



Carraresa n (Garf-RT)

D'Onofrio C., Fausto C., Ducci E., Matarese F., Fiorani F., Poli I., 2015. Carraresa (Garf-RT), var Carraresa nera. In: Italian Vitis Database, www.vitisdb.it, ISSN 2282-006X

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Acknowledgments

Unione Comuni di Garfagnana (Lucca); Fondazione AGER (AGER Fundation)

General information

name Carraresa n (Garf-RT) **code** ITA419-1184
country of selection Italia **region of selection** Toscana
province of selection Lucca **locality of selection** Garfagnana
holding institution Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DiSAAA-a) - Università di Pisa
collection vineyard Garfagnana - Vivaio La Piana, Camporgiano (Lucca)

Variety & clone

type of origin spontanea **genera** Vitis
specie Vitis vinifera **subspecie** sativa
variety Carraresa **variety code** IVD-var_49
clone not available
trueness to type confirmed by ampelography

Trueness to type

True-name

confirmed **yes**

related bibliography (1)

authors	year	title	journal	citation
Basso M.,	1992	Contributo alla conoscenza del patrimonio genetico-vitico toscano. Province di Pisa, Lucca e Massa Carrara.	Proceedings of "Germoplasma frutticolo, salvaguardia e valorizzazione delle risorse genetiche" meeting, Alghero (Italy), 21-25 September 1992,	505-512.

Trueness to type confirmed by ampelography

confirmation by ampelography **confirmed**

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Basso M.,	1992	Contributo alla conoscenza del patrimonio genetico-vitico toscano. Province di Pisa, Lucca e Massa Carrara.	Proceedings of "Germoplasma frutticolo, salvaguardia e valorizzazione delle risorse genetiche" meeting, Alghero (Italy), 21-25 September 1992,	505-512.

Trueness to type confirmed by SSR-markers

confirmation by SSR-markers **not checked**

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	145	225	235	247	247	185	185	192	196	243	251	242	256	237	261	241	253

