Smėlyne farm
– using adaptive rotational grazing for the benefits of soil, animal, and human health

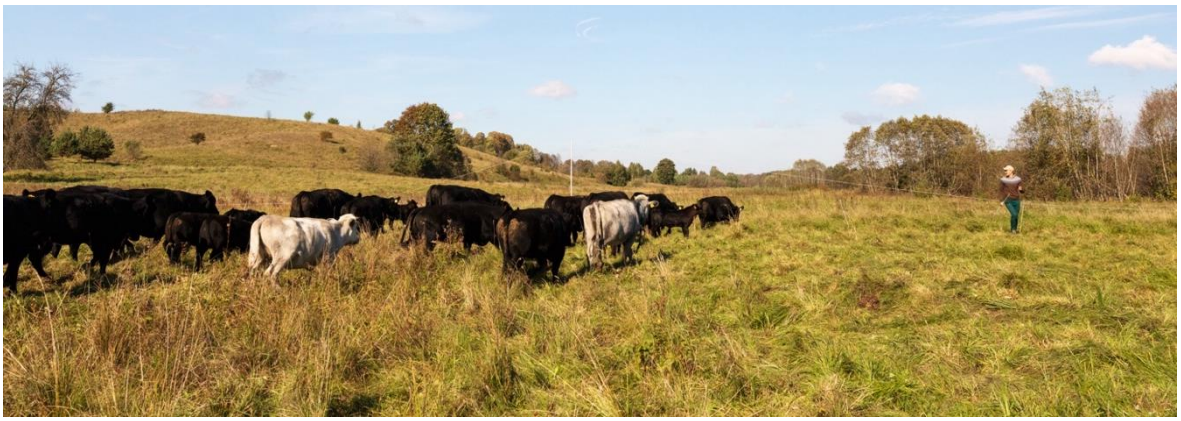

Photo: Farmer Laurynas herding the cattle. Credit: Žymantas Morkvėnas, Baltic Environmental Forum Lithuania.

Name	Justina and Laurynas Kaučikai, Smėlyne farm
Country	Lithuania
Biogeographical Region	Boreal
Region	Šiauliai municipality district
Landscape/ Eco system type / protected area	Grasslands and wetlands in a hilly landscape and a river valley. The whole area is part of Kurtuvėnai Regional Park, partly in the Natura 2000 network.
Size / Scope	60 ha
Type of farm	Regenerative cattle farming and husbandry
Agricultural Use	- 60 ha of pastures, partly wetlands - Mainly cattle farming - In total, 75 cattle, including calves, of which 30 are Angus cattle, 2 Dexter, 2 Lithuanian light grey cattle. The remaining are mixed breeds between the mentioned cattle
Best-practice / main idea	Adaptive rotational grazing, grassland recovery period and soil preservation practices
Involved Stakeholders/ Partners	- Sharing knowledge on soil preservation and farming, speaking at organised lectures, accepting farm visits - Cooperation with environmental protection organisation Baltic Environmental Forum Lithuania

Duration	The farm is active since 2018, but the establishment of the farm began in 2015
Measures addressing water and/or soil management	- No fertilisers, herbicides or pesticides are used on pastures to protect soil biodiversity, structure, and water quality - Adaptive rotational grazing prevents soil compaction - Bale grazing in winter helps to increase soil organic matter and water holding capacity in the soil
Measures addressing biodiversity, climate	- Preservation of healthy soil structure by maintaining perennial grasslands acts as a carbon sink. - A third of the land is left ungrazed every season to encourage full regeneration and habitat preservation for insect and bird species. - Only grass is used as feed, preventing use of additional agricultural land - Produce is shipped by farmers themselves to local clients.
Funding / Financing	- Previously received CAP payments (AECM) for permanent grassland and wetland maintenance. Continue to receive payments for permanent grassland and wetland maintenance by applying for eco-schemes.
Transferability	- The practices, experience, and guidance are shared with interested farmers in a one-on-one capacity via presentations in seminars and a short movie.
Tip / suggestion from the farmer	"If you want to implement rotational grazing, make sure you gradually decrease the grazing plot. This way the cattle get used to being in a smaller space and do not try to escape the area. Firstly, start by fencing off half of your plot and decrease until the desired area is reached." Laurynas Kaučikas, Smėlyne farm.
Role of Landcare Associations	The NGO Baltic Environmental Forum Lithuania collaborates with the farm to share their best practices with other interested farmers.
Further information	https://smelyneukis.lt, Video on you tube https://www.facebook.com/smelyneukis, https://www.instagram.com/smelyne_ukis/
Contact information	info@smelyneukis.lt

