



Malvasia di Candia aromatica (standard)

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Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DiSAAA-a) - Università di Pisa

Acknowledgments

Fondazione AGER (AGER Foundation)

General information

name Malvasia di Candia aromatica (standard)	code ITA419-1724
country of selection Italia	region of selection not available
province of selection not available	locality of selection not available
holding institution Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DiSAAA-a) - Università di Pisa	
collection vineyard Colignola (DiSAAA-a) - San Giuliano Terme (PI)	

Variety & clone

type of origin spontanea	genera Vitis
specie Vitis vinifera	subspecie sativa
variety Malvasia di Candia aromatica	variety code IVD-var_335
clone not available	
trueness to type confirmed by ampelography and SSR-markers	

Trueness to type

True-name

confirmed	yes
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related bibliography (1)

authors	year	title	journal	citation
Cosmo I., Sardi F.	1962	Malvasia di Candia (aromatica)		Principali vitigni da vino coltivati in Italia, Ministero dell'Agricoltura e delle Foreste.

Trueness to type confirmed by ampelography

confirmation by ampelography	confirmed
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Cosmo I., Sardi F.	1962	Malvasia di Candia (aromatica)		Principali vitigni da vino coltivati in Italia, Ministero dell'Agricoltura e delle Foreste.

Trueness to type confirmed by SSR-markers

confirmation by SSR-markers	confirmed
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compared loci	9
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identical loci	9
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discrepancies	n.a.
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Standardized microsatellite profile

loci:	predefined loci (9)																	
SSR locus:	VVS2		VVMD5		VVMD7		VVMD27		VrZAG62		VrZAG79		VVMD25		VVMD28		VVMD32	
allele:	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2
size:	135	143	227	227	233	233	179	185	196	204	251	255	256	256	237	249	241	265

other Locus info available online

Images



shoot



shootTipUs



shootTipLs



leaf



leafUs



leafLs



petiol sinus



bunch





berry



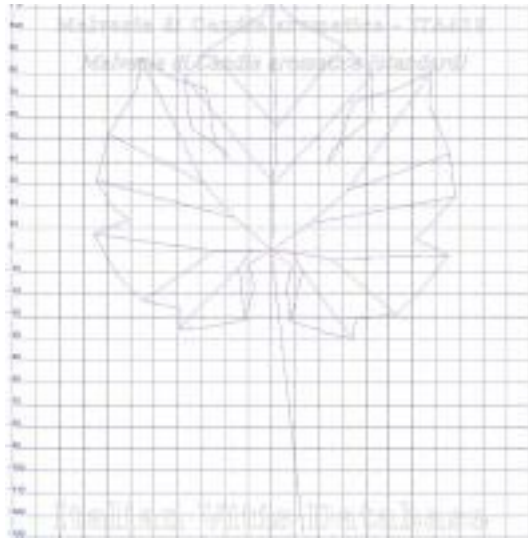
seed

Ampelography

OIV	description	value		images
001	Young shoot: opening of the shoot tip	5	fully open	
003	Young Shoot: intensity of anthocyanin coloration on prostrate hairs of tip	3	low	
004	Young Shoot: density of prostrate hairs on tip	3 / 5	low / medium	
006	Shoot: attitude (before tying)	1 / 3	erect / semi-erect	
007	Shoot: color of dorsal side of internodes	2	green and red	
008	Shoot: color of ventral side of internodes	1	green	
016	Shoot: number of consecutive tendrils	1	2 or less	
051	Young leaf: color of the upper side of blade (4 th leaf)	2 / 3	yellow / bronze	
053	Young leaf: density of prostrate hairs between main veins on lower side of blade (4th leaf)	1 / 3	none or very low / low	
067	Mature leaf: shape of blade	3	pentagonal	

