SORÉLI' 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 'SORÉLI'.

FIG. 1A and FIG. 1B show a typical fruit cluster of 'SORÉLI' taken on Aug. 30, 2012, in Udine, Italy.

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

FIG. 3 shows a typical mature vine of 'SORÉLI' taken on Aug. 6, 2012.

FIG. 4 shows a close-up view of typical mature fruit of 'SORÉLI' taken on Aug. 30, 2012, in Udine, Italy

#### DETAILED BOTANICAL DESCRIPTION

The following description of 'SORÉLI' 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. 'SORÉLI' has not been observed under all possible environmental conditions.

Characteristic	'SORÉLI'	'TOCAI FRIULANO' (unpatented)
<u>GENERAL</u>		
35 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 $-24^{\circ}\text{C}$ .	Resistant to winter cold down to $-15^{\circ}\text{C}$ .
40 VINE		
Vigor	Medium-strong	strong
Trunk diameter	6 cm (6 yrs-old plant)	6.5
Bark		
45 color	RHS 177B	Dark brown
underbark color	RHS 179B	Light brown
texture	n.a.	n.a.
Canes		
50 length	Internode length cm 12	Internode length about cm 10
width	8 mm	8 mm
Shoots		
55 shape	Erected, cross section: elliptic, surface: with stripes, nodes and internodes without hairs	Semi-erected, cross section: circular, surface: smooth, nodes and internodes without hairs
color	internodes with red (RHS 185B) and green (RHS 144B) pigmentation on both sides, nodes with red green ventral and dorsal (RHS 185B) and green side (RHS 144B) pigmentation on both sides	Internodes with green color on ventral and dorsal side, nodes with both sides, nodes with red green ventral and dorsal (RHS 185B) and green side (RHS 144B) pigmentation on both sides
60 Tendrils		
form	bifid or trifid	bifid
color	RHS 145C and RHS 184D	Green

## US PP28,057 P3

5

6

-continued

Characteristic	'SORÉLI'	'TOCAI FRIULANO' (unpatented)	Characteristic	'SORÉLI'	'TOCAI FRIULANO' (unpatented)
texture	Normal	normal	5	Overall shape	n.a.
number	2 or <2 consecutive	2 or <2 consecutive		Color (immature)	n.a.
Buds				Upper surface	n.a.
size	average	average		Under surface	n.a.
shape	round	round	10	Color (mature)	n.a.
color	RHS 139C and RHS 181A	Light brown		Upper surface	n.a.
number	2/node	2/node		Under surface	n.a.
time of budbreak	early	early-medium		Pedicel	
LEAVES				Length (mm)	7
Size	medium	medium		Color	RHS 145C
Number of leaflets	5	5		FRUIT	7 green
Glossiness	Medium	medium	15	Primocane time of fruiting (1 <sup>st</sup> pick)	August 30th
Cross section	revolute	V-shaped		Clusters	September 7th
shape			20	cluster weight	g 170
Color (immature)				cluster shape	cylindrical
Upper surface	RHS 140B and RHS 185B	Light green		cluster length	long (mm 190)
Under surface	RHS 140B and RHS 185B	green		avg. berries per	160
Color (mature)				cluster	220
Upper surface	RHS 141B	Medium green	25	avg. clusters per	2
Under surface	RHS 141C	Darker green		shoot	2
Petiole				Berries	
Length (cm)	5.5	6.0	30	Berry size	Very low to low (g 1.5)
Color (upper	RHS 145A and RHS 184D	green		Berry length (cm)	1.3
surface)				Berry width (cm)	1.3
Color (under	RHS 145A and RHS 184D	green		Overall shape of	globose
surface)			35	berry	berry
Stipule orientation	n.a.	n.a.		Berry Texture	slightly firm
FLOWERS				Berry Skin Color	RHS 137C
Flowering period	End of May	End of May		(immature)	soft
(time of beginning				Berry Skin Color	green
of flowering)			40	(mature, at 19° BX)	RHS 8C
Sex	hermaphrodite	hermaphrodite		Berry Flesh Color	RHS 148B
Size	Average	average		Soluble solids (%)	22.7
Diameter (cm)	0.3 (stamens)	0.3 (stamens)		Titratable acidity	21.1
Stamen color	RHS 4D			(as g/L tartaric	
Pistil color	RHS 149A			acid)	5.0
Fragrance	average	average		Sugar/acid ratio	4.5
Flower number (at	n.a.	n.a.		Firmness	3.7
3 <sup>rd</sup> node from tip			45	Seeds	soft
of lateral mean				2-3	2-3
and range)				Seed Color	RHS 166C and RHS187A
Petals				Skin cracking?	no
Length (cm)	n.a.	n.a.		Juice color	rarely
Width (cm)	n.a.	n.a.		Berry taste	transparent
Overall shape	calyptra	calyptra		Eating quality	Neutral
Calyptra Color	RHS 134A	green		Berry uses	n.a.
Sepals				Shipping quality	wine
Length (cm)	n.a.	n.a.	50		n.a.
Width (cm)	n.a.	n.a.			

What is claimed is:

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

\* \* \* \* \*

FIG. 1A

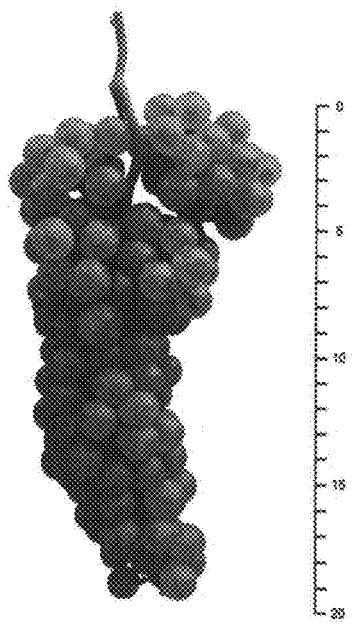
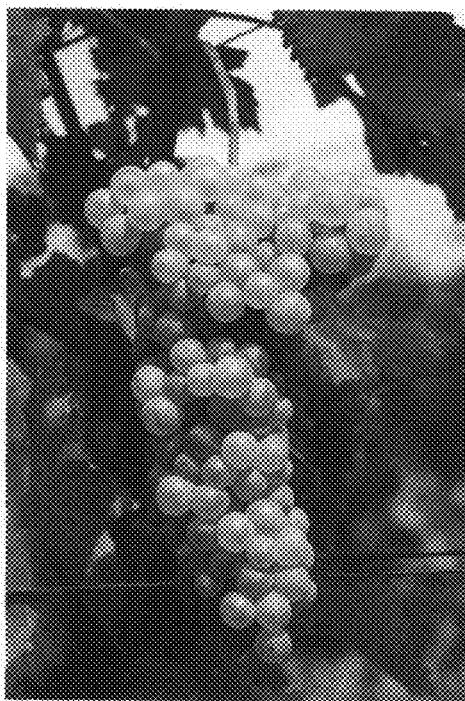


FIG. 1B



**FIG. 2**



**FIG. 3**



FIG. 4

