

In situ and Ex situ gene conservation in Serbia, Gödöllő, Hungary, 12-14.04.2016.



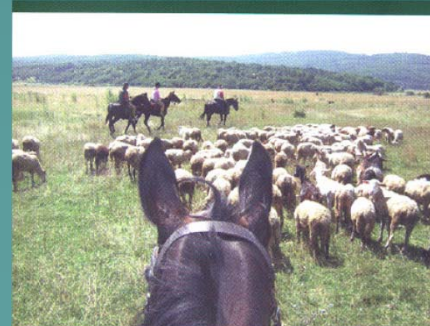
Srdjan Stojanović

**Ministry of Agriculture and
Environmental Protection**



Institutions involved in the management of AnGR:

- ◆ **Ministry of Agriculture and Environmental Protection**
- ◆ **Livestock Institute, Zemun-Belgrade / Herdbook**
- ◆ **Agriculture Faculty, Novi Sad / Herdbook**
- ◆ **Veterinary Service / Centers for Reproduction and A.I.**
- ◆ **PUBLIC SERVICE – Extension services**
- ◆ **Breeding Association of the old breeds of Serbia**
- ◆ **Local communities**
- ◆ **NGO'S, hobbyists**



Legal and policy frameworks for the management of AnGR:

- Law on Animal Husbandry (**2009**)
- Law on Agriculture and Rural Development (**2009**)
- Rules oflist of autochthonous breeds (**2010**)
- Rulesof register of the indigenous breeds ...(2010)
- The Strategy for the Agriculture and Rural Development 2014-2020 (**2014**)
- Nat. Rural Develop. Program 2015-2020 (**final draft 2015**)
- National Program for Sustainable Use, Development and Conservation of Biological Diversity of Domestic Animals 2016-2021 (**final draft 2016**)
- Biodiversity Strategy 2011-2018 (**2011**)
- Nagoya Protocol (**signed 2011, not ratified**)



Global review, Conservation and Management of AnGR:

- 1944 in Spain, Toledo, experimental herd of Iberian pigs (*Zjalić et al., 2005*).
- 50-th years, in Sweden, Centers for A.I. performed semen conserv. of all bulls used for natural mating.
- During 60-th years, the scientists and farmers have noticed a high level of erosion of AnGR (*Oldenbroek, 2007*).
- In Hungary 1962 First Law/Regulation (*Bodo et al. 1996*)

Global review, Conservation and Management of AnGR:

- **In Great Britain 1968 – (*Alderson and Ramsey, 2001*)**
- **In France 1970 – The First conservation programme, 1983 established the Biro aux ressources génétiques (www.brg.prd.fr)**
- **Commission on Genetic Resources for Food and Agriculture 1983 (**FAO**)**
- **Established Nordic Gene Bank 1984 – (www.nordgen.org)**

Global review, Conservation and Management of AnGR:

- **Global Strategy for Conservation and Management of AnGR 1985 (FAO)**
- **Convention on Biological Diversity 1992 (COP)**
- **ITWG-AnGR 1997 (FAO)**
- **Global plan of Action for AnGR and Interlaken declaration 2007 (FAO)**
- **Nagoya protocol 2014 (COP)**



When its all started in Serbia

- **Activities on the AnGR conservation became more important in Serbia in the ninties.**
- **Organized work on managment of AnGR was started at the 1994 years, with the identification of autochthonous breeds.**
- **Data are sent to FAO AnGR data bank.**



- Till 2001 applied conservation system was economically and technically far away from self-sustaining.
- Conservation and management of AnGR had make a significant changes.



- **Reintegration of AnGR conservation with the traditional mixed-farming systems and non-agricultural activities was promoted.**
- **Government institutions started active cooperation with NGOs and building interactive links with all stakeholders.**
- **AnGR stakeholders are informed that providing rural development policy is needed to support AnGR conservation.**
- **Work on establishing legal framework for conservation of AnGR.**



In-situ conservation (currently applies). Keeping live animals in the areas where they occurred.



Ex-situ conservation

- ***In-vivo*** (zoo`s and Natural parks)
- ***In-vitro*** (4 centers for A.I.)



