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Moscato nero

Raimondi S., Ruffa P., Rolle L., Schneider A., 2014. Moscato nero ITA360-249 (Moscato nero di Acqui). In: Italian Vitis Database, www.vitisdb.it, ISSN 2282-006X

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Acknowledgments

Ager Foundation, Regione Piemonte, DISAFA - University of Turin

General information

name Moscato nero
code ITA360-249
country of selection Italia
region of selection Piemonte
province of selection Alessandria
locality of selection Vignale
holding institution Istituto per la Protezione Sostenibile delle Piante - CNR
collection vineyard Grinzane Cavour

Variety & clone

type of origin spontanea
genera Vitis
specie Vitis vinifera
subspecie sativa
variety Moscato nero di Acqui
variety code IVD-var_143
clone not available
trueness to type confirmed by ampelography and SSR-markers

Trueness to type

True-name

confirmed	**yes**

Trueness to type confirmed by ampelography

confirmation by ampelography	**confirmed**

related bibliography (1)

authors	year	title	journal	citation
Mannini F., Mollo A., Santini D., Schneider A., Raimondi S., Ruffa P., Bonifacino G., Marchese E., Paravidino E., Tragni R.	2012	I principali vitigni aromatici del Piemonte a bacca colorata		Regione Piemonte (Torino).

Trueness to type confirmed by SSR-markers

confirmation by SSR-markers	**confirmed**

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compared loci	**9**
identical loci	**9**
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:	133	135	225	235	247	249	179	185	186	196	243	255	250	256	249	261	253	265

Images

shoot

leaf

bunch

berry

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	1 / 3	none or very low / low	
004	Young Shoot: density of prostrate hairs on tip	3 / 5	low / medium	
006	Shoot: attitude (before tying)	3	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)	1 / 4	green / copper - reddish	
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	4	circular	
068	Mature leaf: number of lobes	3 / 4	five / seven	
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	2 / 5	V-shaped / twisted	
075	Mature leaf: blistering of upper side of blade	3	weak	
076	Mature leaf: shape of teeth	4 / 5	one side concave, one side convex / mixture between both sides straight (note 2) and both sides convex (note 3)	
079	Mature leaf: degree of opening / overlapping of petiole sinus	7	overlapped	
080	Mature leaf: shape of base of petiole sinus	3	V-shaped	
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	7	high	
094	Mature leaf: depth of upper lateral sinuses	5 / 7	medium / deep	
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)	1 / 5	very low (<0,5) / medium (1,1-1,3)	

202	Bunch: length (peduncle excluded)	3 / 5	short / medium
204	Bunch: density	3	loose
206	Bunch: length of peduncle of primary bunch	5 / 7	medium / long
208	Bunch: shape	1	cylindrical
209	Bunch: number of wings of the primary bunch	1 / 2	absent / 1 - 2 wings

220	Berry: length	5	medium
221	Berry: width	5	medium
223	Berry: shape	2 / 3	globose / broad ellipsoid
225	Berry: color of skin	5 / 6	dark red violet / blue black
231	Berry: intensity of flesh anthocyanin coloration	1	none or very weak
235	Berry: firmness of flesh	1	soft
236	Berry: particularity of flavor	2	muscat
241	Berry: formation of seeds	3	complete

