Slow Wine Biodiversity Anatolian Indigenous Grapes' Survival

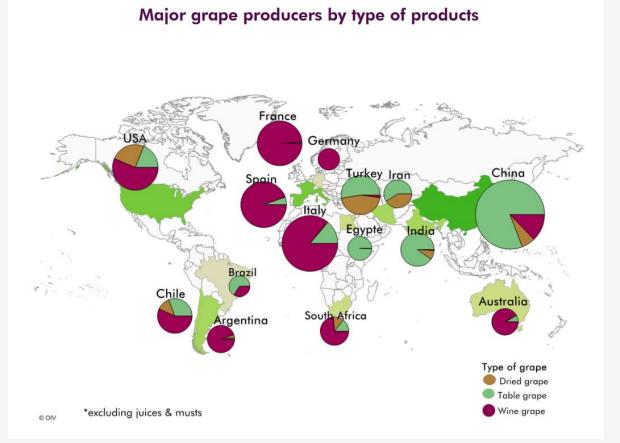
March 27, 2022 / Bologna

Sabiha Apaydın Gönenli Gözdem Gürbüzatik Umay Çeviker

Turkey

World grape and wine production statistics differ from those of Turkey

- Total world area under vines is about 7.4 million ha
- Spain, China, France, Italy, and Turkey accounts for 50% of the world's vineyard.
- Turkey ranks 5th in total vineyard area, and 6th in grape production.
- Estimated world production of grapes is 77.8 million metric tons. 57% of these are used in wine, 36% as fresh grapes, 7% as dried grapes



Turkey is *still* covered with the 5th largest vineyard area in the world with 431.000 hectares (01V 2020)

mha	2016	2017	2018	2019	2020 Prél.	2020/2019	2020 % monde
				Prov.	Prei.	% Var.	
Espagne	975	968	972	966	961	-0,6%	13,1%
France	786	788	792	794	797	0,4%	10,9%
Chine	770	760	779	781	785	0,6%	10,7%
Italie	693	699	701	713	719	0,8%	9,8%
Turquie	468	448	448	436	431	-1,1%	5,9%
USA	439	434	408	407	405	-0,4%	5,5%
Argentine	224	222	218	215	215	-0,2%	2,9%
Chili	209	207	208	210	207	-1,2%	2,8%
Portugal	195	194	192	195	194	-0,2%	2,7%
Roumanie	191	191	191	191	190	-0,4%	2,6%
Iran*	168	153	167	167	167	0,0%	2,3%
Inde*	131	147	149	151	151	0,0%	2,1%
Australie	145	145	146	146	146	0,0%	2,0%
Moldavie	145	151	147	143	140	-2,0%	1,9%
Afrique du Sud	130	128	123	122	122	-0,7%	1,7%
Ouzbékistan*	131	111	108	112	112	0,0%	1,5%
Grèce*	105	106	108	109	109	0,0%	1,5%
Allemagne*	102	103	103	103	103	0,0%	1,4%
Russie	88	90	93	96	96	0,6%	1,3%
Afghanistan*	89	94	94	96	96	0,0%	1,3%
Brésil	86	84	82	81	80	-1,2%	1,1%
Egypte*	83	84	80	79	79	0,0%	1,1%
Algérie*	76	75	75	66	66	0,0%	0,9%
Bulgarie	64	65	67	67	66	-1,8%	0,9%
Hongrie	68	68	69	67	65	-3,9%	0,9%
Autres pays	816	812	811	827	827	0,0%	11,3%
Total mondial	7379	7326	7333	7342	7331	-0,2%	100,0%

Fig. 2 • Surface viticole des principaux pays producteurs de vin²

* Oiv-statistical-report-on-world-vitiviniculture-2020 / Vineyard Surface Area

This area has contracted from 580.000 hectares since 1990.

The 149,000 hectares of vineyard area Turkey has lost in the last 30 years is ...



... equal to the total vineyard area of Australia, which is the world's 6th largest producer of wine with 14,5 million hl.



... larger than the total vineyard area of South Africa, which is the 7th largest wine producer in the world, with 9.5 million hl.

