

WWF Baltic Sea Farmer of the Year Award 2019

WWF Baltic Ecoregion Programme



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THE RISING APPETITE FOR SUSTAINABLE FARMING

Our global food system is the single biggest threat to nature today. The way that it's currently operated is heavily reliant on natural resources and contributes to biodiversity loss, climate change, deforestation, erosion, and eutrophication. Sustainable farming is instrumental in driving the transformation that is needed. The global food system of the future needs to be more resilient, profitable, and beneficial for both people and nature – and support a collective shift towards a more sustainable diet.

The problem is clear: We all need to eat, but the way we produce and consume food is putting an impossible strain on the planet.

Earlier this year, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) launched a landmark Global Assessment Report presenting strong evidence that the state of nature is in steep decline. A prognosis that was reinforced by the Intergovernmental Panel on Climate Change (IPCC) in August when they released a special report on the relationship between climate change and land use. Altogether, these findings paint an alarming picture of species extinction, habitat loss, and the depletion of the ecosystem services that are crucial to our sustenance and economic development. Many environmental systems and processes have already been pushed beyond safe boundaries by food production alone. To reverse this trend, a transformation of the global food system is needed.

However, there is hope. Farmers hold the key to combatting the impacts of climate change and other environmental consequences on people and nature. When land is managed sustainably, farming can help combat environmental problems while ensuring food security well into the future. The global food production system must change to ensure this important shift and support farming measures that have a minimal impact on the environment.

While farmers are a vital part of the solution, they are not often in a position to influence a substantial part of the problem. Policies, such as the Common Agricultural Policy, are a major driver in reshaping the way our food system looks today. So too, are the choices made by consumers and the companies in the food production and retail sector – and this is where a collective movement towards a more sustainable production and diet becomes necessary.

As a global community, we can reduce our environmental footprint by increasing the proportion of plant-based products in our diets and – when we do eat meat—by eating less and better meat. Many people in middle-income and developed countries, as well as wealthier people in developing countries, consume more animal proteins than what is required for nutrition alone with adverse impacts on the planet. Not only would such dietary and production changes be better for human health, but they would also benefit the climate, natural habitats, biodiversity, and the environment.

> "WHEN LAND IS MANAGED SUSTAINABLY, FARMING CAN HELP COMBAT ENVIRONMENTAL PROBLEMS WHILE ENSURING FOOD SECURITY WELL INTO THE FUTURE".

WWF is currently working to grow both the supply and demand of more sustainably sourced food. In the Baltic region, the consumer meat guide is a helpful tool for guiding consumers, producers, and retailers towards more sustainable meat choices.

In general, there is a strong need to connect production and consumption of food. Interest in sustainably produced food is growing, yet there is still a lot of work to be done to increase widespread consumer awareness of how food is produced. Farmers who are willing to share their experiences and tell the stories behind the food that they produce are extremely valuable to this mission to increase the sustainability of the food system.

The farmers who are part of the Baltic Sea Farmer of the Year Award represent an exciting wave of trailblazers who are seeking and implementing solutions that mobilise change in our dietary habits and push us towards more sustainable meat and crop production. Thanks to them, we are one step closer to a more sustainable food system in the Baltic region and beyond.



AN AWARD FOR FARMERS WHO MAKE A DIFFERENCE

Many farmers are prepared to go the extra mile in order to help save the Baltic Sea. The winners of the Baltic Sea Farmer of the Year Award have all taken measures on their own initiative to reduce nutrient runoff. With this award, WWF aims to highlight how important this work is and showcase good examples across the region.

A lesson learned from the Baltic Sea Farmer of the Year Award initiative over the years is that cooperation with farmers with open minds for new research-based methods and techniques, is a winning concept.

The competition was first introduced in 2009 as a way to inspire farmers and decision makers in the agricultural sector, by highlighting concrete examples of the positive measures farmers are applying to reduce nutrient runoff around the Baltic Sea. Each of the 11 jury-selected winners serve as a role model, both to other farmers and the agricultural sector at large.

This year's winning farms are diverse in size and type, ranging from a small organic crop collective to a mid-sized biodynamic dairy farm and a large conventional agricultural cooperative. The socioeconomic and political situation for farming in the eleven Baltic countries varies widely and these farmers serve as great examples not only within their respective countries but for the region as a whole.

Each farmer has a unique story to tell about the methods they have tried and implemented to address nutrient runoff, as well as the benefits – both planned and unexpected – they have experienced as a result.

