



Public service for
Animal Genetic
Resources Slovenia



Management and conservation of AnGR in Slovenia

Danijela Bojkovski

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Biotechnical Faculty, Department of Animal Science

LEGAL BACKGROUND

- **1991 – first information on local breeds**
- **1996 – ratification of CBD, commitment to develop strategies and programmes**
- **2000 – Agricultural act**
 - **protection of local breeds**
 - **Public service**
- **2001 – Biodiversity strategy, Multiyear programme**



MULTIYEAR PROGRAMME

- **Period I: 2001–2008**
- **Period II: 2010–2016**
- **Period III: 2017–2023**
- ❖ **Accepted by the government with main strategic priorities**
- ❖ **Long term measures to ensure the protection and conservation of the species and breeds of AnGR in Slovenia**



Main objectives

- Conservation of AnGR - local breeds
- *in situ in vivo; ex situ in vivo; ex situ in vitro*
- Awareness and education
- International work
- Collaboration with breeders, stakeholders
- Financial support „de minimis“ – part of the programme

LOCAL BREEDS IN SLOVENIA



- Slovenian cold blooded horse
- Lipizzan horse
- Posavje horse
- Cika cattle
- Krskopolje pig
- Dreznica Goat
- Bela Krajina Pramenka
- Istrian Pramenka
- Jezersko-solcava breed
- Bovec sheep
- Styrian hen
- Carniolan Honeybee

Local - autochthonous (historical documents, indigenous environment, breeding documentation, origin for five generation...)

CURRENT STATUS

Breed/Year	2000	2006	2012	2016	Status
Lipizzan horse	600	1000	1.150	1.267	vulnerable
Slovenian cold blooded horse		2.200	1.460	2.950	critical
Posavje horse		630	1.560	1.750	endangered
Cika cattle	400	1.350	2.558	4.289	endangered
Krskopolje pig	300	529	821	1.950	endangered
Jezersko-solcava breed	19.000	17.000	17.200	17.200	vulnerable
Bovec sheep	3.500	3.600	3.500	3.500	critical
Bela Krajina Pramenka	250	850	809	1050	critical
Istrian Pramenka	600	1.100	1.150	1.050	critical
Dreznica Goat		600	650	670	critical
Styrian hen	1.000	1.000	1.800	1.450	endangered
Carniolan Honeybee-fam.	162.000	170.682	150.000	150.000	/



SELECTED ACTIVITIES (1)

Genetic reserves

- Semen collection stored on different location (BF, VF, IC)
- Serve as the long term conservation for potential reconstruction of breed in the future
- 2017 semen of Krskopolje pig, Styrian hen, Cika cattle, Bela krajina pramenka, Drežnica goat



SELECTED ACTIVITIES (2)

- ❖ **Collection of biological material** (DNA, samples of different tissues – blood samples, skin, hair, muscles)
- ❖ **Serves as collection for research**
(origin, genetic structure)
- ❖ **Paternity identification -**
populations grazing in mountains





BIOLOGICAL MATERIAL

Breed/Year	2010-2016
Lipizzan horse	130 blood
Slovenian cold blooded horse	67 hair
Posavje horse	30 hair
Cika cattle	224 blood; 265 DNK
Krskopolje pig	20 blood
Bovec sheep	48 blood; 48 DNK
Bela Krajina Pramenka	26 blood; 48 DNK
Istrian Pramenka	97 blood
Dreznica Goat	433 blood; 393 DNK, 9 hair
Carniolan Honeybee	240 samples



SELECTED ACTIVITIES (3)

- ❖ **Guidelines/recommendations for the use of local breeds based on examples of good practices, professional and scientific findings**
- ❖ **„De minimis“ incentives for the local breeds in 2017 (100 breeders)**

(Cika cattle, Krskopolje pig, Bela krajina pramenka, Istrian pramenka, Dreznica goat)



SELECTED ACTIVITIES (4)

***Ex situ in vivo* conservation**

Ark FARM

Primer iz Ekološke kmetije Totter



- Primary activity – livestock breeding (local breeds).
- Breeding of pure breeding animals.
- More than 50 % LU/local breeds.
- Animals included in the breeding programme.
- Desired:
 - Processing and marketing of products,
 - Organic farming,
 - Conservation of plant varieties.