Photo: owners of the Smėlyne farm, Justina and Laurynas Kaučikai. Credit: Baltic Environmental Forum Lithuania.

"Our mission is to regenerate soil and human health and invite everyone to learn how to grow nutrition-filled food."

Laurynas and Justina Kaučikai

The story of the Smėlyne farm

"The story of the Smėlyne farm started in the spring of 2015, driven by our ambitious and diverse dreams of creating a thriving, self-sustained farm," explains farmer Laurynas Kaučikas. "It all began by building a small house and planting berry bushes, fruit trees, and seeds collected over the years," adds his wife, Justina.

Since the very beginning, we were constantly receiving sceptical opinions, especially from older generations. According to them, our land was infertile and unsuitable for growing crops. The surrounding fields had been intensively ploughed and sprayed for decades, leaving the soil degraded and unusable. "But, as we had studied the ways of natural farming, we believed that mulching was enough to restore fertility and create abundant harvests in our land," says Justina. Reality, however, was harsher – the crops only sprouted briefly, just to wither away later in the season.
The underlying problem was environmental degradation – the pond we had used for irrigation was polluted from pesticide and herbicide run-off coming from neighbouring

intensive farming fields. Once home to abundant fish populations, the pond had become lifeless, reflecting the damaged surrounding ecosystem.

But even after facing numerous challenges, we refused to give up. "Laurynas spent extensive hours researching soil regeneration and restoration.", reveals Justina. This work later transformed into the Lithuanian Facebook page "Insights on soil improvement" and the group "Growing healthy food". "Through studies, I came to realize that animals play a fundamental role in restoring soil ecosystems. As we had maintained a vegan diet, at first, it was hard to acknowledge the need for herbivores, but continuous research led us to reconsider our beliefs and led us to apply a regenerative farming model." Laurynas says.
The new perspective marked a turning point in the farm. Suddenly, we were raising chickens, ducks, goats, sheep, and cattle. With greater experience, broader knowledge, and a more grounded understanding of farming, we renewed our commitment to creating a mixed regenerative farm that could heal both – soil and the ecosystem. Even the farm's name reflects its mission – the word *Smėlyne* is derived from the Lithuanian word *Smėlis*, meaning *sand*. Through patience, effort and regenerative practices, the goal is to transform barren sandy soil into fertile, living land.

Adaptive rotational grazing – towards a better soil health

"We are using regenerative farming practices to preserve grassland soil, keep cattle healthy, and facilitate grassland regrowth," Laurynas and Justina explain. Each season a third of the 60-hectare land is excluded from grazing and remains untouched to encourage plant and soil structure regeneration. As a result, habitats are created to maintain local insect and animal biodiversity. Plant diversity is also of utmost importance to ensure a well-rounded diet for the cows. The diversity is not only maintained by rotational grazing but also by feeding cattle seeds of various selected plants to remediate the less diverse grasslands.

The remaining two-thirds of the land are used for rotational grazing. Each day the cattle are moved to an approximately 1-hectare plot and stay there until the grass is evenly grazed down. "Ensuring that most of the plant is consumed is essential to the health of the cattle," says Laurynas. As the top of plants, such as the blossom, is mostly made of carbohydrates, it does not provide a holistic amount of nutrients for the animal. Alternatively, if the cattle do not consume the bottom part of the plant, which contains more protein and fiber, the gut turns acidic and thus results in a detrimental effect on digestion. After moving the cattle to another 1-hectare plot, the previous plot is not used until the plants have completely regenerated, which usually takes around 20-40 days depending on the amount of rain. "I would advise other farmers to use the plot again when the plants start leaning. This provides the best quality feed," Laurynas explains.