... is at least 40% larger than each of the vineyard areas of leading wine producers; Greece, Germany, Hungary, Bulgaria, Austria and Georgia.



... four times larger than the vineyard area of New Zealand, the world's 16th largest producer of wine.

Turkey is the 6th largest grape producer in the world with 4.208.000 tons (Turkish Institute of Statistics 2021)

Major grape producers *

						Production. 2018 (in %)		
million t	2014	2015	2016	2017	2018	Table grape	Dried grape ^b	Wine grape =:
China	12.5	13.2	12.6	13.1	11.7	84.1%	5.6%	10.3%
Italy	6.9	8.2	8.4	6.9	8.6	13.5%	0.0%	86.5%
USA	7.1	6.9	7.0	6.7	6,9	16.3%	18.1%	65.6%
Spain	6.1	6.0	6.3	5.0	6.9	4.0%	0.0%	96.0%
France	6.2	6.3	6.3	5.0	6.2	0.4%	0.0%	99.6%
Turkey	4.2	3.7	4.0	4.2	3.9	56.1%	40.7%	3.2%
India	2.6	2.6	2.6	2.9	2.9	92.6%	5.9%	1.5%
Argentina	2.7	2.5	1.9	2.1	2.7	0.9%	5.5%	93.7%
Chile	2.2	2.7	2.2	2.0	2.5	26.0%	3.9%	70.2%
Iran	2.3	2.3	2.3	1.9	2.3	76.3%	23.7%	0.0%
Australia	1.8	1.9	2.0	2.2	1.9	7.1%	1.9%	90.9%
South Africa	1.9	2.0	2.0	2.0	1.8	15.8%	15.5%	68.7%
Uzbekistan	1.4	1.6	1.6	1.6	1.7	78.4%	17.8%	3.7%
Egypt	1.6	1.7	1.7	1.7	1.6	99.5%	0.0%	0.5%
Brazil	1.4	1.5	1.0	1.7	1.6	53.5%	0.0%	46.5%
Germany	1.2	1.2	1.2	1.0	1.4	0.4%	0.0%	99.6%
Romania	0.7	0.8	0.8	1.0	1.3	6.9%	0.0%	93.1%
World	74.3	76.7	75.5	73.0	77.8	36%	7%	57%

a) Countries with a production of more than 1 million of tons

 b) Dried grape converted in fresh grape. On average 4 kg to obtain 1 kg of raisin
c) OIV conversion factor used: production of wine* 1.325 kg of fresh grape, average quantity necessary to obtain 1 hl of wine d) Musts & juices included

* Oiv-statistical-report-on-world-vitiviniculture-2019 / Grape production



Of these 4.208.000 tons;

% 56 is eaten fresh, used to make grape juice and molasses, % 41 is dried into raisins*, % 3 is used for winemaking.

> (*) Turkey is the world's leading raisin producer (Every 4-5 kg of fresh grapes make 1 kg of raisin)



Umay Çeviker / Land & Grapes Webinar / 17th November 2021

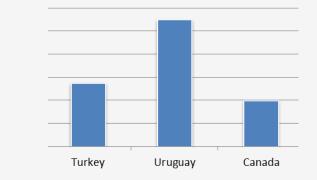
Turkey ranks 32nd in world wine production: 847.000 hectoliters (Turkish Agency of Tobacco and Alcohol TADAB-2020) Turkey ranks between Uruguay and Canada.