other Locus info available online

Images



shoot



shootTipUs



shootTipLs



leaf



leafUs



leafLs



petiol sinus



bunch






berry



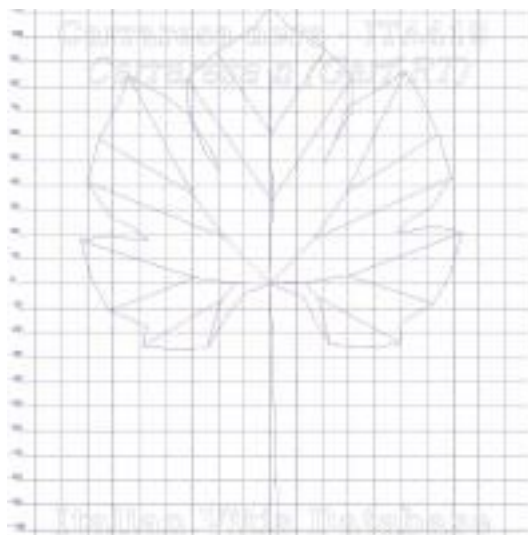
seed

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	1	none or very 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	1 / 2	green / 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	yellow	
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	1	absent or very weak	
076	Mature leaf: shape of teeth	2 / 3	both sides straight / 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	5	medium	
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)	3 / 5	low (0,7-0,9) / medium (1,1-1,3)	
202	Bunch: length (peduncle excluded)	5 / 7	medium / long	
204	Bunch: density	7	dense	
206	Bunch: length of peduncle of primary bunch	3	short	
208	Bunch: shape	2	conical	
209	Bunch: number of wings of the primary bunch	2	1 - 2 wings	
220	Berry: length	5 / 7	medium / long	
221	Berry: width	3 / 5	narrow / medium	
223	Berry: shape	8	obovoid	
225	Berry: color of skin	6	blue black	
231	Berry: intensity of flesh anthocyanin coloration	3	weak	
235	Berry: firmness of flesh	1 / 3	soft / very firm	
236	Berry: particularity of flavor	1	none	
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	3	short (45 mm)
607	PDF	Mature leaf: angle between N1 and N2 measured at the first ramification	3	small (30°-45°)
608	PDF	Mature leaf: angle between N2 and N3 measured at the first ramification	5	medium (46°-55°)
609	PDF	Mature leaf: angle between N3 and N41) measured at the first ramification	7	large (56°-70°)
610	PDF	Mature leaf: angle between N3 and the tangent between petiole point	7	large (56°-70°)
612	PDF	Mature leaf: length of tooth N2	3	short (10 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	52.800	9.600
Distance from the petiole sinus to the lower left sinus	50.300	9.700
Distance from the petiole sinus to the upper right sinus	53.100	9.400
Distance from the petiole sinus to the upper left sinus	50.600	10.300
Vein N3, length from the petiole sinus to vein N4	13.300	1.900
Vein N3', length from the petiole sinus to vein N4'	13.300	3.000
Length of vein N5	20.000	5.500
Length of vein N5'	20.400	5.100
Length of vein N4	44.800	7.200
Length of vein N4'	44.100	5.700
Distance between petiole point and end of vein N4	56.000	7.900
Distance between petiole point and end of vein N4'	55.300	6.800
Leaf width	145.900	10.300
Leaf length	145.000	12.200
Petiole length	106.300	15.100
Leaf length Including the petiole	219.800	20.200
Distance between the ends of veins N2 and N2'	106.000	13.900
Length of vein N1	113.500	9.300
Distance between the ends of veins N4 and N4'	99.300	13.900
Distance between the ends of veins N3 and N3'	146.300	10.200
Length of vein N2	101.000	11.400
Width of petiole sinus / Distance between points SP and SP'	-34.500	4.900
Length of vein N3	76.600	8.800
Length of vein N2'	100.700	9.500
Distance between the tooth tip of N2 and the tooth tip of the first ramification (secondary vein) of N2	32.000	10.000
Length of vein N3'	75.400	7.900
Distance between the tooth tip of N2' and the tooth tip of the first ramification (secondary vein) of N2'	35.700	8.500

angles		
descriptor	value	standard deviation
Angle between N1 and N2 measured at the first bifurcation	41.800	3.300
Angle between N2 and N3 measured at the first bifurcation	45.600	5.200
Angle between N1 and N2' measured at the first bifurcation	43.500	5.700
Angle between N3 and N4 at the first fork of N3	59.200	6.700
Angle between N2 and N3' measured at the first bifurcation	47.000	6.000
Angle between N1 and N2 measured at the ends of the veins	30.600	6.100
Angle between N3' and N4'	60.000	6.500
Angle between N2 and N3 measured at the ends of the veins	43.600	3.900
Angle between N1' and N2' measured at the ends of the veins	32.700	4.500
Angle between N3 and N4 measured at the ends of the veins	41.400	4.600
Angle between N2' and N3' measured at the ends of the veins	43.900	7.200
Angle of opening of the petiole sinus measured at SP and at SP'	102.900	20.800
Angle between N3' and N4' measured at the ends of the veins	41.100	3.400
Angle between S and S' with the center in N1	35.900	13.800
Angle between D and D' with the center in N1	93.000	7.400
Angle between N2 and N3 measured at the petiole point and between N2 and N3 tooth tip	62.200	8.300
Angle between I and I' with the center in N1	54.000	11.400
Angle between N2 and N3 measured at the petiole point and between N2' and N3' tooth tip	60.700	7.500

rations		
descriptor	value	standard deviation
Media of the base of the teeth of the left side	5.800	0.961
Media of the base of the teeth of the right side	5.200	1.566
Media height of the teeth of the left side	4.299	0.734
Ratio between the height and the base of the tooth at the end of the vein N4'	0.518	0.109
Media height of the teeth of the right side	5.009	0.734
Ratio between the height and the base of the tooth at the end of the vein N2'	0.699	0.194
Ratio between the height and the base of the tooth at the end of the vein N4	0.425	0.050
Ratio between the height and the base of the teeth of the left side	0.765	0.204
Ratio between the height and the base of the tooth at the end of the vein N2	0.618	0.167
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	0.003
Ratio between the height and the base of the teeth of the right side	1.045	0.368
Ratio between the length of the vein N5' and the length of the vein N1	0.180	0.040
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	0.015	0.003
Ratio between the length of the vein N4' and the length of the vein N1	0.388	0.035
Ratio between the length of the vein N5 and the length of the vein N1	0.178	0.051
Ratio between the length of the vein N3' and the length of the vein N1	0.664	0.044
Ratio between the length of the vein N4 and the length of the vein N1	0.394	0.050
Ratio between the length of the vein N2' and the length of the vein N1	0.888	0.044
Ratio between the length of the vein N3 and the length of the vein N1	0.676	0.061
Ratio between the distance from the petiole sinus to the lower left sinus OI' and the length of vein N3'	0.673	0.140
Ratio between the length of the vein N2 and the length of the vein N1	0.889	0.065
Ratio between the distance from the sinus and the length of the vein N2'	0.506	0.112
Ratio between the distance from the petiole sinus to the lower right sinus OI and the length of vein N3	0.696	0.140
Multiplication between length and width of the leaf	21273.000	3269.000
Ratio between the length of the petiole OP and the length of the vein N1	0.939	0.129
Ratio between length and width of the leaf	0.993	0.024
Ratio between the distance from the sinus and the length of the vein N2	0.532	0.115

