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Looking to Lapland's past for a sustainable food source

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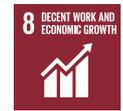
Shaping the future of the Arctic

Looking to Lapland's past for a sustainable food source

Rami Hiltunen feeds his Lappish cow under the northern lights. Well adapted to Arctic conditions, Lappish cows can cope with cold and snow.



Photo: Marko Junttila ©Lappari



The Lappish cow—formally known as the northern Finncattle—is an endangered heritage breed in northern Finland. It was once the only cattle breed in Finnish Lapland, and is particularly well adapted to the region’s cold climate and harsh conditions. By the 1960s and 1970s, it had almost disappeared entirely. But as PÄIVI SOPPELA explains, thanks to a group of devoted farmers—as well as national gene programs, a living gene bank and increased awareness of the value of these unique cows—the Lappish cow is once again grazing the fields and forests of Lapland.

ACCORDING TO Finnish folklore, when the first people came to Lapland, they were greeted by a Lappish cow. As the story goes, this beautiful, small, white cow appeared from a fountain in the forest, provided the new arrivals with a basket full of warm, nourishing milk and kept them fed thereafter.

But times change, and a day came when people in the region started to give up their Lappish cows. After the Second World War, farmers brought in new breeds that produced greater volumes of milk to meet the demand for more intensive agricultural production. By the 1970s, fewer than 30 reproducing Lappish cows remained.

A revival of the breed began in the 1980s. The Lappish cow is still endangered today, but its numbers have nearly doubled over the past 10 years. There are now some 850 purebred, reproducing female Lappish cows in Finland; 340 of them are farmed in northern Finland. Their milk is once again appreciated for

its taste, fat content and healthy omega-3 fatty acids. Its high casein content makes it perfect for products such as cheese, yoghurt and sour milk.

The question is: How can Finland make even better use of this heritage breed? To get to the bottom of this, I teamed up with colleagues to lead a one-year joint project at the Arctic Centre and Natural Resources Institute (NRI) Finland. Anne Tuomivaara (project coordinator), Mervi Honkatukia (senior researcher at NRI) and I mapped the location of the cows and their owners to gauge interest in introducing milk and other products to new markets.

We visited milk producers at their farms, surveyed their views and organized meetings with refiners. The aim was to support local producers and increase recognition of the Lappish cow as a valuable local breed. We found clear interest among farmers in increasing the number of Lappish cows, producing more milk and bringing both traditional and novelty

REVIVING THE LAPPISH COW MAKES ECONOMIC SENSE BECAUSE IT HELPS STRUGGLING LAPPISH FARMS TO DIVERSIFY. BUT IT ALSO MAKES SUSTAINABILITY SENSE. THE BREED IS HEALTHY, FERTILE, LONG-LIVING AND WELL ADAPTED TO THE HARSH ARCTIC CONDITIONS.

■ During its heyday, the Lappish cow was an important food source, mostly as milk for families. The breed may not return to its pre-World War Two levels, but if its renaissance succeeds, its new role will be to provide economic opportunities for northern farmers by offering heritage, novelty or specialty milk or meat products, as well as services that may be of interest to both tourists and locals, such as farm visits.



Photo: Marko Junttila ©Lappari

► dairy products to the market.

But challenges remain: the total number of the cows is still small. Farms are scattered across the region and separated by large distances, making milk collection difficult. As well, the average Lappish cow produces less milk than more common breeds—for example, about a third less than domestic Ayrshires. Local dairies are a potential solution—farmers near each other could collaborate to provide specialty milk products—but for now, such dairies are rare.

PÄIVI SOPPELA

is a senior scientist at the Arctic Centre, University of Lapland. Her current research focuses on the adaptation of reindeer and local breeds of cattle and horse to the Arctic environment.



The farmers also need support to work together to increase the number of cows, such as training to capitalize on business opportunities offered by the breed and its milk.

Our project also tested the

Lappish cow's farm-made milk products among consumers, who not only loved the taste, but were interested in learning more about the cows themselves. This tells us that Lapland's "traditional" cow and its products may be an asset to the

region's tourism industry. Restaurants also want to offer the products.

Reviving the Lappish cow makes economic sense because it helps struggling Lappish farms to diversify. But it also makes sustainability sense. The breed is healthy, fertile, long-living and well adapted to the harsh Arctic conditions. The farmers who took part in the project praised the cow's modest feed intake and the fact that it can sustain itself by grazing in forests, mountains and even mires during the summer.

Farmers' traditional knowledge has been vital in breeding these cows over time. The breed has developed traits that have made it sustainable, inventive and well suited to Lapland's Arctic environment. This knowledge is important and should be recognized in any management policies developed for this breed. We have also begun a parallel project, known as the Arctic Ark, to study the biological and socio-cultural adaptation of the Lappish cow to the northern environment.

Although the future of the Lappish cow is still uncertain, there are signs the breed can make a comeback if we act quickly and give the young farmers of Lapland the support they need. There may be another chapter to this breed's story after all. ○

Innovation and best practices in Arctic agriculture

10th Circumpolar Agriculture Conference

■ The Circumpolar Agricultural Association recently announced its 10th Circumpolar Agriculture Conference. Scheduled to take place March 13 to 15, 2019 at the University of Lapland's Arctic Centre in Rovaniemi, Finland, the conference is aimed at those involved in northern agriculture, including researchers, practitioners, administrators, managers, policy-makers and students.

The conference will focus on new thinking in local agriculture, food production and rural development in northern areas, highlighting the UN Sustainable Development Goals. Kicking off with a pre-conference trip to a reindeer farm and concluding with an "Arctic bio-economy" outing in northeast Finland, the conference will examine best practices and solutions in the use of animal and plant resources, local breeds, reindeer herding, small-scale farming and non-timber forest products.

Registration opens online in May 2018. For more information, visit www.uarctic.org/news/2018/2/10th-circumpolar-agriculture-conference/ or contact Päivi Soppela, chair, Circumpolar Agriculture Association: paivi.soppela@ulapland.fi or tel.: +358 400 138 805.

Ulrik "Maki" Lyberth harvesting seaweed near Sisimiut, Greenland.



Photo: Kurt Herlyk