068	Mature leaf: number of lobes	3	five	
070	Mature leaf: area of anthocyanin coloration of main veins on upper side of blade	1	absent	
072	Mature leaf: goffering of blade	1	absent or very weak	
074	Mature leaf: profile of blade in cross section	1	flat	
075	Mature leaf: blistering of upper side of blade	3	weak	
076	Mature leaf: shape of teeth	3	both sides convex	
079	Mature leaf: degree of opening / overlapping of petiole sinus	3	open	
080	Mature leaf: shape of base of petiole sinus	2	brace-shaped (f)	
081-1	Mature leaf: teeth in the petiole sinus	1	none	
081-2	Mature leaf: petiole sinus base limited by veins	1	not limited	
083-2	Mature leaf: teeth in the upper lateral sinuses	1	none	
084	Mature leaf: density of prostrate hairs between the main veins on lower side of blade	1	none or very low	
087	Mature leaf: density of erect hairs on main veins on lower side of blade	1 / 3	none or very low / low	
094	Mature leaf: depth of upper lateral sinuses	5	medium	
151	Flower: sexual organs	3	fully developed stamens and fully developed gynoecium	
152	Inflorescence: insertion of 1 st inflorescence	2	3rd and 4th node	
155	Shoot: fertility of basal buds (buds 1-3)	7	high (1,5-1,7)	
202	Bunch: length (peduncle excluded)	9	very long	
204	Bunch: density	5	medium	
206	Bunch: length of peduncle of primary bunch	5	medium	
208	Bunch: shape	2 / 3	conical / funnel shaped	
209	Bunch: number of wings of the primary bunch	2 / 3	1 - 2 wings / 3 - 4 wings	
220	Berry: length	5	medium	
221	Berry: width	5	medium	
223	Berry: shape	2	globose	
225	Berry: color of skin	1	green yellow	
231	Berry: intensity of flesh anthocyanin coloration	1	none or very weak	
235	Berry: firmness of flesh	2	slightly firm	
236	Berry: particularity of flavor	1 / 2	none / muscat	
241	Berry: formation of seeds	3	complete	

Ampelometry



ampelometric leaf

OIV

OIV	PDF	description	value	
601	PDF	Mature leaf: length of vein N1	3	short (105 mm)
602	PDF	Mature leaf: length of vein N2	5	medium (105 mm)
603	PDF	Mature leaf: length of vein N3	5	medium (75 mm)
604	PDF	Mature leaf: length of vein N4	9	very long (55 mm and over)
605	PDF	Mature leaf: length petiole sinus to upper lateral leaf sinus	3	short (50 mm)
606	PDF	Mature leaf: length petiole sinus to lower lateral leaf sinus	5	medium (60 mm)
607	PDF	Mature leaf: angle between N1 and N2 measured at the first ramification	5	medium (46°-55°)
608	PDF	Mature leaf: angle between N2 and N3 measured at the first ramification	3	small (30°-45°)
609	PDF	Mature leaf: angle between N3 and N4 measured at the first ramification	7	large (56°-70°)
610	PDF	Mature leaf: angle between N3 and the tangent between petiole point	9	very large (> 70°)
612	PDF	Mature leaf: length of tooth N2	5	medium (14 mm)
613	PDF	Mature leaf: width of tooth N2	7	wide (18 mm)
614	PDF	Mature leaf: length of tooth N4	1	very short (6 mm)
615	PDF	Mature leaf: width of tooth N4	5	medium (14 mm)
617	PDF	Mature leaf: length between the tooth tip of N2 and the tooth tip of the first secondary vein of N2	3	short (30-45 mm)