iohl	2016	2017	2018	2019 Prov.	2020 Prél.	2020/2019 % Var
Italie	50,9	42,5	54,8	47,5	49,1	3%
France	45,4	36,4	49,2	42,2	46,6	11%
Espagne	39,7	32,5	44,9	33,7	40,7	21%
USA	24,9	24,5	26,1	25,6	22,8	-11%
Argentine	9,4	11,8	14,5	13,0	10,8	-17%
Australie	13,1	13,7	12,7	12,0	10,6	-11%
Afrique du Sud	10,5	10,8	9,5	9,7	10,4	7%
Chili	10,1	9,5	12,9	11,9	10,3	-13%
Allemagne	9,0	7,5	10,3	8,2	8,4	2%
Chine	13,2	11,6	9,3	7,8	6,6	-16%
Portugal	6,0	6,7	6,1	6,5	6,4	-2%
Russie	5,2	4,5	4,3	4,6	4,4	-4%
Roumanie	3,3	4,3	5,1	3,8	3,6	-7%
Nouvelle Zélande	3,1	2,9	3,0	3,0	3,3	11%
Hongrie	2,5	2,5	3,6	2,7	2,4	-12%
Autriche	2,0	2,5	2,8	2,5	2,4	-3%
Grèce	2,5	2,6	2,2	2,4	2,3	-6%
Brésil	1,3	3,6	3,1	2,0	1,9	-5%
Géorgie	0,9	1,0	1,7	1,8	1,8	2%
Autres pays	16,8	16,5	18,1	16,6	15,4	-7%
Total mondial	270	248	294	258	260	1%

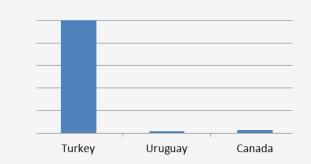
Fig. 4 • Production de vin (jus et moûts exclus) dans les principaux pays ${}^{\scriptscriptstyle 6}$

* Oiv-statistical-report-on-world-vitiviniculture-2021 / Wine production (mil hl)

There are **185** registered wine producers in Turkey (*TADAB 2021*). In 2020 there were **178** producers in the UK (*WINEGB*). Proportional comparison of Turkey's wine production with Uruguay and Canada (OIV 2018)

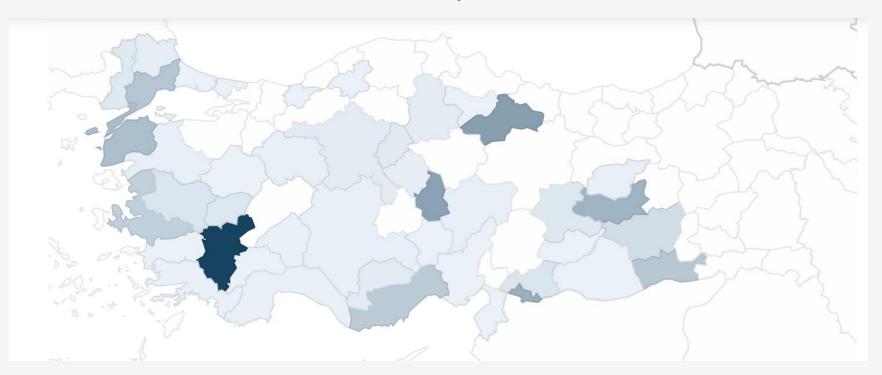


Proportional comparison of Turkey's total vineyard area with Uruguay and Canada (OIV 2018)



Grape production and vineyard distribution throughout Anatolia

2021-82 Million litres of wine production



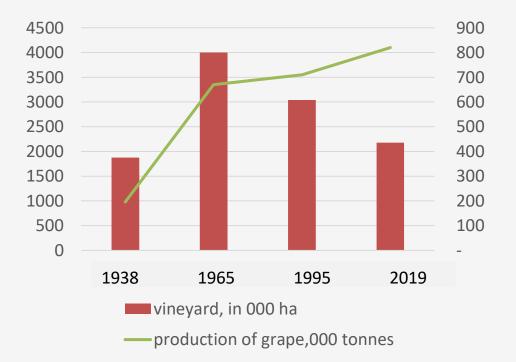
Veri: TÜİK

Harita: DrDataStats.com

Türkiye: 382.911 ton; 1-Denizli: 84.523 ton; 2-Tokat: 39.783 ton; 3-Nevşehir: 38.076 ton; 4-Kilis: 31.954 ton; 5-Elazığ: 29.247 ton; 6-Çanakkale: 24.574 ton; 7-Tekirdağ: 20.534 ton; 8-Mardin: 20.422 ton; 9-Mersin: 18.564 ton; 10-İzmir: 16.143 ton; ...