On the following pages you will have the chance to meet these farmers and learn more about the actions they are taking, and how they are collectively making a difference for the Baltic Sea – please read on and be inspired!

Previous winner update: Krzysztof Kowalski, Poland



In 2018, Krzysztof Kowalski received the Regional Farmer of the Year Award for the impressive range of measures implemented on his farm to protect nearby waters, preserve biodiversity, and yield better products. One year later, Krzysztof is still sharing knowledge on his way of farming, and continues his mission to protect the Baltic Sea.

"I'm surprised by the amount of attention I got from the agricultural media, and the support I received from various institutions", says Krzysztof. "Thanks to the media, I´m able to promote marine-friendly practices that combat eutrophication to a wider public".

Recently, Krzysztof received additional recognition when he won the Rural Inspiration Award for "Environment and Climate Action". Organised by the European Network for Rural Development, the award was handed to him by Phil Hogan, the former European Commissioner for Agriculture and Rural Development.

Today, Mr. Kowalski continues to implement measures that reduce nutrient runoff. He plans to plant an extra 200 trees along the river and in the midfields on his property. Additionally, Krzysztof has begun working with the Mazovian Agriculture Advisory Center in a honey bee protection program. He has 30 hives so far.

© Kajsa Juslin / WWF

BALTIC SEA FARMER OF THE YEAR AWARD 2019 WINNERS

The Baltic Sea catchment area is four times the size of the Baltic Sea itself, as you can see from the darker blue area on this map. It encompasses around 90 million people, and 14 countries including the inland countries of Belarus and Ukraine. Considering the great diversity of the terrain, natural resources, and socioeconomic conditions within the catchment, it's critical that we join together to take united and adapted action to protect the Baltic Sea from eutrophication.



DENMARK Kristian and Maria Lundgaard-Karlshøj



THIS DIVERSE AND MODERNIZED FARM IS BRIDGING THE GAP BETWEEN AGRICULTURAL BUSINESS AND NATURE CONSERVATION.







WWF BALTIC SEA FARMER OF THE YEAR AWARD

WWF

WINNER 2019

Photos: Jens Bach

The history of Ausumgaard farm can be traced back to the year 1473. But Kristian and Maria Lundgaard-Karlshøj's ties to the farm began in 1942 when it was purchased by Kristian's great-grandfather. They took over in 2007, and have been guided ever since by the vision of creating something future generations will be proud to inherit.

"The overall vision for Ausumgaard is to create something worthy of continuing, so that someone will have the desire to continue after us", says Kristian. "For this reason, it's essential for us to focus on sustainability in everything we do".

Kristian first learned about the problem of eutrophication through his work as a chair member of Denmark's Sektionen for Større Jordbrug ("Section for Greater Agriculture") during a discussion about farming with a longterm perspective. Loaded with inspiration, Kristian decided to take action on his own farm.

"WE NEED TO SHOW THAT WE ARE PART OF THE SOLUTION AND THAT WE ARE WILLING TO STEP INTO THE BIG WORK OF CONFRONTING THE PROBLEMS".

One of the key measures Kristian and Maria practice to prevent nutrient runoff is conducting farming activities at the right time – according to season and weather conditions – and with good machine capacity. They have also built small ponds on the farm to collect excess nutrient drainage. Additionally, all manure and plant waste are treated in an on-site biogas plant prior to field application to both ensure a higher nutrient uptake, as well as to produce fossil-free fuel. They started producing



their own biogas in 2017, a production which today is equivalent to the annual heat consumption of approximately 2,000 households per year.

"Implementing these solutions has greatly motivated us to do more", says Kristian. "It also aids our dialogue with our surroundings because we're able to explain to others what we are doing and how we are helping".

Kristian and Maria have various plans in the works for future improvements. In 2018, they received approval to build a one-hectare constructed wetland which is expected to reduce runoff to the local fjord by 744 kilograms of nitrogen per year. They also have plans to begin climate reporting on their farm.

Making the transition to organic crop production has been another key improvement, and Kristian and Maria have also plans of switching over to organic pig and free-range broiler production in the future.

"It's been a very big change in the practical day-to-day, but also in our mindsets. I think more of our neighbours are now considering their own steps, and maybe we have made it easier".

Initiatives at Ausumgaard also lean towards the experimental. As part of a research project with the Danish Technological Institute, the farm is now producing mealworms for human and animal consumption. This will partially replace field-grown protein, thereby improving the efficiency of their nutrient use in the fields.

