



Conservation of animal genetic resources in the Georgian Caucasus

Georgia belongs to the “fertile sickle moon”, where a large portion of all modern domestic animals and plants were bred and cultivated. This region served as the original distribution ground to almost every part of the world, adapting to the local circumstances and evolved into numerous varieties and breeds.

What is not known at all is the fact that in the periphery of the prime breeding regions untold numbers of old breeds exist. This is mostly the case for the “Svanuri-pig” and the “Khevsuruli-cattle” in higher altitude communities (> 2000 m asl.) that straddle the sealed border between Georgian and Russia. The numbers of the cattle in dangerously low numbers. These animals are not only the unique genetic variety but also the integrated economic subsistence for the high altitude communities in these harsh regions. The conservation of the breed is not only important per se but also for the survival for these mountain communities.



Khevsuruli cattle

Georgia was until 1971 a part of the former soviet union. During this time, a consistent exchange of breeding animals within the different republics of the USSR took place, particularly performance breeds from Russia. In those days the mountain cattle were considered inferior and crossbred with high-performance breeds, in order to improve the productivity. Of the originally six different Georgian mountain cattle breeds, all but one disappeared permanently. Only the khevsuruli cattle survived because of the remoteness of the region, it is the only one of the original heritage breeds, that has survived in small numbers. After the disintegration of the former soviet union and the political turmoil in 1991 the crossbreeding with westerly breeds was continued. Bulls and sperm from all of Europe and overseas are readily available in almost all of the mountain valleys. During an expedition in June of 2011, organized by SAVE Foundation with breeding professor Tortladze from the

Agricultural University in Tiflis and two members of the Georgian national association for animal production (GNAAP) revealed that only in two villages south of the Datvis-Djavarisghele mountain pass a total of 12 families of true Khevsuruli cattle exist. In three villages a few purebred older cows in mixed herds still exist. It appears that in a few years the last breed of Khevsuruli cattle will be extinct.



The advantage of the type *Bos primigenius* breed of Khevsuruli cattle is the agility in difficult terrain, they can climb like goats in the mountains. Additionally, they are robust, undemanding and sturdy – the daily milk performance is 6-8 litre per day is coming out of nowhere. These are the qualities, that are lost in the crossbreeding but will become significant in the future

Svanuri Pigs

Also not less dramatic is the situation of the svanuri pigs in the isolated mountain region. Svaneti, the highest valley in central Caucasus is too difficult to access from the outside, that this valley never was part of the osman empire. Even today, the each family in each village has its own tower for defensive purposes, mostly because the warring factions of the valley were continuously a threat to each other. This is also the reason why the soviet union never really had an influence in this region. Today, Svaneti is being discovered by the tourist industry.



Ushguli (2'200 m asl.) with mountain Shkhra (5'200 m asl.)

The capital Mestia has a small airport and sports a mountain golf course, from the Black Sea is a highway under construction. The development of the touristic infrastructure is moving forward, even in a rather soft "agrotouristic" pace.

In the meantime, disease for humans and animals alike are spreading in this isolated region in the height of over 2,000 m, which were not known until recently. Animal epidemic diseases have destroyed a large amount of the farm animals, first the chickens, then the pigs and now the cattle. Additionally, most of the Svanuri pigs disappeared – either because of diseases or because of the eradication measures by the authorities as a means to contain the epidemic. During the recent search mission only a handful of animals were found in villages high up in the mountains without paved roads.

The Svanuri pig is difficult to describe as it is not really pig like about the animal. The breed is slender with an erect mane, a long tail and a really long snout. The pig resembles something of an ant eating bear. The pig is very fertile and has adapted to the sparse mountain meadows and the long hard winter of 9 month in duration.



The conservation project

Target: With the rebuilding project over the next three years not only the threatened breeds will be saved but also a range of perfectly adapted domesticated animals will be recognized in their economic value. This is a win-win situation for everyone. This important heritage will be saved, the mountain community secures a sustainable income with the sale of the products and the erosion of villages will be halted. The pastures on the mountain slides will not overgrow and the ecological and economic value of the landscape will be established.

Method: The last remaining animals of good breeding quality of both groups need to be documented and identified as soon as possible. A new breeding scheme will be needed, with special caution towards avoiding inbreeding. A breed register will make sure, that a lot of different independent breeding lines will be considered. Access to expert breeding software for the breeding in small populations will be introduced. This software needs to be translated into Georgian, in order to have use on the ground. With the selected bull- and boar-management tool an improvement of the pure breed will be achieved.

The Conservation is planned in-situ. Where the crossbred „foreign“ bulls and or boars are roaming on the pasture, a secure new pasture needs to be staked out in order to avoid further cross breeding. This nucleus stock will become the backup of the breeding program. The marketing and the added value of the breed is going to give the farmer an additional benefit in order to bring them back towards their heritage breeds.

Partners:

- Biological Farming Association **ELKANA** executing the project (engaged already with keeping traditional plant varieties with ist many members).
- Georgian National Association for Animal Production (**GNAAP**) for the scientific monitoring and the connection to the University and the Government.
- **SAVE Foundation** (with its experience in such projects) coaching the project.