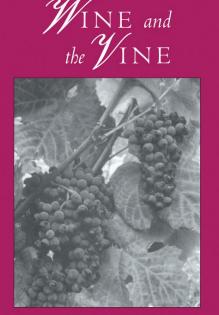
Vineyard area, in 000 ha	Production of grape, in 000 tonnes
275	077.4
3/5	977.4
800	3,350.0
607	3,550.0
125	4,100.0
	in 000 ha 375 800

Turkey's wine grape production is 2-3% of total grape production



- Loss of vineyard areas for the last 25 years in Middle and Eastern Anatolia.
- Keeping the production capacity yield while losing vineyard area indicates a more monolithic and industrial production of grapes; mainly sultanas suitable for raisin making.

How to look at these changes through social sciences?



Tim Unwin

ANCIENT NEAR EASTERN STUDIES

SUPPLEMENT 51

OF VINES AND WINES

The Production and Consumption of Wine in Anatolian Civilizations through the Ages

Edited by Lucienne Thys-Şenocak



A FRENCH VIEW OF THE OTTOMAN-TURKISH WINE MARKET, $$1890{-}1925$$

Edhem ELDEM

Halenko, Oleksander. "Wine Production, Marketing and Consumption in the Ottoman Crimea, 1520-1542. Journal of the Economic and Social History of the Orient 2004

Kayseri region wine production in 15th Century in Ottoman Era by Greek population was more than today's conditions

The progressive increase in the number of wine-producing villages in Kayseri over one century, from the end of the 15th until the end of the 16th century, is shown in Table IV.

Dates	Wine-producing villages	Non Wine-producing villages	Total
1484	27	38	65
1500	49	22	71
1570	47	20	67

Table IV.

When we move further west and southwest, to Ürgüp, Ortahisar, Karahisar and Develi in Niğde, we can see that the picture in the 59 villages in the *kaza* does not deviate from the corresponding picture in Kayseri. The following data in **Table V** come from the unpublished register of the Prime Ministry Ottoman Archive, the Tapu Tahrir # 46, which dates back to the early 16th century.¹⁵

There are only one wine producer in Kayseri in 2021

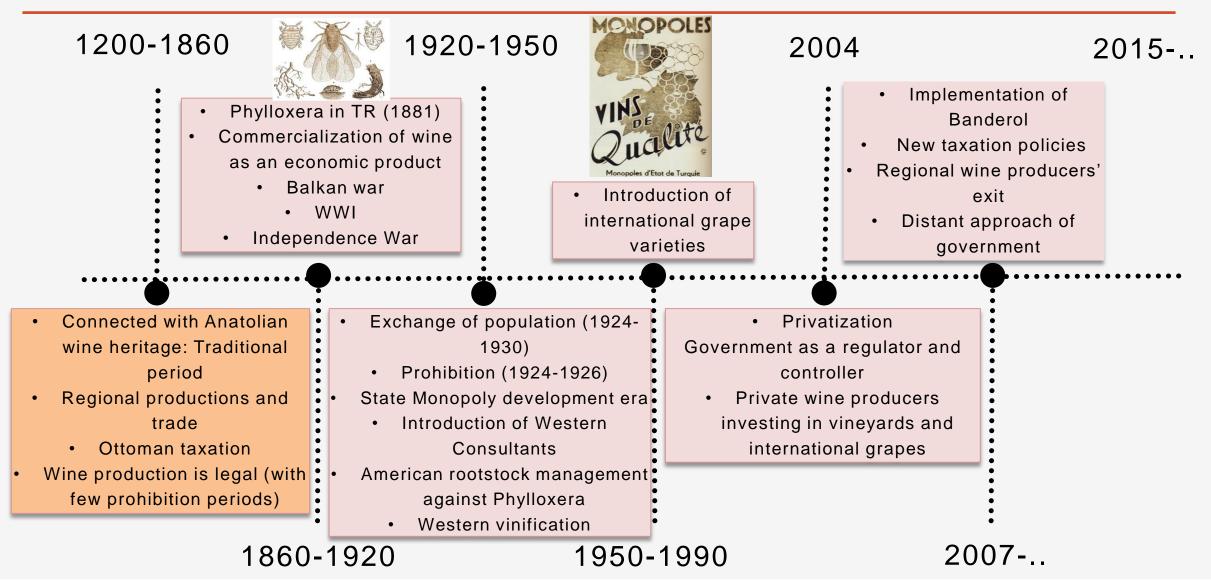
*Evangelia Balta, «From Ypolenion to Bolum: The Viticultural Transition in Cappadocia through Ottoman Sources and Oral Tradition», article in «of Vines and Wines»,