Ark CENTRE

- Education and awareness raising.
- Main purpose is wider than breeding.
- Source of animals – from the breeders included in the breeding programme.
- Desired:
 - Processing and marketing of products,
 - Organic farming,
 - Conservation of plant varieties.



Breeding at least three local breeds from the below group

Group A: cattle, equidae, pigs

Group B: sheep, goats

Group C: Styrian hen, Carniolan Honeybee



ARK KMETIJE in ARK SREDIŠČA po Sloveniji

Obiščite katero od lokacij slovenske ark mreže
in spoznajte slovenske avtohtone pasme domačih živali
ter prednosti njihove uporabe.



SELECTED ACTIVITIES (5)

Ark farm; Ark centre

- ❖ **Ark farm 4+8, ark centre–7** (applications, farm visits, decision on acceptance, preparation and design of promotional material, certificates to breeders)
- ❖ **Ark park – combining more breeders into a park, an individual protected area with surrounding breeders**
- ❖ **Preparation of rules in cooperation with breeders and managers of protected areas**



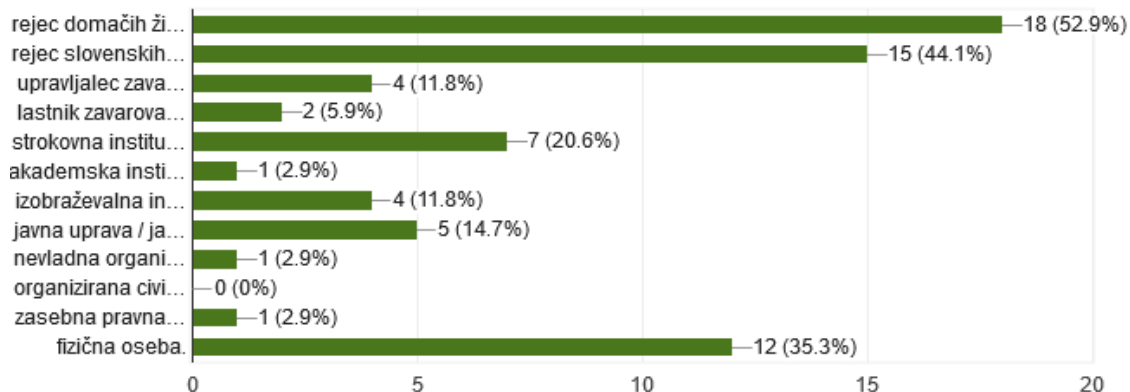


SELECTED ACTIVITIES (6)

Ark park – preparation of rules

1. Označite, kakšne so vaše vloge uporabnika domačih živali oziroma območij velike kulturne ali naravne vrednosti (možnih je več odgovorov):

34 responses



> 40 % of respondents are familiar with ark network

< 60 % managers of protected areas stated, that agricultural activities are part of the activities in this areas

> 75 % breeders stated, that their agricultural activities are carried out on protected areas



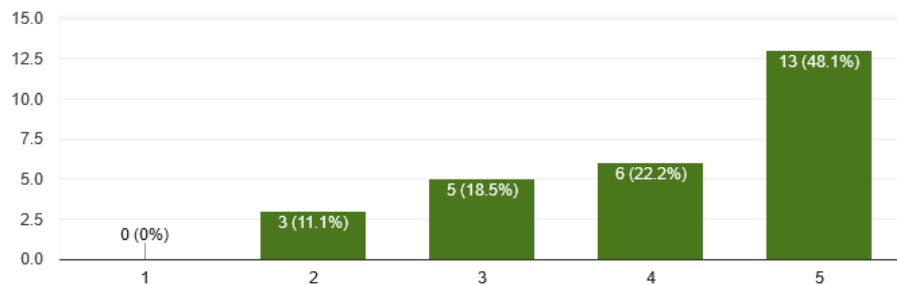


SELECTED ACTIVITIES (7)