"We need to show that we are part of the solution and that we are willing to step into the big work of confronting the



problems", says Kristian. "But, at the same time, we have to convince consumers that we have to do this together and that they have to buy products made in a sustainable way".

As this year's international winner of the Baltic Sea Farmer of the Year Award, Kristian and Maria prove that farmers are not only an important part of the solution, they can also lead the way.

"It is great to receive recognition for doing something that you believe in", says Kristian. "Winning will definitely help us do more of what we are doing and reach our goals. It will also empower us with greater leadership as we steer our farm, our employees, and also our surroundings towards a more sustainable way of farming, doing business, and living".

Kristian and Maria Lundgaard-Karlshøj, Ausumgaard I/S

Location: Hjerm in northwest Denmark

Type of farm: Conventional livestock and organic crop farm (850 ha)

Main production: Broiler chickens, welfare pigs, mealworms, horse beans, rapeseed, grasses and cereals, biogas, energy from wind turbines

International jury motivation: "Kristian and Maria want their farm to be sustainable and future-proof, and for this reason they work in all fields of environment, including climate, energy and nutrient management. They show that large-scale farming can also be sustainable through diversification, modernization, and technology. Organic crop production, animal husbandry, biogas plant for processing all agricultural residues, forestry, green energy, and engaging with the consumers all contribute to bridging the gap between agricultural business and nature conservation. The jury also acknowledges and applauds the forward momentum and continuous development of the farm, including future plans to switch to free-range chicken production, participation in research projects, and the construction of a wetland".

Key practices: Agricultural residue processed in biogas plant, buffer zones, catch crops, constructed catchment ponds, cover crops, crop rotation, fertiliser accounting and nutrient management plans, preservation of forest and other natural elements, processing of all agricultural residues in biogas plant.

BELARUS
Vitaly Belooky



THIS FARM IS BUILT ON THE CONVICTION THAT HEALTHY PEOPLE AND HEALTHY FOOD CANNOT EXIST WITHOUT A HEALTHY ENVIRONMENT.



Photos: The Center of Environmental Solutions.



Zdorovaya Strana farm was founded in 2016, following a conversation between Vitaly Belooky and a businessman named Valentin Baiko, who was determined to realise his dream of a farm that could produce natural products in line with a healthier lifestyle and environment.

"Lots of questions appeared later, of course: How can it practically be realised, which methods and approaches should we choose?" Vitaly recalls.

As the first organic farm in Belarus of its size, a huge amount of labor, financial investment and experimentation were required.

"There are no textbooks on organic products, there are no flow sheets", says Vitaly. "You need to constantly analyze, understand the biology of plants and pests, and look for methods and technologies yourself".

With no national standards and few examples to guide organic farming in Belarus, Vitaly and his team learned through experimentation and cooperation with other organic farmers and environmental organisations across Europe. In 2018, the farm was certified as organic according to European Union standards.

Implementing measures that minimize nutrient runoff has been a natural part of operations at the farm from the beginning.

"We understand that there cannot be any healthy people or healthy food without a healthy environment", says Vitaly. "So everything is important – clean water, biodiversity, climate. Everyone has at least seen one terrible picture of a eutrophic lake or river, and this is one of the reasons why we use organic standards at our farm".

"WE'VE SHOWN OTHER FARMERS AND THE LOCAL COMMUNITY THAT AN ALTERNATIVE WAY OF PRODUCING FOOD REALLY WORKS".

In addition to abstaining entirely from the use of pesticides and chemical fertilisers, Vitaly and his team use composted manure and biological preparations for soil nutrition, and have switched to subsoil tillage to promote optimal water exchange within the soil. They also actively promote biodiversity through polyculture, creating habitats for beneficial insects, and rotating in disease-resistant crops – in a seven-field crop rotation method – during transition periods to further reduce nutrient loads and activate healing processes in the soil.

Since implementing these measures, soil quality has significantly increased, while energy costs and the amount of required fieldwork has decreased.

"Once the living environment was formed, microorganisms appeared in it", says Vitaly. "The ecosystem has been restored and now everything regulates itself".

"There was also a big transformation in peoples' minds", he adds. "We've shown other farmers and the local community that the alternative way of producing food really works".

