

THE ACTUAL SITUATION OF RARE BREEDS PRESERVATION IN CROATIA

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Summary

The cattle production in Croatia has been reduced to a particularly small number of breeds of the main cattle species. Neglected and endangered are the autochthonous breeds (e.g. the Istrian and Slavonian Podolac, the pig from Turo-polje and the black Slavonian, the Istrian Pramenka and others) and favoured only modern, highly productive ones. Since 1987 programmes for protecting the endangered breeds have been made. Collaboration with the FAO mission and the EAAP and the DAGENE associations is topical. An integral state programme is required for protection and financial support.

Introduction

The geographical position and economic and political changes in the history of Croatia created a specific structure in livestock production. Migrations of peoples from the east and political orientation to western systems led to significant migrations of tamed primitive breeds and types from the east and modern breeds from the west, to Croatia, from the Adriatic to the rivers Drava and Danube. Thus breeding the Busha, the Podolian, the Balkan horse and goat, the Pramenka, the pig from Turopolje and the black Slavonian pig was established in Croatia, with the Lippizaner, the Simmental and other modern breeds in recent time.

Although the Croatia systematic livestock breeding has a hundred years old tradition (the first livestock association was founded in 1906. and the first herd books were established in 1892), today it is very modest in variety.

The animal variety was drastically reduced by the socialist system of agriculture, orientated towards a small number of production varieties and breeds (Caput, 1994). Today's poor livestock production in Croatia is reflected primarily in a relatively small number of breeds of the main varieties. Thus e.g. cattle breeding rests on three significant breeds, sheep breeding on three to four ones and horse breeding on two.

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The gene valuables in farm animals

In livestock production in Croatia the main branches are cattle and pig farming followed by horse, sheep, goat and poultry farming (Caput, 1994).

In cattle breeding: there are three active breeds: the Simmental, the Brown Swiss and the Holstein-Friesian. The three particularly endangered breeds or strains are the Istrian cattle (50-60 females), the Slavonian-Syrmian Podolian (20-30 females) and to a smaller degree the Grey Dalmatian cattle (300-400 cows). The Lika Buša has been destroyed to such an extent that we can say it has become extinct.

In horse breeding: there are two active breeds: the Croatian cold-blooded and the Lippizaner horse. The autochthonous cold-blooded horse from Međimurje is becoming extinct (there are a few horses of type) and the autochthonous horse from Posavlje is seriously endangered (there are a few tens of mares).

Pig breeding: includes a relatively large number of good breeds and hybrids. The Šiška and the Bagun from Podravina have disappeared and greatly endangered are the autochthonous breeds from Turopolje (30-40 sows) and the Black Slavonian Pfeiffer pig (20-30 sows).

Sheep breeding: includes modern European breeds in the continental areas the Pramenka in the mountains and the improved Pramenka known as the "sheep from Primorje" in the coastal area. On the coastal belt from Istria to Dubrovnik a few strains of improved sheep have been created: the Istrian, the Cres, the Pag, the Zlarin and the Ruda from Dubrovnik region. The autochthonous Ruda and the Istrian Pramenka should be the subject of urgent protection. The attempt to revitalise the Zlarin sheep is problematical and the Pag and Cres sheep are actively used in farming.

In poultry farming: in intensive production imported lines and hybrids are used but in the country they are generally the domestic hen and the domestic turkey. The best domestic breeding achievements are the recognised autochthonous traits the hen "Hrvatica" and the Zgorje turkey. These breeds should be included in the national programmes of protection and exploitation.

Analysis of the current state in the population (number, owners, endangerment and others) has been made for the Istrian cattle, the Slavonian podolian, the Pag sheep, the Turopolje pig and partly the Istrian pramenka and the cold-blooded horse from Međimurje, the Ruda-sheep, the Black Slavonian pig and the hen Hrvatica.

The project Identification Missions, defined within the FAO (Meissen, 1994) means a great help in making a systematic and complete inventory of genetic resources and rare breeds in Croatia.

"The Management of global animal genetic resources" (FAO paper No. 104, 1992. and by Hammond (1994), on the 4th Round table of Livestock Production in Central and Eastern Europe in Zagreb) and by Bodo (1994) on Third International DAGENE-Symposium on Gene Conservation, Zagreb with topic "Discussion on the obligatory population size of the preserved domestic animal populations" are great help in our programme.

The autochthonous breeds have been promoted in the world (Global data bank in Hannover, (Simon, Buckeneuer, 1993), FAO/UNEP World watch list, FAO Animal report, DAGENE-symposias and workshops in Krems, Budapest, Üllö and

Coventry), as well as in our country (HRT "Znanstveno ozračje", 30 Sep, 1993, a series of articles in the periodicals *Stočarstvo*, *Agronomski glasnik* and others and at meeting of the HAD, HED and others.

We have succeeded in securing of permanent financial support several indigenous breeds by the law on premiums.

In the period from 1991 to 1994 in investigating genetic polymorphisms cca 1500 analyses on the Istrian and Slavonian podolian cattle and the Posavina horse were carried out. Some of the results have been published in (the above mentioned) periodicals and a considerable part is the subject of a doctoral dissertations entitled "Relationship of genetic polymorphisms of blood and milk protein with the characteristics of the Croatian Simmental" (Posavi, 1994).

There have been no systematic investigations of protein polymorphism of domestic animals in our country so far. Therefore one of the primary tasks in the project is to study the current methods of work in this field.

In establishing "Gene collections" the following has been done: the nucleus of the Istrian cattle has been established as well as the Slavonian-Syrmian podolian, and the pig from Turopolje. The establishment of collections primarily determined depends on available funds.

REFERENCES

1. Bodo, I., (1994): Discussion of the obligatory population size of the preserved domestic animal populations "Stočarstvo" 48:279- 286, Zagreb.
2. Caput, P., (1994): Genetic variability as a limiting factor in improvement of livestock breeding in Croatia. Croatian Academy of Sciences and Arts (Proceedings, p. 37-38)
3. Caput, P., (1994): Activity in the field of gene valuables conservation of genetic resources in farm animals in Croatia. Third DAGENE-symposium, Zgreb, "Stočarstvo" 48:287-290.
4. Caput, P., (1994): Održavanje i zaštita genetskih resursa domaćih životinja u Hrvatskoj, "Stočarstvo", Vol. 48:257-264.
5. Hammond, K., (1994): The state of Global animal genetic resources, and a new FAO programme of management. 4th round table of livestock production in Central and Eastern Europe Zagreb. "Stočarstvo" 48:175-182 and 215-218.
6. Posavi, M., (1994): Relationship of genetic polymorphisms of blood and milk protein with characteristics of the Croatian Simmental. Disertation, University of Zagreb.
7. Simon, D.L. Buckeneuer, D., (1993): Genetic diversity of European livestock breeds, EAAP Pub. No 66.
8. xxx World Watch List for Domestic Animal Diversity. 1st edition, FAO/UNEP, Rome, 1993.