Of Vines and Wines: The Production and Consumption of Wine in Anatolian Civilizations through the Ages (Ancient Near Eastern Studies Supplement Series), Peeters Publishers; 31 December 2017.

Continuity and why it is not seen?

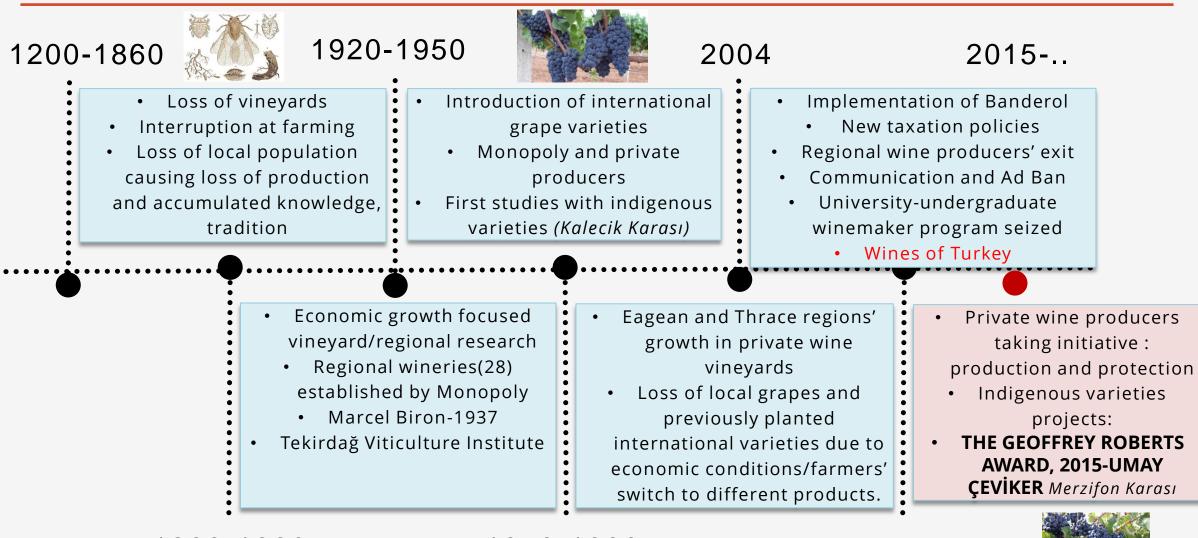


Wine production shifts in Anatolia from a socio-political and economic perspective



Gözdem Gürbüzatik, Fernkolektif

Wine production shifts in Anatolia from a socio-political and economic perspective



1860-1920

1950-1990

2007-..



Gözdem Gürbüzatik, Fernkolektif

Grape & viticulture research and state supported academic studies are very limited



Within the scope of the project initiated in 1965, there are 1.435 grape varieties in the Tekirdağ Viticulture Research Institute's **National Collection Vineyard**. Genetic analysis was performed for 1.150 of these cultivars and 854 were registered as genetically different.

