

TABLE S1. Date of collection and maturation characteristics for each grapevine variety.

DO	Grapevine variety	Sample code*	Date of collection	Sugar content (g/L)**	Total acidity (g tart./L) **
Monterrei	Treixadura	Mo-Trx-Org	10/09/2015	254.6±14.1	5.7±0.6
		Mo-Trx-Con	10/09/2015	240.2±9.0	5.9±0.2
	Mencia	Mo-Men-Org	10/09/2015	249.8±0.0	4.2±0.2
		Mo-Men-Con	10/09/2015	226.0±3.0	5.1±0.2
Ribeiro	Brancellao	Ri-Bra-Org	14/09/2015	199.7±3.1	6.7±0.5
		Ri-Bra-Con	14/09/2015	201.6±3.5	6.1±0.4
	Treixadura	Ri-Trx-Org	10/09/2015	261.8±9.0	6.4±0.6
		Ri-Trx-Con	10/09/2015	249.8±5.0	5.8±0.4
Ribeira Sacra	Mencia	RS-Men-Org	14/09/2015	231.9±6.0	4.6±0.1
		RS-Men-Con	14/09/2015	251.0±8.0	3.9±0.1
Rías Baixas	Albariño	RB-Alb-Org	09/09/2015	242.6±7.0	9.1±1.0
		RB-Alb-Con	09/09/2015	237.8±7.0	7.9±0.3
	Treixadura	RB-Trx-Org	09/09/2015	236.6±16.1	6.6±0.8
		RB-Trx-Con	09/09/2015	193.3±9.0	7.1±0.1

*Org, organic farming; Con, conventional farming. **data are mean of three replicates ± standard deviation. Sugar content and total acidity were determined following the official methods (OIV, 2012).

TABLE S2. Frequency of each yeast species (%) in organic (Org) and conventional (Con) grape samples from different Galician DOs and grapevine varieties.

DO- Grape variety	Mo-Trx		Mo-Men		Ri-Trx		Ri-Bra		RS-Men		RB-Alb		RB-Trx		Total	
	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con
<i>Aureobasidium</i> spp.*	70.5	78.4	71.3	80.7	75.9	67.4	22.5	84.1	6.7		44.9	58.0	5.3	29.9	42.4	56.9
<i>Candida apicola</i>									3.6							0.52
<i>Candida oleophila</i>												1.4				0.21
<i>Cryptococcus carnescens</i>	20.1		9.5		4.5							1.7				5.11
<i>Cryptococcus laurentii</i>					27.9											3.98
<i>Cryptococcus stepposus</i>			3.2	4.1							25.2	6.1			1.33	4.19
<i>Cryptococcus terrestris</i>		9.3				65.3			27.2		16.2				11.65	5.22
<i>Cryptococcus af. victoriae</i>					2.2				2.2			3.7				1.16
<i>Cryptococcus victoriae</i>	5.4				12.5											2.56
<i>Cystofilobasidium macerans</i>		12.3							1.2						0.18	1.76
<i>Debaryomyces hansenii</i>							15.9				9.8	58.7			9.79	2.27
<i>Hanseniaspora uvarum</i>			1.4						39.8	26.4	23.6	15.0	53.1		11.4	11.40
<i>Issatchenkia terricola</i>												1.9				0.27
<i>Lachancea thermotolerans</i>			3.2													0.46
<i>Metschnikowia</i> spp.			6.3	12.1		4.8	12.2		28.0	42.1	2.3	12.1	5.4	8.7	7.72	11.40
<i>Pichia kluyveri</i>									17.2			0.9				2.58
<i>Rhodotorula graminis</i>			3.2		4.8						4.7	5.5			1.14	1.46
<i>Rhodotorula nothofagi</i>											3.2					0.46
<i>Saccharomyces cerevisiae</i>			1.8	3.1											0.26	0.44
<i>Sporobolomyces ruberrimus</i>	4.0											2.8			0.57	0.40
<i>Zygoascus hellenicus/meyerae</i>									4.3							0.61
<i>Zygosaccharomyces bisporus</i>									1.2							0.18

*Yeast-like species. Values are the average of six data

TABLE S3. Frequency of each yeast species (%) in organic (Org) and conventional (Con) must samples from different Galician DOs and grapevine varieties.

