

STRATEGIC PRIORITY AREA 1: CHARACTERIZATION, INVENTORY AND MONITORING OF TRENDS AND ASSOCIATED RISKS

Actions undertaken during the past year 2007:

Better understanding of status, trends and risks were realized with running the "Register of breeds with zootechnical assessment". Register consisted the following information about each breed by species:

- basic data (population size, location, risk status, phenotypic characteristics, geographical distribution within the country);
- in situ and ex situ conservation (number of pure breed animals);
- whereas data about breed is included in international database;
- breeding program (breeding goal, herdbook, production characteristics, biological characteristics, breeding value),
- assessing genetic value of the breed;
- zootechnical assessment (Table 1) and actions (short-term and long-term actions).

The data from the register helped us to monitor trends in population numbers and therefore to took all necessary steps for determine conservation activities. Once per year risk status of the breed was assesed. For each breed report was completed regarding breeding environment and assesment, number of animals, short introduction about breed status, breeding and selection methods and their application.

First steps are done for monitoring the breeds of ass. Breed standard that comprises the description of appearance/exterior of a breed, body measurements, morphological and biological characteristics, and data on the principal economic traits for two breeds of sheep and goat were prepared. History of breed development was studied. Literature about the breed development was presented for few breeds. Within EU project EFABIS first steps are done to accomplished information sistem.

Table 1: Zootechnical assesment for the breed group in Slovenian agriculture
(Source: Register of breeds with a zootechnical assessment)

| Breed group | No. of breeds | Breeding programme | Basic zootechnical characterisation | Gene bank* | Tissue deposit bank | Breeding value | Zootechnical assessment and measures |
|---------------|---------------|--------------------|-------------------------------------|---------------|---------------------|----------------|--------------------------------------|
| Autochthonous | 13 | 12 (92,3%) | 13 (100%) | 9 | 10 (76,9)% | 5 (38,4%) | 13 (100%) |
| Traditional | 16 | 16 (100%) | 16 (100%) | - | 6 (37,5%) | 10 (62,5%) | 16 (100%) |
| Foreign | 20 | 14 (70,0%) | 20 (100%) | 2 | 10 (50%) | 6 (30%) | 19 (95%) |
| Total | 49 | 42 (85,7%) | 49 (100%) | 11 (22,4%) | 26 (53%) | 21 (42,5%) | 46 (93,6%) |

*number of female breeding animals *in situ*

Actions planned for the next year 2008

Register containing all the data will be managed for the next year and few new species will be included. Register with included data is basic for obtain all necessary steps in conservation programme and plans, and most important for the degree of breed endangerment. For each breed report will be completed regarding breeding environment and assesment, number of animals, short introduction about breed status, breeding and selection methods and their application. Ass which were monitored in previous year will be identified and breeding program will be proposed. Socioeconomic environment for the farms with ass and their beneficiary will be establish. Breed standard that comprises the description of appearance/exterior of a breed, body measurements, morphological and biological characteristics, and data on the principal economic traits for three breeds of sheep and two breeds of goat and for cattle, chicken and few hoofed breeds. History of breed development will be studied and written for Partridge Styrian Hen, Krsko Polje Pig, Bela Krajina Pramenka, Lipizzian horse and Cika cattle. Information system will be continously updated and new breed will be added.

STRATEGIC PRIORITY AREA 2: SUSTAINABLE USE AND DEVELOPMENT

Actions undertaken during the past year 2007

Social and production condititions for conservation of biodiversity in Slovenian livestock in situ were studied in case of small ruminants (traditional technology and knowledge).

Organic production is drawing increasing attention because of public concerns about food safety, animal welfare and the environmental impacts of intensive livestock systems. The organic farming is rapidly becoming a significant player also in the Slovenian agricultural production scene especially by breeders keeping autochthonous breeds of small ruminants.

The objective of our reserch was to determine influences of organic and conventional farming system in Slovenian autochthonous breeds - Istrian pramenka and Bovec sheep. Using a data from Slovenian selection program, milk yield was analysed, considering avarage milk yield per recorded ewe, content of fat, protein, lactose and lactation lenght. Furthermore, reproductive traits such as litter size, birth and weaning mass were also investigated. The study showed that different types of farming systems have different effects on the production traits. Organic dairy farms and conventional dairy farms were not matched in size, location, and agricultural zone therefore we could not studied possible differneces of breeding-size on results.

Actions planned for the next year 2008

Production system for the cattle (cika cattle) and sheep will be assesed concerning value, knowledge and importance. Research will be carried out with questionnaire directly on farm. Result of research will illustrate the social, economic and culural characteristic of keeping animals and traditional knowledge. Local production systems and trends will be described. Traditional technologies and protection of technology for traditional cheese will be describe and protocol will be tested for popoulation dynamic of microbes variety. Indicators of cattle diversity will be illustrate showing of distribution of specific breed on the teritory of all country. Market research will be carry out for localy typical products and protected cheese made from autohtonous and tradicional breeds of cattle and sheep. Inventory of all localy typical products will be done regarding their characteristics (type of products, species and breed, region, climate, technology, market, knowledge, speciality, market value, market availability).