Photo: Cattle moving to another paddock. Credit: Smėlyne farm.

As part of the land is wetlands, grazing management depends on the seasons. The cattle graze in wetlands mostly during spring-summer seasons, when the sedges and reeds are still young and the rainfall is not as plentiful. “It is nearly impossible for the specific cattle breeds to graze on wetlands during autumn“, explains Laurynas. During winter, cattle graze in the third of the land that was left untouched. When these pastures are grazed or the snow cover freezes and the cattle cannot dig through the ice cap, they are brought back to the winter pastures near our home. Here we continue to graze the cattle outside using the “bale grazing method”, where hay bales are strategically placed in pastures allowing the animals to consume them in place rather than in a centralized feeding area.“ It keeps the daily movement, cow manure is evenly spread on the land, and the leftovers from the bales increase the soil organic matter, which boosts new grass growth in the upcoming season significantly”, Laurynas concludes.

These practises have helped the farm revive their soil. Soil tests taken in the beginning and after 9 years in one of our plots show significant proof that we are on the right track: pH increased from 4.9 to 7.4, soil organic matter from 1.76% to 2.7%, Ca:Mg ratio from a disbalance of 8.01 to an ideal value (~3.2). This is critical for good soil health, structure, and water infiltration. Though the farmers buy hay bales for bale grazing in winter and do not produce their own forage due to the lack of machinery and economic reasons, they have never experienced the shortage of grass in the grazing season, even in the heavy drought seasons, keeping in mind that a third of the land is not used until late autumn and that the herd is increasing steadily every year. This proves that proper management of the herd, knowledge about soil health and practises like adaptive rotational grazing can help revive the landscape, soil health, and water infiltration, create habitats for biodiversity and provide healthy, nutritious, and short-chain-supplied food for the community.

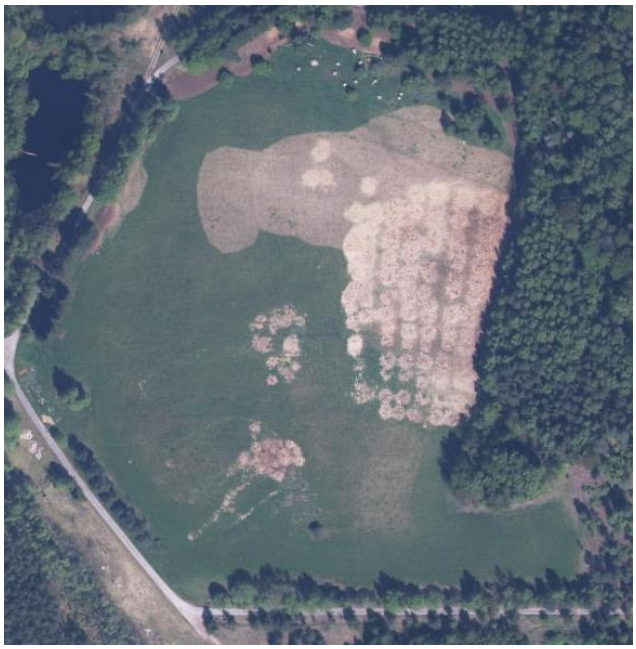

Photo: Paddock after winter bale grazing in early spring. Credit: geoportal.lt © Lietuvos Respublikos aplinkos ministerija, © VšĮ Statybos sektoriaus vystymo agentūra, 2026.

Overall, “Smėlyne” farm represents more than agricultural production alone. It reflects an ongoing journey of learning about health, nutrition, soil restoration and the relationship between humans, animals and nature.

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Water~Farmers

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