Ampelometry

OIV

no descriptors available for Moscato nero

Superampelo

distances		
descriptor	value	standard deviation
Distance from the petiole sinus to the lower left sinus	38.100	8.300
Distance from the petiole sinus to the lower right sinus	42.400	9.200
Distance from the petiole sinus to the upper left sinus	38.700	6.100
Distance from the petiole sinus to the upper right sinus	38.400	6.400
Vein N3', length from the petiole sinus to vein N4'	9.600	1.800
Vein N3, length from the petiole sinus to vein N4	10.000	2.600
Length of vein N5'	26.600	4.600
Length of vein N5	26.100	3.400
Length of vein N4'	45.700	4.500
Length of vein N4	46.900	5.400
Distance between petiole point and end of vein N4'	53.300	5.200
Distance between petiole point and end of vein N4	54.700	6.100
Leaf length	151.500	13.400
Leaf width	143.300	12.600
Leaf length Including the petiole	221.500	28.200
Petiole length	115.100	22.600
Length of vein N1	106.400	8.800
Distance between the ends of veins N2 and N2'	126.900	17.100
Distance between the ends of veins N3 and N3'	140.700	11.100
Distance between the ends of veins N4 and N4'	70.100	12.500
Width of petiole sinus / Distance between points SP and SP'	-11.800	7.200
Length of vein N2	93.700	8.400
Length of vein N2'	91.800	8.700
Length of vein N3	72.500	7.900
Length of vein N3'	69.100	5.600
Distance between the tooth tip of N2 and the tooth tip of the first ramification (secondary vein) of N2	41.600	12.000
Distance between the tooth tip of N2' and the tooth tip of the first ramification (secondary vein) of N2'	40.400	11.800

angles		
descriptor	value	standard deviation
Angle between N3' and N4'	58.500	5.100
Angle between N1 and N2 measured at the ends of the veins	43.800	8.000
Angle between N1' and N2' measured at the ends of the veins	42.700	6.500
Angle between N2 and N3 measured at the ends of the veins	49.700	6.300
Angle between N2' and N3' measured at the ends of the veins	48.800	6.100
Angle between N3 and N4 measured at the ends of the veins	47.200	6.300
Angle between N3' and N4' measured at the ends of the veins	45.700	5.000
Angle of opening of the petiole sinus measured at SP and at SP'	26.300	15.800
Angle between D and D' with the center in N1	101.400	6.500
Angle between S and S' with the center in N1	29.400	7.500
Angle between I and I' with the center in N1	42.900	8.400
Angle between N1 and N2 measured at the first bifurcation	53.900	4.600
Angle between N1 and N2' measured at the first bifurcation	51.300	4.300
Angle between N2 and N3 measured at the first bifurcation	50.300	4.200
Angle between N2 and N3' measured at the first bifurcation	52.200	4.100
Angle between N3 and N4 at the first fork of N3	56.600	5.800

rations		
descriptor	value	standard deviation
Ratio between length and width of the leaf	1.060	0.030
Ratio between the length of the petiole OP and the length of the vein N1	1.080	0.190
Ratio between the distance from the sinus and the length of the vein N2	0.410	0.080
Ratio between the distance from the sinus and the length of the vein N2'	0.430	0.080
Ratio between the distance from the petiole sinus to the lower right sinus OI and the length of vein N3	0.590	0.110
Ratio between the distance from the petiole sinus to the lower left sinus OI' and the length of vein N3'	0.550	0.110
Media of the base of the teeth of the left side	8.500	1.370
Media height of the teeth of the left side	8.710	1.350
Media of the base of the teeth of the right side	8.090	1.250
Media height of the teeth of the right side	8.760	1.250
Ratio between the height and the base of the tooth at the end of the vein N4'	0.700	0.130
Ratio between the height and the base of the tooth at the end of the vein N4	0.680	0.140
Ratio between the height and the base of the tooth at the end of the vein N2'	0.920	0.100
Ratio between the height and the base of the tooth at the end of the vein N2	0.840	0.120
Ratio between the height and the base of the teeth of the left side	1.040	0.170
Ratio between the height and the base of the teeth of the right side	1.090	0.160
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'	0.020	0.010
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	0.020	0.010
Ratio between the length of the vein N5' and the length of the vein N1	0.250	0.040
Ratio between the length of the vein N5 and the length of the vein N1	0.250	0.020
Ratio between the length of the vein N4' and the length of the vein N1	0.430	0.030
Ratio between the length of the vein N4 and the length of the vein N1	0.440	0.050
Ratio between the length of the vein N3' and the length of the vein N1	0.680	0.040
Ratio between the length of the vein N3 and the length of the vein N1	0.680	0.050
Ratio between the length of the vein N2' and the length of the vein N1	0.860	0.040
Ratio between the length of the vein N2 and the length of the vein N1	0.880	0.050