(Prof. Dr. Ali ERGÜL, Ankara University Biotechnology Institute, 2006-2009)

32 of these varieties are thought to be suitable for winemaking. The institution will announce the 5 new varieties as wine grapes in 2022;

These are: Karamenüş (Menüşkül) – Malatya (B) Yayla – Bolu (B) Tilkiboğan - Malatya (B) Ak Sıdağan Eskişehir (W) Beyaz Üzüm Gümüşhane (W) (*)

https://arastirma.tarimorman.gov.tr/bagcilik/Link/6/Turkiye-Asma-Genetik-Kaynaklari



Few pages of the national record of the varieties classified by the institute on the basis of provinces / Tekirdağ Viticulture Research Institute Grapevine Genetic Resources of Turkey 2021

(*) Tamer Uysal, Dr. Yılmaz Boz, Ahmet Semih Yaşasın / Tekirdağ Viticulture Research Institute

Vineyards of indigenous varieties Central Anatolia



Indigenous grape varieties used in Turkish wine production - 2021

Adakarası Acıkara Ak Üzüm Barburi Bilbizeki Bornova Misketi Hasandede Boğazkere Çalkarası Çakal Çavuş Emir

Feslegen Fersun Foça Karası Gavdoni Gök Üzüm Horozkarası Kalecik Karası Karalahna Karaoğlan Karasakız (Kuntra)

Kerküş Ketengömlek Kızıl Üzüm Kolorko Koku Üzüm Köhnü Kösetevek Mazrona Merzifon Karası Midin Karası Narınç Narince

Öküzgözü Papazkarası Patkara Raşegurnik Sıdalan Sikkara Sultaniye Sungurlu Taş Üzüm Ten Göynek Urla Karası Vasilaki Yapıncak



Long-established and widely planted varieties

Long-established but less widely planted varieties

New entries within the last few years

Boğazkere

Vineyards of indigeneous varieties-Diyarbakır region, Boğazkere wild vineyards



Vineyards of indigenous varieties - Diyarbakır region, Boğazkere wild vineyards



Registered geographical citations for indigenous grape varieties of Turkey

Wine Grapes (2012)

A Complete Guide to 1.368 Vine Varieties, Including Their Origins and Flavours / J.Robinson, J.Harding, J.Vouillamoz

Lists 1.368 varieties used in commercial wine making all over the world in 2012, 26 local varieties for Turkey.

OIV, International Organisation of Vine and Wine (2017)

It includes 709 different grape varieties for Turkey, whether used in winemaking or not.

VIVC, Vitis International Variety Catalogue (2020)

Julius Kühn-Institut

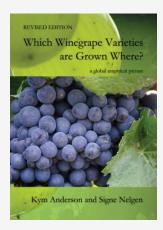
Lists 1.075 grape varieties for Turkey. This represents 4,68% of the 22.983 varieties registered by the institute.

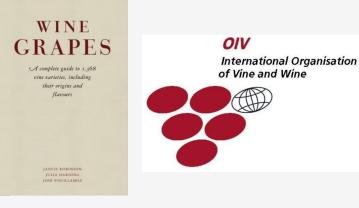
Which Winegrape Varieties are Grown Where? (2020)

A Global Empirical Picture (Revised Edition), Adelaide: University of Adelaide Press Kym Anderson, Signe Nelgen

With 2016 data, it includes 1.562 varieties used in commercial wine production all over the world. For Turkey, there are 35 varieties listed, regardless of whether they are local or international.







OIV registered geographical sitations for indigeneous grapes of Turkey

only 18 varieties (5 of them are wine grapes)

Turkey Turkey	Adıyaman Besni üzümü Arapgir Köhnü Üzümü	Mahreç İşareti - geographical sign Mahreç İşareti - geographical sign	G OIV International Organisation of Vine and Wine
Turkey	Cimin Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Ege Sultani Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Elazığ Boğazkere Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Elazığ Öküzgözü Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Erbaa Narince Bağ Yaprağı	Mahreç İşareti - geographical sign	GI
Turkey	Gaziantep Muskası	Mahreç İşareti - geographical sign	GI
Turkey	İncesu Karaevrek Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	İsabey Çekirdeksiz Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Kalecik Karası Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Kavacık Üzümü	Mahreç İşareti - geographical sign	GI
Turkey	Kırklareli Hardaliyesi	Mahreç İşareti - geographical sign	GI
Turkey	Manisa Sultani Çekirdeksiz Üzümü	Mahreç İşareti - geographical sign	GI

OIV, International Organisation of Vine and Wine (2017)

There are 709 grape varieties registered in OIV from Anatolia.