Vitaly Belooky, Zdorovaya Strana Farm

Location: Liudvinava village in west Belarus

Type of farm: Organic crop farm (270 ha)

Main production: Grain, perennial grasses, berries, cherries, apples, garlic, phacelia, mustard, honey

National jury motivation: "Adhering to the rules of the organic standard, Zdorovaya Strana reduces greenhouse gas emissions. In addition, due to the technologies used, the pesticide load on the soil, water resources and the environment as a whole is reduced. Due to the rejection of the use of chemically synthesized fertilisers, the migration of nutrients to groundwater and surface water is reduced. At the same time, water bodies are protected from eutrophication, and drinking water sources from pollution by nitrates. The activity of the farm also has a positive effect on the social aspects of the life of the region, since a significant number of additional jobs are created (for about 90-100 people), which is very important for rural areas in Belarus".

Key practices: Organic production, composted manure, crop rotation, subsoil tillage.

ESTONIA Ivar Baumann and Maarja Maksimov



HEALTHY SOIL, HAPPY ANIMALS AND A CLEAN SEASIDE ARE THE PRIORITIES ON THIS LARGE-SCALE ORGANIC FARM.



Photo: Saareõue

Located right next to the Baltic Sea, Saareõue OÜ is a family farm started by Ivar Baumann's parents in 1986 with 16 cattle and 40 hectares of land. Today, it has grown to 600 hectares upon which Ivar and his wife Maarja Maksimov tend to vast fields of organic grain, coastal meadows, and 170 Aberdeen Angus cows who spend their summers grazing seaside pastures.

"It's an old known truth that if you want something from the land, you have to give back", says Ivar.

Ivar and Maarja have been dedicated to organic farming since taking over the farm, and have maintained chemical-free producion methods even as the farm has expanded. Ivar's experience as the founder of an organisation that tests organic methods and fertilisers on farms across Estonia further contributes to the problem-solving mindset that is sometimes required on the farm.

"Our big problem was the manure", says Ivar. "There wasn't enough space for it, and we did not want to store it on the fields in a pile".

Since some of their fields are located far from the farm, Ivar and Maarja had decided to concentrate manure in one spot to reduce transportation costs. But storing it on the field took up too much space, increased the risk of nutrient leaching, and created swampy field conditions during spreading.

The solution was building a new, covered manure storage building. Today, its thick floor, walls, and angled roof keep manure sheltered and prevent nutrient runoff. Manure is composted in three stages together with algae or bacteria, then spread on mild spring days using a spreader with a precise weighing system according to soil sample insights.

Other measures used that keep nutrients in the soil include crop rotation, year-round soil cover, and the maintenance of buffer zones and permanent grasslands. Ivar and Maarja also help maintain the openness and vitality of the native landscape by allowing their cows to graze the coastal meadowlands.

"IT'S AN OLD KNOWN TRUTH THAT IF YOU WANT SOMETHING FROM THE LAND, YOU HAVE TO GIVE BACK".

"The thing we hadn't considered with seaside pastures is the garbage the sea brings", says Ivar. "We have to clean the pastures once or twice a year, and the amounts are huge – bottles, plastic, paper, et cetera".

All of their sustained efforts have been well worth it, however.

"Local people and our neighbours are happy", reports Ivar. "The seaside is clean and maintained. Thanks to the new manure storage building 'the smell' is no longer spreading so intensively. Our local beekeepers are very happy. And business is on the rise".

Ivar Baumann and Maarja Maksimov, Saareõue OÜ

Location: Metsapoole Village in southwest Estonia

Type of farm: Organic crop and livestock farm (500 ha)

Main production: Grain, fabacae plants, Aberdeen Angus cattle

National jury motivation: "Saareõue is a large-scale organic farm that has made healthy soil and healthy animals its priority, and has the curiosity to test new farming practices. The farm demonstrates that environmentally conscious cultivation and breeding can be used in larger farms. Furthermore, the family running the farm is a great example of the efforts a farmer can make to minimize the impact it has on the environment, especially considering its location right next to the Baltic Sea. The farm keeps healthy soils in high regard: fertilising is optimized by regularly taking soil and manure samples and using crop-rotation and winter crops to keep the nutrients in the soil. The farm has also made notable investments in manure management: there is a new fully covered construction for storing and handling manure".

Key practices: Buffer zones, composting, crop cover year-round, crop rotation, manure management, minimal tillage, no chemical fertilisers or pesticides, nutrient recycling, permanent grasslands, soil analysis.

FINLAND
Tage and Ulla Eriksson



IMPROVED NUTRIENT CIRCULATION AND PASTURE RESTORATION WAS THE KEY TO TRANSFORMATION AT HAMMARUDDA FARM.