DO-Grape variety Farming system	Mo-Trx		Mo-Men		Ri-Trx		Ri-Bra		RS-Men		RB-Alb		RB-Trx		Total	
	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con	Org	Con
<i>Aureobasidium spp.*</i>	49.8	68.8	12.3	62.3	23.9	62.5	34.5	70.1	33.4		19.5		17.22	45.23		
<i>Candida apicola</i>			27.1						5.1			1.5	4.9	4.82	0.69	
<i>Candida bentonensis</i>											1.2				0.18	
<i>Candida californica</i>									0.4		2.0	2.2	8.0	0.66	1.15	
<i>Candida oleophila</i>											7.5	1.5		1.28		
<i>Candida cf. sorbosivorans</i>											4.0			0.57		
<i>Starmerella bacillaris</i>									2.9	14.5	12.4	34.1	28.2	7.07	6.11	
<i>Cryptococcus carnescens</i>						6.4									0.91	
<i>Cryptococcus laurentii</i>						16.1	3.5	13.9						0.50	4.29	
<i>Cryptococcus stepposus</i>								6.7							0.96	
<i>Cryptococcus sp. (terrestris)</i>		9.9					33.9							4.84	1.41	
<i>Cryptococcus victoriae</i>					18.4	13.0								4.50		
<i>Cystofilobasidium macerans</i>		3.2				15.0									2.60	
<i>Debaromyces hansenii</i>							2.2				4.7	3.5		1.17	0.31	
<i>Hanseniaspora uvarum</i>	3.6	4.5	10.2	12.0		4.7			54.8	35.8	48.7	31.0	37.8	30.2	22.82	16.21
<i>Issatchenkia terricola</i>									11.0		16.0	2.4	8.7	1.91	3.52	
<i>Lachancea thermotolerans</i>	32.6		2.6		31.3									9.51		
<i>Metschnikowia spp.</i>	14.0	11.2	46.2	25.7	26.3	10.4			12.4	8.9	10.1	13.1	3.7	3.1	17.59	8.84
<i>Meyerozyma guilliermondii</i>											2.2			0.31		
<i>Pichia kluyveri</i>									7.3		1.6	7.8	11.9	2.38	1.70	
<i>Pichia membranifaciens</i>									0.4					0.05		
<i>Pichia sporocuriosa</i>									4.5					0.64		
<i>Rhodotorula graminis</i>		2.5	1.6				7.1				20.4			0.22	4.28	
<i>Rhodotorula nothofagi</i>									2.9						0.41	
<i>Torulaspora delbrueckii</i>									3.2						0.45	
<i>Zygoascus hellenicus/meyerae</i>									0.6		2.8	2.0		0.76		
<i>Zygosaccharomyces bailii</i>												2.0		0.28		
<i>Zygosaccharomyces bisporus</i>									0.4	1.3	2.9	1.7	5.1	0.71	0.91	

*Yeast-like species. Values are the average of six data

TABLE S4. Comparison of yeast population from different DO and production systems by analysis of similarity/distance measure (ANOSIM and PERMANOVA) on grapes.

ANOSIM								
	Mo-Org	Mo-Con	Ri-Org	Ri-Con	RS-Org	RS-Con	RB-Org	RB-Con
Mo-Org		0.1846	0.1766	0.3094	0.989	1	0.6572	0.3758
Mo-Con	<i>0.2044</i>		0.1856	0.2054	1	1	0.6507	0.5353
Ri-Org	<i>0.3416</i>	<i>0.252</i>		0.241	0.6437	0.5617	0.4402	0.29
Ri-Con	<i>0.0028</i>	<i>0.028</i>	<i>0.0672</i>		1	1	0.6536	0.536
RS-Org	<i>0.0028</i>	<i>0.0056</i>	<i>0.0028</i>	<i>0.0028</i>		0.4963	0.5072	0.5256
RS-Con	<i>0.0056</i>	<i>0.0028</i>	<i>0.014</i>	<i>0.0028</i>	<i>0.0476</i>		0.5573	0.6494
RB-Org	<i>0.0028</i>	<i>0.0028</i>	<i>0.0056</i>	<i>0.0028</i>	<i>0.014</i>	<i>0.0084</i>		0.3776
RB-Con	<i>0.0056</i>	<i>0.0028</i>	<i>0.042</i>	<i>0.0028</i>	<i>0.0952</i>	<i>0.0140</i>	<i>0.0308</i>	

PERMANOVA								
	Mo-Org	Mo-Con	Ri-Org	Ri-Con	RS-Org	RS-Con	RB-Org	RB-Con
Mo-Org		4.053	4.665	5.096	24.52	35.48	17.47	4.908
Mo-Con	<i>0.2268</i>		5.266	3.466	40.38	61.23	25.7	7.444
Ri-Org	<i>0.7504</i>	<i>0.714</i>		6.445	8.499	7.508	7.75	3.787
Ri-Con	<i>0.056</i>	<i>0.3444</i>	<i>0.1708</i>		31.1	44.31	21.1	7.871
RS-Org	<i>0.0084</i>	<i>0.0056</i>	<i>0.0252</i>	<i>0.0028</i>		4.387	7.267	4.828
RS-Con	<i>0.0084</i>	<i>0.0056</i>	<i>0.084</i>	<i>0.0028</i>	<i>0.056</i>		9.991	7.954
RB-Org	<i>0.0028</i>	<i>0.0056</i>	<i>0.0168</i>	<i>0.0056</i>	<i>0.0168</i>	<i>0.0028</i>		5.406
RB-Con	<i>0.0168</i>	<i>0.0028</i>	<i>0.5712</i>	<i>0.0028</i>	<i>0.3948</i>	<i>0.0616</i>	<i>0.1092</i>	

Statistical R- and F-values are shown above the diagonal and the level of significance (p-values) and the Bonferroni correction is shown below.