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	3 / 5	weak (50-60 g) / medium (70-80 g)
502	Bunch: weight of a single bunch	3 / 5	low (250-350 g) / medium (450-550 g)
503	Berry: single berry weight	2	between very low and low (1,5-2,5 g)
504	Yield per m ²	3 / 5	low (1,0-1,2 kg) / medium (1,4-1,6 kg)
505	Sugar content of must	5	medium (17,2-18,8)
506	Total acid content of must	5	medium (8,2-9,8)
508	must specific pH	3 / 5	low (3,0-3,1) / medium (3,2-3,3)

Agronomic

plant spacing & training system	value	standard deviation	number of years
Training system	Guyot		
Pruning System			
Distance on the row (m)	0.900		
Distance between rows (m)	2.200		

vigor	value	standard deviation	number of years
Cane's weight (g)	0.078	0.050	2
Pruning wood's weight per vine (kg)	0.789		2
Pruning wood's weight per vine meter of row (kg)	0.710		2
Number of shoots/canes per vine (number/vine)	6.500		2
Number of shoots/canes per meter of row (number/m)	5.850		2

fertility	value	standard deviation	number of years
Fertility of basal buds (bunch/bud)	1.117	0.118	2
Number of bunch per shoots at flowering (number/shoot)	1.310	0.120	2

production's quantitative characteristics	value	standard deviation	number of years
Grape production per meter of row (kg/m)	2.432		2
Grape production per vine (kg/ceppo)	2.702	0.243	2
Number of bunches per meter of row (number/m)	5.850		2
Number of bunches per vine (number/vine)	8.500	0.710	2
Weight of 100 berries (g)	2.197	0.409	2
Bunch's weight (g)	451.660	123.000	2
Grape production per hectare (t/ha)	13.645		2

production's qualitative characteristics	value	standard deviation	number of years
Titrateable acidity of must (g/l)	8.390	0.360	2
pH (pH)	3.130	0.090	2
Sugar content of must (°Brix)	17.800	1.560	2

Berry polyphenols

no polyphenolic descriptors available for Carraresa n (Garf-RT)

Berry aroma

no aroma descriptors available for Carraresa n (Garf-RT)

Other descr.

no other descriptors available for Carraresa n (Garf-RT)

Related bibliography (2)

authors	year	title	journal	citation
D'Onofrio C., Fausto C., Matarese F., Materazzi A., Scalabrelli G., Fiorani F., Poli I.,	2015	Genotyping of Grapevine Varieties from Garfagnana (Northern Tuscany): Evidence of a Historical Centre of Diversity	American Journal of Enology and Viticulture	Am. J. Enol. Vitic. 67: 120-126
Basso M.,	1992	Contributo alla conoscenza del patrimonio genetico-viticolo toscano. Province di Pisa, Lucca e Massa Carrara.		Proceedings of "Germoplasma frutticolo, salvaguardia e valorizzazione delle risorse genetiche" meeting, Alghero (Italy), 21-25 September 1992, 505-512.

Accessions of the same variety (2)

- Carraresa n (Garf-RT) - Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DiSAAA-a) - Università di Pisa
- Carraresa rada n (Garf-GR) - Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali (DiSAAA-a) - Università di Pisa

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, Fausto Catia, Matarese Fabiola</p>