Photos: Paula Kallio / WWF

Tage and Ulla Eriksson are reminded of their relationship with the Baltic Sea every time they step out their door. Established in 1726, Hammarudda Farm, with its long shoreline and barren cliffs, is surrounded by the sea in three directions. A unique location that also means signs of the sea's health are hard to ignore.

The problem of eutrophication first became obvious to Tage and Ulla years ago, when they spotted blue-green algae blooms in the sea. Since their cattle often drink from the sea, they were afraid they might be harmed.

"Husbandry is always challenging when it comes to balancing nutrient cycles", says Tage. "You have to have very good manure management and be sure you have the right amounts of nutrients at the right time and in the right places".

Compounding the problem was the state of the soil – a nutrient-poor composition of light sand, moraine, and stones. By the time Tage and Ulla had taken over the farm in 1980, it had earned the nickname, "Hammarudda dirty sand", Also, the pastureland was nearly nonexistent.



The work they have put in since then, however, has resulted in a complete transformation.

Efforts to reduce nutrient runoff consist of two main methods: Manure management and constructed ponds and wetlands. Manure is only spread during the growing season for maximum water protection. Two wetlands, and five ponds along the farm's largest stream capture excess nutrients and sediments from the farm and forest, provide vital water reserves during droughts, and create habitats for wildlife.

Additional measures taken include soil mapping and almost year-round soil coverage. Nutrient-rich bladderwrack collected from the seashore is also added to the soil for fertilisation and improvement.

Another significant change is the restoration of the farm's natural grazing areas, which have grown from only 10 hectares in the 80s to over 90 hectares today of natural, permanent, biodiversity-rich pastures. Since the naturally thin soil is unsuitable for farming, to keep the grasslands open, continuous grazing is critical.

"We can now farm in a way where the animals mostly rely on pastures and we can have more cows than our fields would otherwise allow", says Tage. "For half the year, the cows graze themselves. This way is more climate-friendly and our farming system is now fully adapted to our natural conditions".

"... OUR FARMING SYSTEM IS NOW FULLY ADAPTED TO OUR NATURAL CONDITIONS".

Tage and Ulla Eriksson, Hammarudda Farm

Location: Åland island near south-west Finland

Type of farm: Organic/conventional livestock farm with forestry (350 ha)

Main production: Nurse cows, Heifer breeding, fodder for own use, forest services and products, hunting and recreational activities

National jury motivation: "The water protection measures at Hammarudda Farm are exceptionally comprehensive. The fields have plant cover for the greater part of the year. The farm aims to treat all surface waters that flow through it in some way with numerous voluntarily built wetlands and ponds. The usage of nutrients is kept to a minimum and nutrient circulation is advanced. Extra points from the jury were given for significant work, since the 80s, to restore natural grazing areas. The area of natural grazing areas has increased from 10 to 90 hectares. The farm is managed as an entity and the farm constantly develops its methods. In addition, Hammarudda spreads knowledge of environmentally friendly methods to other farmers and stakeholders".

Key practices: Buffer zones, catchment water bodies on property including constructed ponds and wetlands, cover crops year-round, manure management, no chemical fertilisers or pesticides, preservation of trees, soil mapping and analysis.

GERMANY
Wilfried Lenschow



THIS COOPERATIVE DEMONSTRATES THAT AGRICULTURE AND ENVIRONMENTAL PROTECTION CAN GO HAND IN HAND.

Shortly after the fall of the German Democratic Republic, 26 people founded an agricultural cooperative in Bartelshagen 1. The manager, Wilfried Lenschow, has been there since the beginning and combines his commitment to agricultural excellence with a passion for the world of birds – which has inspired many ongoing conservation efforts on the farm.

"Nature conservation has been a fundamental concern for us since the founding of our cooperative", says Wilfried. "We wanted to show that, in addition to food production, farmers also have a responsibility to preserve and protect the natural environment".

The farmland is a popular breeding ground for birds, and cooperative members regularly care for and maintain nesting aids and habitats for storks, swallows, and rare sand martins.

Given the cooperative's dedication to conservation, it was only natural that the problem of eutrophication would also enter their awareness.

"I had been following the subject for a long time and had already attended a number of lectures..." recalls Wilfried. "But the realisation that I have it in my hands, as a farmer, to change something motivated me".

Combining his 30 years of experience with support from an agricultural consultant, as well as state and EU programmes, Wilfried has since implemented several protective measures.