Ark park – preparation of rules

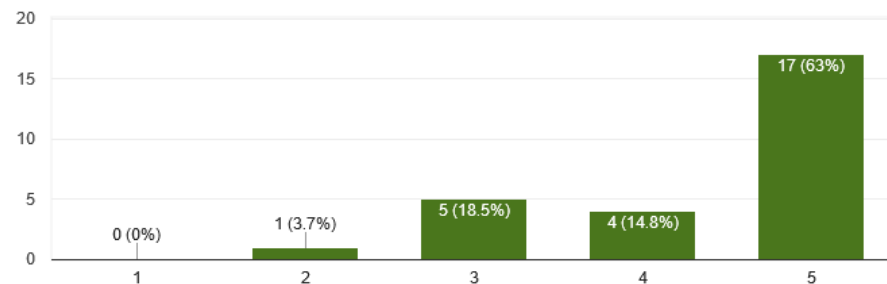
9. Ali je na zavarovanih območjih izvajanje tradicionalnih (izvornih) kmetijskih dejavnosti bolj primerno od izvajanja drugih oblik kmetijstva:

27 responses



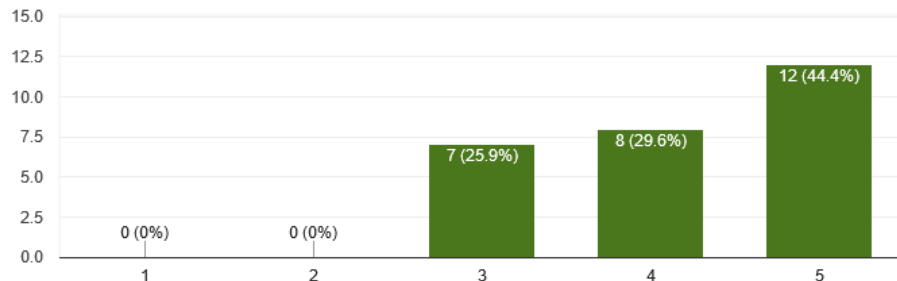
10. Ali je na zavarovanih območjih izvajanje ekološkega kmetovanja bolj primerno od izvajanja drugih oblik kmetijstva:

27 responses



11. Ali je na zavarovanih območjih uporaba slovenskih avtohtonih pasem po vašem mnenju bolj primerna od uporabe drugih pasem domačih živali:

27 responses



> 60 % respondents is willing to collaborate in preparation and design of the rules for ark park

> 60 % respondents is interested to get the status for ark park

SELECTED ACTIVITIES (8)

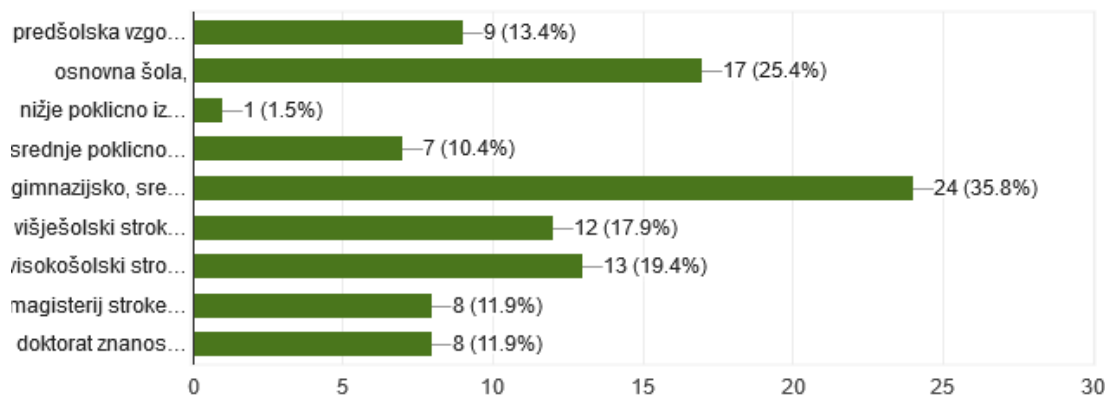
- **Draft of ark farm/centre/park portal**
- **Collaboration with educational organizations - kindergartens, primary and secondary schools, secondary schools and higher education**
- **AnGR conservation and their presence in the educational process at different levels**