Protecting the heritage of old vines and indigenous varieties: A practical model



THE GEOFFREY ROBERTS AWARD 2015 Umay Çeviker

The Geoffrey Roberts Award is an international wine-related award under the patronage of The Worshipful Company of Vintners, that will celebrate its 659th anniversary in 2022.

The winning applicant must demonstrate to the judging panel a genuine commitment to New World wines or wines from Emerging Regions.



Derek Mossman Knapp Chile / 2010

Encouraging artisan wine production from dry-farmed old vines in the undervalued Maule region.

Garage Wine Co, Movi and Vigno

Some of the past and present winners of the award



Miquel Hudin Spain / 2016

To create a comprehensive, visually attractive wine tourism guide to the up-andcoming wine region of Kakheti in Georgia.

Georgia: A Guide to the Cradle of Wine 2017



Amanda Barnes UK / 2018

Research for a comprehensive guide to South America's wine regions, its producers and grape varieties.

The South America Wine Guide 2021



DISCOVER by Urla Şarapçılık 2015, 2017and 2019

The main purpose of the project is to reveal the secret wealth of the broad Anatolian vineyards to the wine scene in Turkey. The endeavor to highlight three off-the-beatentrack vineyard areas and four obscure grape varieties has a dual purpose; to help these areas to come to light as they once were and to draw the attention of the Turkish wine industry to a sense of cooperation.

Varna Плевен Варна Black Sea Vladikavkaz Владикавказ Bulgaria Бургас Georgia Plovdiv Пловдив Zongulda Kastamonu Samsun THE BLACK SEA Trabzon Rize THE THRACE Kars Armenia 0 Bursa Erzurum Erzincan **CENTRAL ANATOLIA** THE AEGEAN lakhch EASTERN ANATOLIA Khov خوى Aksaray Konya Divarbaki Urmia Kahramanmaras THE MEDITERRANEAN SankuSOUTHEASTERN ANATOLIA Gaziantep Adana **O**Antalya Rhodes Póðoc Mosul Aleppo Erbil Iskenderuno الموصا Al Hasaka Ar Raggah Kirkuk Deir ez-Zur ανιά Heraklion Ηρακλειο Svria

The cluster of wine producers in Turkey



DISCOVER by Urla Şarapçılık 2015, 2017and 2019

Three varieties; **Patkara** and **Gök** from Çömelek in Mersin and **Sungurlu** from the eponymous town in Çorum were turned into wine with a sustainable economic model where all the profit will be used to purchase the grapes for the following vintage.

1 Road to the Taurus Mountains 2 Ancient press among the vineyards 3 Grape cluster carved on a rock tomb 4 Old vine Patkara near Çömelek 5 Local grovers in Çömelek 6 Proud Sungurlu grower

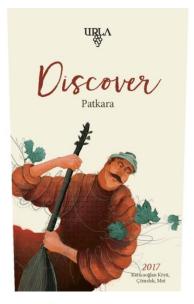


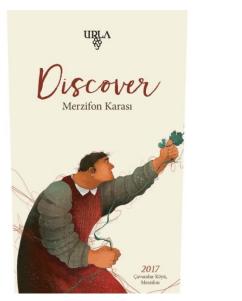


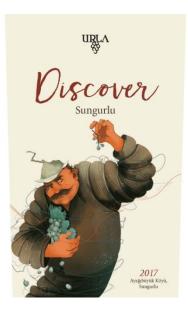
DISCOVER by Urla Şarapçılık 2015, 2017and 2019



The positive reaction of the wine scene in Turkey suggests that the quest to support the long-neglected wine grapes and wine growing regions will be embraced. The Urla Winery effort will hopefully live as a sustainable model and influence other wineries to follow the same path.







