



Plantaze

ECPGR

European Cooperative Programme for Plant Genetic Resources

**“On-farm inventory of minor grape varieties in the
European Vitis Database (GrapeOnFarm)”**

Vesna Maraš and Anita Gazivoda

MONTENEGRO

Montenegro is a small country of great wines.

- *Montenegro has a very long tradition of grapevine growing - dates back from the pre-roman period*
- *Geographical specificity of Montenegro, ie. the influence of the Mediterranean climate in the south, continental in the north and moderate in the central part of the territory, made it possible for the genetic material of the vineyard to be rich and diverse.*



Montenegrin viticulture regions explored:

1. MONTENEGRIN BASIN OF SKADAR LAKE

(sub regions: Podgoricki, Crmnicki, Rijecki, Bjeloplavicki, Katunski, Kucki and Piperski)

2. MONTENEGRIN COST

(sub regions: Bokotorski, Budvansko-Barski, Ulcinjski, jadransko zaleđe)

3. NUDO

4. MONTENEGRIN NORTH *(sub regions: Nikšićki, Bjelopoljski, Šćepan polje i Dragaljsko polje)*



Winemaking-winegrowing sector of Montenegro



Ministarstvo poljoprivrede i ruralnog razvoja



Ministarstvo nauke



Ministarstvo održivog razvoja i turizma

Plantaže



„13. jul Plantaže“



FAKULTET ZA PREHRAMBENU TEHNOLOGIJU, BEZBJEDNOST HRANE I EKOLOGIJU



Nacionalno udruženje

Sommeliers
Crne Gore



Permanent work on identification, characterization and preservation of grapevine germplasm in Montenegro, through realization and active participation in national and international projects.

REALIZED PROJECTS:

- *SEEDnet project (2009-2010) - "Identification, characterization and conservation of old and autochthonous vine varieties in eastern European countries"*
- *SEE.ERA.NET project (2010-2012) "Preservation and establishment of true-to-type and virus free material of endangered grapevine cultivars in Croatia and Montenegro" ERA 91/04*
- *As a result of the work on the characterization of the Montenegrin grapevine germplasm, within the mentioned projects, Montenegro is the first time in 2012. presented its autochthonous varieties and officially joined the EU Vitis database.*
- *Participation in the **COST ACTION FA1003** (East-West Collaboration for Grapevine Diversity Exploration and Mobilization of Adaptive Traits for Breeding) (2012-2014)*
- *Participation in **ECPGR** group "Increasing the efficiency of conservation of wild grapevine genetic resources in Europe) – InWiGrape project (2016)*
- *Project "**Genetic diversity of vines in Montenegro**", in cooperation with Institute of Vine and Wine (ICVV) in La Rioja, Spain (2013 - ongoing)*

Project: "Genetic diversity of grapevine in Montenegro"

The work on the genetic identification of indigenous varieties of Montenegro continued through cooperation with the Spanish partner – Institute for vine and wine from La Rioja Grape. In the project are also included the Ministry of Agriculture, the Ministry of Science, the National Association of winegrowers and winemakers of Montenegro and Biotechnical Faculty in Podgorica.

This project included:

- research of the genetic diversity of Montenegrin grapevine varieties,
- discovering of their origin,
- the study of the variability of the populations of varieties.

The most comprehensive research on grapevine in Montenegro.

A total of 473 vines were marked and sampled (cultivated and wild *Vitis sylverstris* forms)

An analysis of 318 samples revealed the existence of 54 new grape genotypes. 21 found at more than 2 sites, indicating that these varieties were grown in Montenegro for centuries.