STRATEGIC PRIORITY AREA 3: CONSERVATION

Actions undertaken during the past year 2007

New equipment was proposed for the conservation of tissue and sperm in the first phase of the project. Next stage will be conservation of primary cell culture and egg cell and in the third phase the conservation of embryo. For the most endangered breeds the strategy of cells culture for conservation and cryopreservation was prepared. Total zootechnical assessment was done for all breeds of cattle and selection of bulls for which semen will be stored. For every breed of cattle number of preserved semen was defined. Furthermore total zootechnical assessment was done for all other breeds, where the necessary extent of genetic reserves was prepared and from which animals. Strategies for semen storage for autochthonous breed of ram was prepared and long-term programme for conserving of semen for the sheep.

Actions planned for the next year 2008

Gene bank (ex situ conservation) – is made from a depository of semen, oocytes, embryos, somatic cells or DNA (deoxyribonucleic acid). Collecting of blood sample, skin and hair of all animals is included in the programme. Main attention will be on collecting samples for autochthonous breed of Cika cattle and dog – Karst shepherd. The two primary cell culture of goat milk gland will be characterized and prepared for freezing. The semen collection for the Cika cattle will start and semen of coack will be tested regarding freezing. Genetic reserves for the bulls has to be stored according to the national law. Total zootechnical assessment will be done for all breeds of cattle and selection of bulls for which semen will be stored. For every breed of cattle number of preserved semen will be defined. Procedure of taking semen of three autochthonous breed of pigs will be tested and furthermore the freezing of semen. Sheep, rabbit and chicken semen will also be included in the gene bank.

STRATEGIC PRIORITY AREA 4: POLICIES, INSTITUTIONS AND CAPACITY BUILDING

Actions undertaken during the past year 2007

Our international cooperation on the management of AnGR in EU was focused in the following research projects:

- Heritage Sheep (040 AGRI GEN RES 870/04); started on April 2007. Project addresses Heritage Sheep Breeds across the European Community with the objective to conserve their genetic resources for the diversification of production in livestock agriculture and the sustainability of medium to low-input farming systems.
- Project EFABISNet (020 AGRI GEN RES 870/04); started on January 2007. The project will support establishment of national databases with direct links to the global database contained in DAD-IS
- Project: Current Status of the Brachycerous Cattle Populations in the South Eastern European Countries and Strategies for their Sustainable Conservation. The basic purpose of the project is give of possibility to countries to put into force of their production systems by cattle of the same origin. The second objective is exchange information and knowledge about brachycerous cattle populations between countries.

All year the web site was updated with different data about current work. The new plan for web design was prepared. Slovenia took an active part in cooperation with the following international organizations like: FAO, ERFP, EAAP, DAGENE, SAVE regarding exchange of information's, seminars, and technical conferences and other. Education and training in the field of conservation of farm animal genetic resources was performed at the at agricultural secondary schools, institutions of higher education, colleges, undergraduate or postgraduate studies at the departments of the Biotechnical Faculty - either as a special course or directly as a part of other subjects within the zootechnical curriculum. Analysis of course and the themes for the seminar work will be done. In order to promote awareness and early warning of the public, yearly data on significance and the state of conservation farm animal genetic resources shall be published on the web site, in the ERFP Newsletter, various articles published in the different media, seminar on Biodiversity in Slovenian agriculture in 2007, European biodiversity day, different exhibitions of animals.

Actions planned for the next year 2008

Various projects with autochthonous breeds are taking place in this year and they are good opportunity for the capacity building with various institutions and people. Heritage sheep – the main goal is to conserve autochthonous breed of sheep in the EU in therefore conserve the variability of agriculture. EU project named EFABIS net will restore the new information sistem. Goal of the information sistem is exchnage of information about breed of animals important for the agriculture biodiversity at the international level. ERFP project called Busha network will continued from the last year and report about breed will be done as a brochure. New project in duration of two years called "Current Status of the sheep breeds in Pramenka type in the Southeaster Europe Countries and Strategies for their Sustainable Conservation" will run in cooperation with eleven countries. Information system will be set up for the Karst shepherd. All year web site had to be add-on different data. In addition web site is old and had to be updated with the new one based on new design techniques for web design. Slovenia will take an active part in cooperation with the following international organizations like: FAO, ERFP, EAAP, DAGENE, SAVE regarding exchange of information's, seminars, and technical conferences and other. Education and training in the field of conservation of farm animal genetic resources is performed at the at agricultural secondary schools, institutions of higher education, colleges, undergraduate or postgraduate studies at the departments of the Biotechnical Faculty - either as a special course or directly as a part of other subjects within the zootechnical curriculum. Analysis

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