

The book *Sakha Ynaga – Cattle of the Yakuts*, tells the story of the survival of the Yakutian cattle in the land of permafrost

Siberia's last remaining indigenous breed of domestic cattle, the *Sakha Ynaga*, or Yakutian cattle, inhabit the lands surrounding the Lena River in Russia's remote Sakha Republic (Yakutia). During the soviet era, the Yakutian cattle were driven to virtual extinction, but thanks to dogged preservation efforts this remarkable, hardy breed has endured to the present day.

A multidisciplinary team of researchers from MTT Agrifood Research Finland and the University of Helsinki's Aleksanteri Institute explored the genetic uniqueness of the Yakutian cattle and the effect of social and cultural factors on the survival of the breed through periods of major upheaval in Russia's history. The findings of this insightful study have now been published in the book *Sakha Ynaga – Cattle of the Yakuts*. The book champions the call for preservation of biodiversity, at a time when countless indigenous breeds around the world are facing the brink of extinction.

The genetic uniqueness of Yakutian cattle

The people of Yakutia wandered north with their cattle and settled in their present homeland on the rugged permafrosted plains of Siberia one thousand years ago. Today, Yakutian cattle represent the last remnants of the Siberian Turano-Mongolian breed of cattle. The research team's DNA-marker analyses reveal that the breed originates from cattle domesticated some 10,000 years ago in the Middle East, yet the breed is genetically differentiated from other Eurasian cattle breeds.

Siberia's harsh environment and ancient methods of livestock raising have adapted the Yakutian cattle to its extreme conditions. The environment has also dictated the annual rhythm of life and traditions of its people. In the book, village inhabitants talk about their life amid the region's vast expanses and fierce climate, with its long cold winters and brief summers, during which the herds must gather the strength to survive the next winter.

Socio-diversity as a guardian of biodiversity

Sakha Ynaga tells how socialism, as well as modernization, which is today reaching even the remotest areas, have left their mark on ancient practices and traditions. The rural people of northern Siberia have traditionally relied on their cattle during times of social upheaval, such as the Russian revolution and the soviet collapse. During the soviet era, it was the actions and defiance of traditional cattle breeders and individual scientists which saved the Yakutian cattle from otherwise certain loss through crossbreeding.

The 1,200 remaining Yakutian cattle are today found in the three northern Siberian villages of Kustur, Sakkyryr and Dzhargalakh, as well as in five separate conservation herds near the capital Yakutsk. As Yakutian society has transformed, so, too, has the way in which people carry out cattle raising changed and diversified, with a range of different organizational units for cattle production established in villages in the region. The biggest indigenous herd is held on the former Lenin Sovkhoz state farm, the present-day experimental farm of the Agricultural Research Institute of Yakutia, but it is also common for ordinary people such as teachers, bakers and reindeer herders to keep a few cows for their own domestic use, and the cattle are also bred by numerous private farmers and co-operatives. The research shows how the conservation and preservation of genetic resources is supported by such diverse social structures.

Cattle, the mainstay of Siberian village life

In their fieldwork, the researchers shed light on the importance of Yakutian cattle to cattle owners, villagers, researchers and local authorities in the region, and to the future of the region's villages. The study includes a media research, which examines how the cattle are portrayed in the Yakutian press and gives an insight into the future threats and opportunities facing the Yakutian cattle.

Views among those involved with the cattle were shown to be unanimous regarding the need to preserve the breed, but the reasons for holding this common view varied. The local inhabitants and experts saw the cattle as vital to securing the self-sufficiency and vitality of their local village communities. Their main goal was to develop economically sustainable cattle production. The view among the experts and authorities in the republic's capital Yakutsk were, on the other hand, primarily interested in preserving the cattle's gene pool for the development of agriculture throughout the wider republic. The region's press media in particular, but also the Yakutsk authorities, emphasised the importance of the cattle as part of the cultural heritage of Yakutia. This shared desire to preserve the Yakutian cattle has led to the Sakha Republic's own, and possibly the world's very first, domestic breed conservation law.

During its four field research expeditions to Yakutia, the research team gathered internationally important findings on the many genetic and sociocultural dimensions involved in animal genetic resource conservation. The research project was part of the Russia in Flux research programme of the Academy of Finland. The genetic analyses were also part financed by the Finnish Ministry of Agriculture and Forestry. *Sakha Ynaga*, superbly illustrated with photographs of the Yakutian cattle, is published by the Finnish Academy of Science and Letters.

The book can be ordered from **Bookstore Tiedekirja** at: www.tiedekirja.fi

Sakha Ynaga. Cattle of the Yakuts
Eds. Leo Granberg, Katriina Soini & Juha Kantanen
Finnish Academy of Science and Letters
Annales Academiae Scientiarum Fennicae. Humaniora 355
Helsinki 2009, 218 pp.
ISBN 978-951-41-1032-0 (Soft)
ISSN 1239-6982

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