Phenology & production

OIV	description	value	
301	Time of bud burst	5	medium
303	Time of beginning of berry ripening (veraison)	4 / 5	medium-early / medium
304	Time of physiological stage of full maturity of the berry	4	medium-early
351	Vigor of shoot growth	7	strong (90-100 g)
502	Bunch: weight of a single bunch	3 / 5	low (250-350 g) / medium (450-550 g)

Agronomic

plant spacing & training system	value	standard deviation	number of years
Training system			
Pruning System			
Distance on the row (m)	1.000		
Distance between rows (m)	2.800		

vigor	value	standard deviation	number of years
Number of shoots/canes per meter of row (number/m)	7.700	0.500	3
Cane’s weight (g)	105.000	38.000	3
Pruning wood’s weight per vine (kg)	0.810	0.290	6
Pruning wood’s weight per vine meter of row (kg)	0.810	0.290	6
Number of shoots/canes per vine (number/vine)	7.700	0.500	3

fertility	value	standard deviation	number of years
Number of bunch per shoots at flowering (number/shoot)	1.300	0.800	6

production's quantitative characteristics	value	standard deviation	number of years
Grape production per vine (kg/ceppo)	3.050	1.530	6
Grape production per meter of row (kg/m)	3.050	1.530	6
Grape production per hectare (t/ha)	10.910	5.470	6
Weight of 100 berries (g)	339.300	60.800	6
Bunch’s weight (g)	197.900	58.700	6
Number of bunches per vine (number/vine)	15.800	5.000	6

production's qualitative characteristics	value	standard deviation	number of years
Anthocyanins coloration of flesh? (yes/no)	☐ no	not available	not available
pH (pH)	3.250	0.200	6
Sugar content of must (°Brix)	20.000	2.400	6
Titratable acidity of must (g/l)	6.700	1.800	6

Berry polyphenols

hydroxycinnamoyltartaric acids	skin (mg/kg) (std dev)	seed (mg/kg) (std dev)	flesh (mg/kg) (std dev)
ac. cis p-cumariol tartarico	5.55		
ac. trans p-cumariol tartarico	30.79		
ac. trans caffeil tartarico	20.17		
ac. trans feruril tartarico	0.15		

anthocyanins monoglycosides	skin (mg/kg) (std dev)	seed (mg/kg) (std dev)	flesh (mg/kg) (std dev)
delfinidina-3-monoglucoside	45.69		
petunidina-3-monoglucoside	41.80		
cianidina-3-monoglucoside	80.86		
malvidina-3-monoglucoside	147.65		
peonidina-3-monoglucoside	156.84		

acylated anthocyanins	skin (mg/kg) (std dev)	seed (mg/kg) (std dev)	flesh (mg/kg) (std dev)
malvidina monoglucoside p-cumarato	6.30		
peonidina monoglucoside acetato	4.28		
cianidina monoglucoside acetato	1.79		
malvidina monoglucoside caffeato	1.03		
delfinidina monoglucoside p-cumarato	1.44		
petunidina monoglucoside p-cumarato	1.63		
peonidina monoglucoside p-cumarato	6.69		
cianidina monoglucoside p-cumarato	5.43		
malvidina monoglucoside acetato	3.17		
petunidina monoglucoside acetato	1.00		
delfinidina monoglucoside acetato	1.20		

flavonols	skin (mg/kg) (std dev)	seed (mg/kg) (std dev)	flesh (mg/kg) (std dev)
quercetina monoglucoside	81.14		
miricetina monoglucoside	11.21		
campferolo monoglucoside	18.77		

Berry aroma

no aroma descriptors available for Moscato nero

Other descr.

no other descriptors available for Moscato nero

Accessions of the same variety (1)

- Moscato nero - Istituto per la Protezione Sostenibile delle Piante - CNR