Superampelo

distances		
descriptor	value	standard deviation
Distance from the petiole sinus to the lower right sinus	61.200	7.500
Distance from the petiole sinus to the lower left sinus	61.800	5.700
Distance from the petiole sinus to the upper right sinus	45.800	6.300
Distance from the petiole sinus to the upper left sinus	45.500	6.700
Vein N3, length from the petiole sinus to vein N4	9.900	1.800
Vein N3', length from the petiole sinus to vein N4'	9.100	2.200
Length of vein N5	23.800	5.100
Length of vein N5'	24.200	4.200
Length of vein N4	46.300	5.200
Length of vein N4'	46.600	6.800
Distance between petiole point and end of vein N4	53.100	5.600
Distance between petiole point and end of vein N4'	53.300	6.500
Leaf width	151.500	11.200
Leaf length	156.600	11.700
Petiole length	129.200	11.900
Leaf length Including the petiole	244.800	13.200
Distance between the ends of veins N2 and N2'	124.000	19.900
Length of vein N1	115.600	8.700
Distance between the ends of veins N4 and N4'	74.400	8.600
Distance between the ends of veins N3 and N3'	151.300	10.600
Length of vein N2	106.400	5.000
Width of petiole sinus / Distance between points SP and SP'	-14.100	2.500
Length of vein N3	75.700	5.900
Length of vein N2'	104.200	7.300
Distance between the tooth tip of N2 and the tooth tip of the first ramification (secondary vein) of N2	40.000	15.100
Length of vein N3'	76.100	7.700
Distance between the tooth tip of N2' and the tooth tip of the first ramification (secondary vein) of N2'	30.600	11.000

angles		
descriptor	value	standard deviation
Angle between N2 and N3 measured at the ends of the veins	52.200	6.100
Angle between N1' and N2' measured at the ends of the veins	32.600	6.200
Angle between N3 and N4 measured at the ends of the veins	47.400	2.800
Angle between N2' and N3' measured at the ends of the veins	51.900	3.400
Angle of opening of the petiole sinus measured at SP and at SP'	45.300	11.300
Angle between N3' and N4' measured at the ends of the veins	47.300	3.600
Angle between S and S' with the center in N1	31.700	6.900
Angle between D and D' with the center in N1	95.100	6.500
Angle between N2 and N3 measured at the petiole point and between N2 and N3 tooth tip	74.400	5.800
Angle between I and I' with the center in N1	59.600	5.800
Angle between N2 and N3 measured at the petiole point and between N2' and N3' tooth tip	75.700	7.400
Angle between N1 and N2 measured at the first bifurcation	51.400	4.600
Angle between N2 and N3 measured at the first bifurcation	44.300	6.900
Angle between N1 and N2' measured at the first bifurcation	48.700	2.700
Angle between N3 and N4 at the first fork of N3	57.600	9.800
Angle between N2 and N3' measured at the first bifurcation	46.200	3.800
Angle between N1 and N2 measured at the ends of the veins	40.000	8.700
Angle between N3' and N4'	58.100	9.400

rations		
descriptor	value	standard deviation
Multiplication between length and width of the leaf	23790.000	3119.000
Ratio between the length of the petiole OP and the length of the vein N1	1.124	0.144
Ratio between length and width of the leaf	1.036	0.068
Ratio between the distance from the sinus and the length of the vein N2	0.431	0.061
Media of the base of the teeth of the left side	6.612	1.721
Media of the base of the teeth of the right side	6.152	1.947
Media height of the teeth of the left side	5.272	1.055
Ratio between the height and the base of the tooth at the end of the vein N4'	0.513	0.088
Media height of the teeth of the right side	4.562	1.055
Ratio between the height and the base of the tooth at the end of the vein N2'	0.881	0.186
Ratio between the height and the base of the tooth at the end of the vein N4	0.520	0.063
Ratio between the height and the base of the teeth of the left side	0.839	0.254
Ratio between the height and the base of the tooth at the end of the vein N2	0.883	0.136
Ratio between the sum of the angles a + b' and the sum of the distance between the petiole sinus and upper right sinus OS' and the petiole sinus and lower right lower right sinus OI'	0.016	0.001
Ratio between the height and the base of the teeth of the right side	0.777	0.288
Ratio between the length of the vein N5' and the length of the vein N1	0.210	0.038
Ratio between the sum of the angles a + b and the sum of the distance between the petiole sinus and upper right sinus OS and the petiole sinus and lower right lower right sinus OI	0.016	0.002
Ratio between the length of the vein N4' and the length of the vein N1	0.404	0.056
Ratio between the length of the vein N5 and the length of the vein N1	0.206	0.044
Ratio between the length of the vein N3' and the length of the vein N1	0.658	0.071
Ratio between the length of the vein N4 and the length of the vein N1	0.402	0.051
Ratio between the length of the vein N2' and the length of the vein N1	0.903	0.059
Ratio between the length of the vein N3 and the length of the vein N1	0.657	0.059
Ratio between the distance from the petiole sinus to the lower left sinus OI' and the length of vein N3'	0.815	0.060
Ratio between the length of the vein N2 and the length of the vein N1	0.922	0.036
Ratio between the distance from the sinus and the length of the vein N2'	0.437	0.058
Ratio between the distance from the petiole sinus to the lower right sinus OI and the length of vein N3	0.808	0.062