The 2017 labels of Urla Discover series (Illustrations by Merve Atılgan)

Protecting the heritage of old vines and indigenous varieties: *Collaborations*

Jaban

A Manifest

Yaban is a step taken to reunite viticulture and wine making in Turkey with its past and forgotten values. We lost our rich viticulture culture, winemaking techniques, traditions, festivities and rituals in a short time after the natural disasters and forced population exchanges in the last century. It will perhaps never be possible to fully recover this memory. Anatolia is losing its grape heritage day by day and the danger is not past even for the varieties we think have been saved.



1 Harvest time in Kayseri, Central Anatolia 2 Drying Sungurlu grapes in Kayseri 3 Dried Sungurlu grapes ready for vinification 4 Ercis Karası bunches at harvest in Ercis, Van

Protecting the heritage of old vines and indigenous varieties: *Collaborations*

Jaban

- Our priority is to bring the forgotten grapes into a commercial activity that will save them from extinction, and to attract the attention of other producers by revealing the true potential of these grapes. Therefore, Yaban varieties will change, those that have not changed will be processed in various styles.
- In addition to local varieties; we will be working with international grapes such as Semillon, Carignan, Cinsault, Gamay and Alicante, which were planted in our country in the last century but are not often fermented by today's producers.
- While we source our grapes from vineyards that do not belong to us, we will guide the way these vineyards are cultivated day by day according to organic and even biodynamic principles. At least, we will strive for better viticulture compared to the previous year.



Protecting the heritage of old vines and indigenous varieties: *Collaborations*

Jaban

- We will aim to ensure that the use of oak in winemaking does not mask the characteristic features of the varieties, and that they are made in a style that reflects the vineyard regions and is far from the international style.
- While making use of today's technological possibilities and modern winemaking techniques, we will give priority to fermentation with local yeasts.
- We will try to prove that another life is possible in the increasingly commercialized world of wine, which we



Collaborations: Anatolian Grapes Project

vineyard and indigenous grapes rescue at Cappadocia with indigenous rootstocks







Cappadocia, near Mount Hasan



Raising Awareness:

Root Origin Soil Anatolian Heritage Grapes

Sabiha Apaydın

In today's wine world, 70 percent of the world's wines are produced from 30 grape varieties only. There might be a serious problem of diversity in the near future: we may end up drinking almost identical wines, lacking the crucial element in wine: culture & excitement! The international market mostly demands a few crowd pleasers, not very far from the days when white was simply a Chardonnay and red was a Cabernet Sauvignon. It is very important for a sustainable future that dwindling local grapes continue to be processed by wine companies of all sizes. The wine event that can happen is naturally either a tasting or a competition

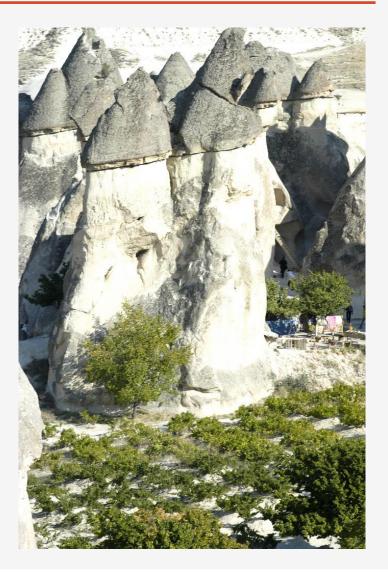


What to do?

Winemaking is economical and sustainable and has deep connections with Anatolian civilization history.

- There is no full range of grape inventory, Tekirdağ is the only place and should be supported by collaboration from regional producers and universities.
- Anatolian Viticulture Heritage to be included as a region at International Heritage Organizations and the Development of Cultural Wine Routes.
- Call for research in social-sciences with multidisciplinary approach to understand the continuity aspect to the history of wine in Anatolia.
- Regional planning, registering and supporting for regional indigenous variety vineyard owners. Call for wine producers to support collaboration projects like Yaban and Anatolian Grapes.
- Research about unique indigenous wine grape varieties' wine potential.
- Protecting and registering «old vine vineyards», with their original rootstock.
- Protecting Cappadocia region (*phylloxera free*)

Gözdem Gürbüzatik, Fernkolektif





Thank you!