Code	Variety	Region	Subregion	Locality	GPS location	Owner	Contact	Notes	Internal code location
MNE 020	Napomena bijela	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 879 19 17 589 829 64 m.	Boro Ivanović	069 894 916	starije bobice	u plinu do ulice
MNE 021	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 849 19 17 589 829 65 m.			razmnožena posadom iz 2. generacije, u srednjem dijelu 2-3 god.	
MNE 022	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 850 19 17 589 829 65 m.			starije bobice, 2. i 3. generacija	
MNE 023	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 851 19 17 589 829 65 m.			starije bobice, 2. i 3. generacija	
MNE 024	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 849 19 17 589 829 65 m.	Blanko Popović		starije bobice, 2. i 3. generacija	
MNE 025	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 209 19 18 309 829 73 m.			starije bobice, 2. i 3. generacija	
MNE 026	Napomena, stara	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 239 19 18 309 829 65 m.			starije bobice, 2. i 3. generacija	
MNE 027	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 239 19 18 309 829 72 m.	Amiranda Popović		starije bobice, 2. i 3. generacija	
MNE 028	Napomena, stara	Crnogorski Istarsi	Podgorički	Kući, Mračine	8 42 27 239 19 18 309 829 70 m.			starije bobice, 2. i 3. generacija	
MNE 029	Vranđača, stara	Crnogorski Istarsi	Podgorički	Kući, Vrbica	8 42 27 432 19 20 359 829 236 m.	Stjepan a Ivanović		starije bobice, 2. i 3. generacija	
MNE 030	Napomena bijela	Crnogorski Istarsi	Podgorički	Kući, Vrbica	8 42 27 442 19 20 354 829 228 m.			starije bobice, 2. i 3. generacija	
MNE 031	Napomena bijela	Crnogorski Istarsi	Podgorički	Kući, Vrbica	8 42 27 443 19 20 353 829 228 m.			starije bobice, 2. i 3. generacija	
MNE 032	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica, Bivaz	8 42 27 439 19 20 354 829 227 m.	Goran Ivanović		starije bobice, 2. i 3. generacija	
MNE 033	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica, Bivaz	8 42 27 549 19 20 367 829 245 m.			starije bobice, 2. i 3. generacija	
MNE 034	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica	8 42 27 449 19 20 342 829 224 m.			starije bobice, 2. i 3. generacija	
MNE 035	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica	8 42 27 449 19 20 360 829 227 m.			starije bobice, 2. i 3. generacija	
MNE 036	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica, Pankovci	8 42 27 851 19 20 359 829 216 m.			starije bobice, 2. i 3. generacija	
MNE 037	Vranđača	Crnogorski Istarsi	Podgorički	Kući, Vrbica, Pankovci	8 42 27 851 19 20 359 829 216 m.	Blanko Popović		starije bobice, 2. i 3. generacija	





„On-farm inventory of minor grape varieties in the European Vitis Database (GrapeOnFarm)“

- Through the project "On-farm inventory of minor grape varieties in the European Vitis Database (GrapeOnFarm)", activities continued on the study of minor and neglected grapevine varieties in Montenegro*
- The producers are informed about the goals and activities of the project, through direct contacts as well as through the media and at the meetings of the National Association of Winegrowers and Winemakers.*



Interested producers were contacted and a field expedition plan was started with the aim of finding, identifying and evaluating rare and forgotten grapevine varieties in the territory of Montenegro.

„On-farm inventory of minor grape varieties in the European Vitis Database (GrapeOnFarm)“

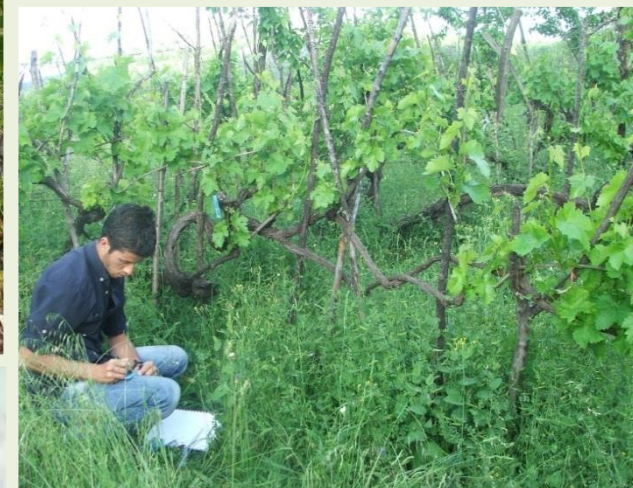
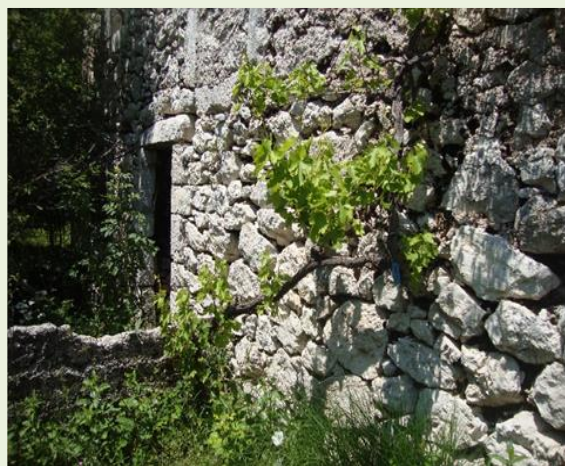
- The field expedition during 2017 has
 - visited interested producers from different viticulture localities;
 - interviewed winegrowers and according to descriptors collected data on the site, history of breeding, names and synonyms of varieties, agrobiological and economic technological characteristics of the variety, manner of maintaining vineyards ...