Number of animals and breeders in the programme of the in situ conservation of AnGR in Serbia (2015)

| Species | No of registered animals | Estimate | No of breeders |
|-------------------------|---------------------------------|-----------------|-----------------------|
| Cattle | 909 | 1000 | 50 |
| Buffalo | 423 | 1000 | 144 |
| Horse and donkey | 465 | 700 | 48 |
| Pig | 899 | 3000 | 48 |
| Sheep | 2034 | 3000 | 43 |
| Goat | 521 | 800 | 17 |
| Poultry | 820 | 3000 | 2 |



The population trend of Locally Adapted Breeds (2000-2015)

***only registered animals and in reproduction**

| Breed | 2015 | 2010 | 2005 | 2000 |
|-------------------------------|-------------|-------------|-------------|-------------|
| Podolian cattle | 240 | 350 | 137 | 110 |
| Busha cattle | 669 | 550 | 65 | / |
| Domestic buffalo | 423 | 250 | 139 | / |
| Domestic-mountain pony | 110 | 80 | 17 | 9 |
| <i>Nonius</i> | 74 | 85 | 34 | 17 |
| Balkan donkey | 281 | 250 | 22 | / |
| Mangalitsa pig | 780 | 400 | 262 | 124 |
| Moravka pig | 103 | 100 | 33 | / |
| Resavka pig | 16 | 40 | 8 | / |

The population trend of Locally Adapted Breeds (2000-2015)

***only registered animals and in reproduction**

| Breed | 2015 | 2010 | 2005 | 2000 |
|-------------------------------|-------------|-------------|-------------|-------------|
| Lipska sheep | 687 | 300 | 110 | / |
| Krivovirska sheep | 532 | 350 | 273 | / |
| Bardoka sheep | 81 | 60 | 31 | / |
| Vlashko-vitoroga sheep | 468 | 350 | 70 | / |
| Pirotska sheep | 101 | 50 | 20 | / |
| Karakachanska sheep | 165 | 130 | 40 | / |
| Chokan Tsigai sheep | 650 | 550 | 288 | 100 |
| Balkan goat | 521 | 250 | 203 | 242 |
| Svrljig hen | 250 | 300 | 140 | / |
| Somborska hen | 260 | 200 | 159 | 100 |
| Banat Naked Neck | 560 | 450 | 207 | 50 |

Main tasks for future work

- 1. Financial support for implementation of GPA,**
- 2. Developing of scientific research (DNK research...),**
- 3. Capacity building (human and infrastructure),**
- 4. Support popularization of AnGR (exhibition, shows...),**
- 5. Improving the quality of local products (PDO, PGO, organic),**

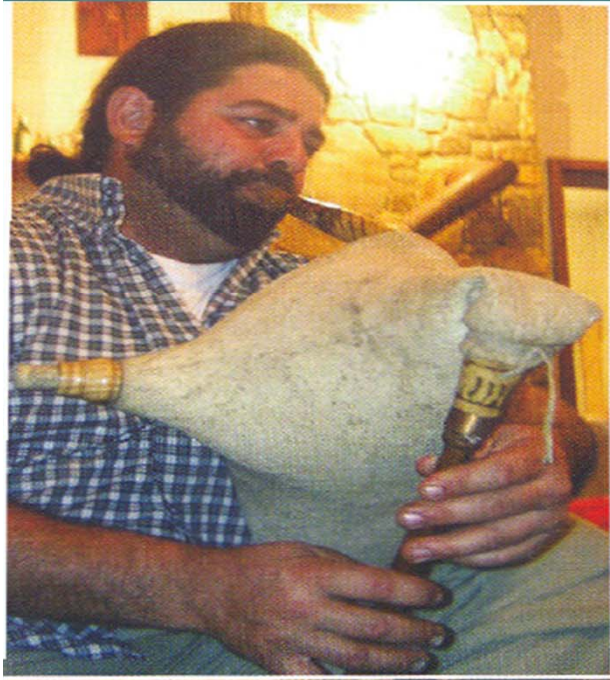
Main tasks for future work

- 6. Developing sustainable use of AnGR and valorisation true agro-turism,**
- 7. Harmonisation legislatives with the EU Regulations,**
- 8. Cooperation on global, regional and national level,**
- 9. Using indigenous knowledge for processing and producing tipycal products,**
- 10. Established Gene Bank (*ex situ*)**

In situ and Ex situ gene conservation in Serbia, Gödöllő, Hungary, 12-14.04.2016.



In situ and Ex situ gene conservation in Serbia, Gödöllő, Hungary, 12-14.04.2016.



In situ and Ex situ gene conservation in Serbia, Gödöllő, Hungary, 12-14.04.2016.

**Thank you for your
attention**

***Ph.D. Srdjan Stojanovic
Ministry of Agriculture and Environmental Protection
Belgrade, Serbia***

A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, partially overlapping the main text area. The mountains are depicted with sharp peaks and ridges, creating a jagged profile against the lighter teal background.