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Republic of Serbia

Ministry of Agriculture, Forestry and Water Management

ANIMAL GENETIC RESOURCES – overview

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Organized work on the conservation of AnGR in Serbia began in 1994, with the identification of all breeds, and the data were sent to the FAO database (DAD-IS).

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The FAO breed classification system is not used

1. Locally Adapted Breeds

2. Autochthonous Breeds

3. Exotic Breeds

4. Local Breeds

5. Transboundary Breeds

6. Wild populations

7. Feral populations



The FAO breed classification system should be taken into account when amending the Livestock Law in the future;

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Diversity of breeds (DAD-IS)				
	Locally adapted breeds (Autochthonous breeds)		Exotic breeds	Total
		Endangered		
Cattle	2	2	11	13
Buffalo	1	1	0	1
Horse	3	3	9	12
Donkey	1	1	0	1
Pig	3	3	5	8
Sheep	15	13	11	26
Goat	2	2	3	5
Chicken	4	4	17	21
Duck	1	n/i	1	2
Goose	1	n/i	1	2
Turkey	1	n/i	0	1

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The level of endangerment

Endangered breeds are those breeds of domestic animals in which the total number of female breeding heads does not exceed:

1) for cattle and buffalo

2) for sheep and goat

3) for equidae

4) for pig

5) for poultry


7.500

10.000

5.000

15.000

25.000



In relation to the degree of endangerment, breeds are classified into **four groups**: I (critically endangered), II (highly endangered), III (potentially endangered), IV (not endangered).

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Population trend of autochthonous breeds (2019-2023)						
- the number of heads in Herd Book -						
Breed	No of breeders (2023)	2023	2022	2021	2020	2019
Podolian cattle	18	403	384	416	304	420
Busha cattle	127	2449	2199	2012	2105	1748
Buffalo	339	1449	1617	1481	1374	1106
Domestic-mount. Pony	647	3300	3124	3097	2765	1621
Nonius	36	135	143	96	92	113
Lipizzaner	277	771	882	/	/	/
Balkan donkey	118	977	830	716	628	567
Mangalitsa	63	2696	2460	2938	2935	2101
Moravka pig	324	4403	4061	3068	956	350
Resavka pig	22	268	224	234	62	65

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Population trend of autochthonous breeds (2019-2023)						
- the number of heads in Herd Book -						
Breed	NB	2023	2022	2021	2020	2019
Lipska sheep	47	3261	2601	2132	2284	1705
Krivovirska sheep	56	3019	2221	1606	1754	1488
Bardoka sheep	9	423	298	246	236	155
Vlaško-vitoroga sheep	11	1001	1138	1110	961	892
Pirot sheep	10	485	393	339	232	218
Karakachan sheep	10	631	416	295	228	211
Čokan Tsigai sheep	15	3011	2453	2002	1625	1327
Vlašićka sheep	16	7476	3698	/	/	/
Balkan goat	21	1592	1358	1135	1080	836
Serbian White goat	8	291	198	170	160	70
Svrljg Hen		N/I	N/I	N/I	100	113
Somborska Kaporka	2	155	324	899	182	251
Banat Nacke Neck	4	387	1248	1919	1474	444






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Actors in the preservation of AnGR		
In situ preservation	Ex situ preservation in vivo	Ex situ preservation in vitro
MAFWM	MAFWM	MAFWM
Farmers	Farmers	Farmers + Gene Banks
Research institutions	Research institutions	Research institutions
Breeding organizations		Breeding organizations
Tourism sector – rural tourism		
Competent authorities for nature protection	Competent authorities for nature protection	
Local communities	ZOO`s	
Agricultural advisory and professional services - PED		

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EUGENA


- Agriculture Faculty of Novi Sad (Campus-Temerin);
- Center for Reproduction and A.I., Velika Plana;
- Institute for Animal Husbandry, Belgrade;



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Autochthonous breeds

	RDP support measures	Autochthonous breeds included in the support system for organic production	Private companies support the preservation of AnGR
Serbia	yes	yes	partially



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Subsidies in Euro (2023)	
	m/f
Cattle, Buffalo	101-254
Horse	254
Donkey	85
Sheep, goat	38
Pig	42
Poultry	3,4

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TYPICAL PRODUCTS FROM AUTOCHTHONOUS BREEDS

Bucha cattle, it is not characterized by high milk content, and dairy products include cheese and yogurt. In addition to meat, you can also find smoked beef sausage on the market.

Podolian cattle, There is no milking, no milk and dairy products, but that's why "kulen", sausage and pâté made from Podolian beef can be found on the market.

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TYPICAL PRODUCTS FROM AUTOCHTHONOUS BREEDS

Buffalo, it is primarily used for the production of milk, specific cheese, "kaymak" and "butter", and is rarely used for meat production. However, on the market you can find mixed sausage made from buffalo and mangalitsa meat as well as buffalo "sudjuk" and "kulen".

Domestic-mountain pony, is primarily a horse for carrying loads, but can also be used for pulling and riding. On the market you can find dry "kulen" made from the meat of DMP.

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TYPICAL PRODUCTS FROM AUTOCHTHONOUS BREEDS

Balkan donkey, the specific quality of the meat that this breed possesses attracts the attention of dietitians, but the tradition of using donkey meat is almost non-existent. Nevertheless, donkey meat sausage can be found on the market, and there is an increasing demand for donkey milk, which has nutritional value and is also used for therapeutic purposes. Other donkey milk products include cheese, soap, day and night face cream and liqueur.

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TYPICAL PRODUCTS FROM AUTOCHTHONOUS BREEDS

Mangalitsa and moravka pig, the specific quality of meat and bacon is increasingly attracting the attention of consumers, and among the products you can still find ham, "kulen", "čvarci" and lard.

Resavka pig, due to the small number of heads, the market for products obtained from resavka pig is still not developed.

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TYPICAL PRODUCTS FROM AUTOCHTHONOUS BREEDS

Autochthonous sheep breeds, are used for the production of lambs, and the milk is used to make cheese (Krivovirski, Lipski, Salamurski, white). Pirot "kačkavalj" is produced from the milk of Pirot sheep, and Pirot rugs, socks and sweaters are made from wool.

Balkan and Serbian White Goat, are mainly used to obtain milk and dairy products - goat cheese and whey.

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Conclusions and recommendations for future work:

- 1. Continuation of the implementation of the GPA;**
- 2. Implementation of breeding programs;**
- 3. Improving the production characteristics and defining the economic characteristics of the breed, while preserving the desirable genetic structure;**
- 4. Development of scientific research, especially genetic characterization;**

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- 6. Continuous monitoring of the trends of endangered populations;**
- 7. Develop models of sustainable use, so that breeders are less dependent on subsidies;**
- 8. Promotion of AnGR (exhibitions, fairs...);**

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- 9. Market development for products from autochthonous breeds;**
 - 10. Development of agro-tourism;**
 - 11. Gene bank development;**
 - 12. Establish and develop a national information system for the diversity of domestic animals;**

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Thank you for your attention

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