Phenology & production

OIV	description	value	
301	Time of bud burst	3	early
303	Time of beginning of berry ripening (veraison)	5	medium
351	Vigor of shoot growth	5	medium (70-80 g)
502	Bunch: weight of a single bunch	1 / 3	very low (<150 g) / low (250-350 g)
503	Berry: single berry weight	2	between very low and low (1,5-2,5 g)
504	Yield per m2	9	very high (>2,2 kg)
505	Sugar content of must	5 / 7	medium (17,2-18,8) / high (20,2-21,8)
506	Total acid content of must	5	medium (8,2-9,8)
508	must specific pH	5	medium (3,2-3,3)

Agronomic

plant spacing & training system	value	standard deviation	number of years
Training system	Guyot		
Pruning System			
Distance between rows (m)	3.000		
Distance on the row (m)	1.000		

vigor	value	standard deviation	number of years
Cane's weight (g)	0.077	0.013	2
Pruning wood's weight per vine (kg)	0.689		2
Pruning wood's weight per vine meter of row (kg)	0.689		2
Number of shoots/canes per vine (number/vine)	13.000		2
Number of shoots/canes per meter of row (number/m)	13.000		2

fertility	value	standard deviation	number of years
Fertility of basal buds (bunch/bud)	1.638	0.259	2
Number of bunch per shoots at flowering (number/shoot)	1.770	0.260	2

production's quantitative characteristics	value	standard deviation	number of years
Number of bunches per meter of row (number/m)	13.000		2
Number of bunches per vine (number/vine)	23.000	7.870	2
Weight of 100 berries (g)	2.631	0.302	2
Bunch's weight (g)	254.530	75.770	2
Grape production per hectare (t/ha)	24.667		2
Grape production per meter of row (kg/m)	7.400		2
Grape production per vine (kg/ceppo)	7.400	1.320	2

production's qualitative characteristics	value	standard deviation	number of years
Titrateable acidity of must (g/l)	0.000		2
pH (pH)	0.000		2
Sugar content of must (°Brix)	0.000		

Berry polyphenols

no polyphenolic descriptors available for Malvasia di Candia aromatica (standard)

Berry aroma

no aroma descriptors available for Malvasia di Candia aromatica (standard)

Other descr.

no other descriptors available for Malvasia di Candia aromatica (standard)

Accessions of the same variety (3)

- Malvasia di Candia aromatica - Dipartimento di Scienze della Vita - Università degli Studi di Modena e Reggio Emilia
- Malvasia di Candia aromatica (standard) - Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DISAAA-a) - Università di Pisa
- Moscato VT1 - Dipartimento di Scienze Agrarie e Forestali, Università della Tuscia, Viterbo

Note

<p>Foto: Claudio D'Onofrio, Puntoni Piero</p> <p>Ampelografia: Claudio D'Onofrio, Belluomini Paolo, Calabrò Rolando, Rocco Fausta</p> <p>Ampelometria: Claudio D'Onofrio</p> <p>Fenologia: Claudio D'Onofrio, Ducci Eleonora, Matarese Fabiola, Cuzzola Angela</p> <p>SSR: Claudio D'Onofrio, Matarese Fabiola</p>