	A	B	C	D	E	F	G	H	I	J	
	Šifra	Lokal name	Vinogradarski region i subregion	Grad	Lokalitet	Selo	GPS koordinate	Nadmorska visina	Vinogradar	Kontakt	
9	MNE 487	Krstač	Basen Skadarskog jezera, Crmnički subregion	Bar	Crmnica	Gornji Brčeli	N 42° 14 67'0" E 19° 00. 624	315 m	Vlado Nikaljević	382 69030682	
10	MNE 488	Lisica		Bar	Crmnica	Gornji Brčeli	N 42° 14 665" E 19° 00. 633	315 m			
11	MNE 489	Nepoznata		Bar	Crmnica	Mačuge	N 42° 13 786" E 19° 02. 032	218 m			
12	MNE 490	Stani vranac		Bar	Crmnica	Mačuge	N 42° 13 762" E 19° 02. 042	218 m	Miroslav Dobković	382 69338877	
13	MNE 497	Rehavi vranac		Bar	Crmnica	Mačuge	N 42° 13 775" E 19° 02. 019	229 m			
14	MNE 498	Bijela nepoznata		Bar	Crmnica	Mačuge	N 42° 13 757" E 19° 02. 032	228 m			
15	MNE 499	Crna nepoznata	Bar	Crmnica	Gluhi do	N 42° 13 285" E 19° 02. 085	420 m	Branko Nikolić	382 69467640		
16	MNE 500	Bijela nepoznata	Basen Skadarskog jezera, Katunski subregion	Daniilovgrad	Zagarač	Donji Zagarač	N 42° 30 091" E 19° 05. 149			143 m	
17	MNE 501	Kratošija	Podgonica	Piperi	Gornji Cmcici	N 42° 32 381" E 19° 13. 641	400 m			Dragan Gligorović	382 67666916
18	MNE 502	Kratošija	Podgonica	Piperi	Gornji Cmcici	N 42° 32 382" E 19° 13. 641	400 m				
19	MNE 503	Kratošija	Podgonica	Piperi	Gornji Cmcici	N 42° 32 373" E 19° 13. 626	400 m				
20	MNE 507	Kratošija	Basen Skadarskog jezera, Piperski subregion	Podgonica	Piperi	Gornji Cmcici	N 42° 32 615" E 19° 13. 385			420 m	Željko Gligorović
21	MNE 508	Nepoznata		Podgonica	Piperi	Gornji Cmcici	N 42° 32 604" E 19° 13. 392	420 m			
22	MNE 515	Kratošija		Podgonica	Piperi	Piperi, Gornji Cmcici	N 42° 32 676" E 19° 13. 358	420 m			
23	MNE 516	Rulica sitna		Podgonica	Piperi	Piperi, Gornji Cmcici	N 42° 32 646" E 19° 13. 351	420 m			
24	MNE 517	Kratošija	Podgonica	Piperi	Piperi, Gornji Cmcici	N 42° 32 661" E 19° 13. 340	420 m	Ljubiša Mišković	382 67173415		
25	MNE 518	Nepoznata	Basen Skadarskog jezera, Bjelopavlički subregion	Daniilovgrad	Kosić	Pitone loze	N 42° 30 348" E 19° 08. 176			48 m	
26	MNE 519	Nepoznata	Crmnogorski sjever	Šavnik	Pošćenje	N 42° 58 322" E 19° 03. 593	1040 m			Gojslav Golović	382 69435282

The image shows two pages of a handwritten form used for data collection in the GrapeOnFarm project. The left page is titled "Podaci o sorti i vinogradu" (Data on variety and vineyard) and the right page is titled "Podaci o mjestu uzorkovanja" (Data on sampling location). Both pages contain various fields for data entry, including vineyard name, location, and contact information, with handwritten entries in blue ink.

„On-farm inventory of minor grape varieties in the European Vitis Database (GrapeOnFarm)“

- ✓ *Marked interesting vines (a total of 42 are marked in 2017) and positioned with GPS.*
- ✓ *Photographed and collected samples for analysis.*
- ✓ *The recommendation for their further expansion is given and during the winter the plan is to take cuttings for their further duplication and collecting.*



*The one of results of work on characterisation of grapevine germplasm is the formation of **National Collection of autochthonous grapevine varieties**, on Ćemovsko field.*

The Collection is planted with confirmed genotypes of autochthonous, neglected and indigenous grapevine varieties in Montenegro. The formation of the collection began in 2016. So far, a total of 160 have been planted, it will be continuously planted.



AGROBUDGET - MEASURES OF RURAL DEVELOPMENT

Measures for sustainable management of natural resources - PRESERVATION OF AUTOHTONIC GENETIC RESOURCES IN AGRICULTURE

- *Producers who cultivate indigenous species / varieties / breeds and who agree to cooperate with the institution responsible for genetic resources in terms of delivering materials and providing the necessary information are entitled to support.*
- *In plant production support is given:*
 - *for perennial crops: cultivation and care of individual (up to 30 individuals) very old olive trees / vines or plantations of the estimated age over 200 years (for olives over 1000 years), breeding and care of individual trees (up to 30 individuals) or for others fruit species / varieties that are endangered by genetic erosion.*

National procedure for listing a wine variety in the National List

- *In Montenegro, neglected varieties are enrolled without prior examination, but only for the needs of the local market (for the purpose of preserving a genetic resources).*
- *In the upcoming period, it is expected to be developed the Rule Book that will define this more precisely for the needs for outside of Montenegro.*

Thank you for your attention !