How is AnGR conservation included in the educational process

1. Označite stopnjo izobraževanja pri kateri sodelujete (možno je več odgovorov):

67 responses



Included content in the educational process:

76 % biodiversity

64 % local breeds

40 % biodiversity conservation

40 % conservation of local breeds

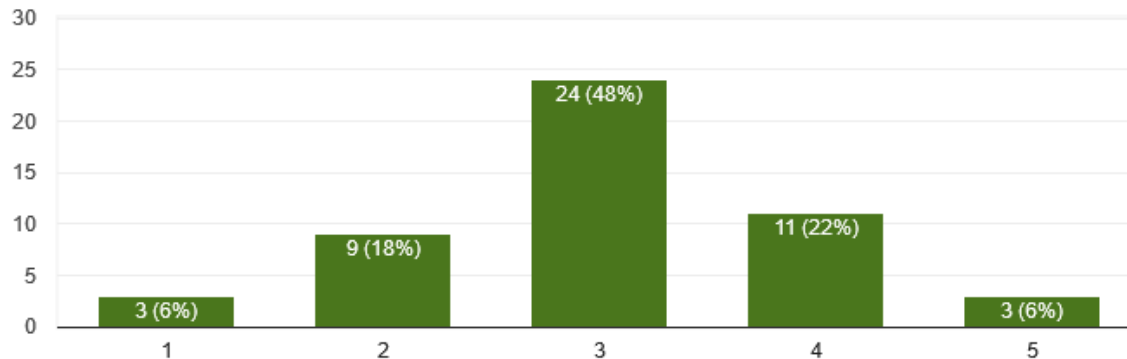




AnGR conservation in the educational process

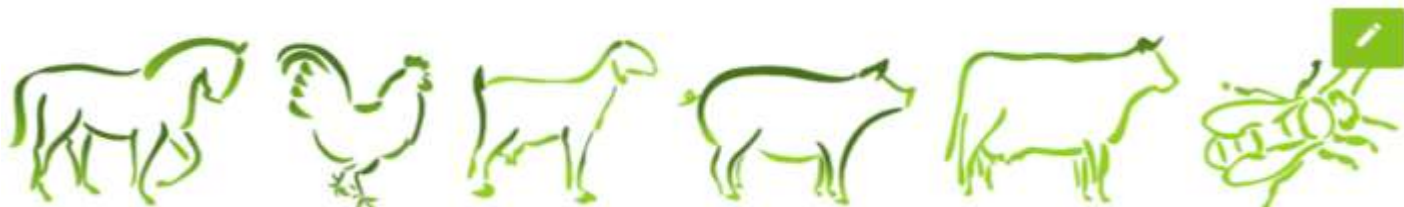
9. Kakšna je dostopnost do virov in informacij za potrebe priprave učnih gradiv / podajanja vsebin s področja sl...e izkušnje (izberite eno od možnosti):

50 responses



65% of respondents are ready to consult Public service in the further preparation of educational materials

40% of respondents (especially from agriculture and biotechnology) are willing to participate in the preparation and review of the educational guidelines.





AWARENESS RAISING



Slovenska Ark mreža





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**THANK YOU FOR YOUR
ATTENTION**