Experiments on integrated crop protection and fertilisation have been a key part of developing a better fertilisation strategy. The selection of catch crop varieties has now been adapted according to nutrient requirements. Liquid manure is spread using drag hoses on growing crops in good weather conditions and is immediately incorporated within two hours. Protective, 15–20 meter buffer zones have been added along all running water – subsequently reducing nutrient runoff by about 50%. Drainage system maintenance is also prioritized on the farm to further reduce nutrient leaching. Additionally, about 100 hectares of permanent grassland is maintained, free from fertilisers or chemicals.

"By keeping broad crop rotations and catch crops, we've observed good pre-harvest effects which, in turn, has reduced fertiliser and pesticide expenditures", says Wilfried of the results.

Efforts have also been received well by the community, and cooperation with local environmental associations, schools, and institutions has increased as a result.

"By showing that we are serious about nature conservation, we are able to bridge the gap between environmental protection and agriculture", says Wilfried.



Photo: Sonja Ritter / WWF

> "...THE REALISATION THAT I HAVE IT IN MY HANDS, AS A FARMER, TO CHANGE SOMETHING MOTIVATED ME".

Wilfried Lenschow, Bartelshagen 1 Agricultural Cooperative

Location: Marlow in northern Germany

Type of farm: Conventional crop and livestock (3,420 ha)

Main production: Crops, including winter rape, beets, maize, winter barely, winter wheat, grain lupines, potatoes, winter rye, oats, and grass seed. Dairy cows, suckler cows and offspring, geese, ducks guinea fowls, chickens and turkeys

National jury motivation: "Wilfried Lenschow is an extraordinary and very committed farmer. As a conventional farmer, he sets a good example and demonstrates that agriculture and environmental protection can go hand in hand. His voluntary commitment both to the Farmers' Association of Mecklenburg-Vorpommern and as chairman of the NABU (Nature and Biodiversity Conservation Union) local group is a symbol of this compatibility. Thanks to his charismatic and enthusiastic manner, he is able to get other farmers involved in environmental protection. His networking in the region, and also his local political work as a representative of the city of Marlow, make him an outstanding role model for his colleagues. At the management level, Lenschow shows that broad crop rotation, integrated crop protection, and the production of quality products with direct marketing are possible. The balanced choice of his arable crops, with malting barley, fodder and sugar beets, oats, lupines and grass seed propagation, the exclusively in-house production of fodder and the careful handling of farm fertiliser all suggest very good in-farm nutrient management".

Key practices: Buffer zones, catch crops, catchment ponds, closed nutrient cycle, crop rotation, manure management, nutrient analysis, permanent grasslands, precision technology and timing, preservation of trees, shrubs and other natural elements.

LATVIA
Rihards Kadirovs



RIHARDS TOOK A CHANCE ON FARMING AND BECAME ONE OF THE FIRST IN LATVIA TO ADOPT A STRIP-TILL SYSTEM.



Photos: Magda Jentgena

When Rihards Kadirovs got the opportunity to start his own farm in 2005, he didn't hesitate. He began working the land in parallel with his university studies and, after graduation, it became a full-time job. Today, the first-generation farmer combines his economics background with a love of farming and future-forward thinking.

It was anything but easy in the beginning, however. The farm's location on a hill and it's naturally dense, 80% clay soil, which has been plowed heavily by previous farmers, made it highly vulnerable to erosion.

"I was using conventional methods and ploughing my land, which was already in poor condition", says Rihards. "I quickly realised that I wasn't getting good results with traditional techniques and something had to change".

After researching various methods, Rihards came across the strip-till system and decided to give it a try. A hybrid between full-till and no-till, strip-till only disturbs the strip of soil that is sowed while leaving the rest intact.

"I've had nothing but positive results from the strip-till system", says Rihards, who is only the second farmer in Latvia to adopt the system. "It has increased my harvest, the quality of my soil, and the quality of life around the farm".

Since the system was adopted in 2015, fertiliser and pesticide requirements have significantly reduced. And, after four years, the harvest increased by 90%, while the soil's phosphorous and nitrogen levels dropped.

"I QUICKLY REALISED THAT I WASN'T GETTING GOOD RESULTS WITH TRADITIONAL TECHNIQUES AND SOMETHING HAD TO CHANGE".

"Even the surface structure has radically changed", says Rihards. "After a couple more years of strip-till, when the soil has returned to a completely healthy state, I may even be able to start using the no-till system".

Additionally, using the strip-till system has led to a more even distribution of moisture and more consistent crop quality across the hill-sloped fields. Rihards has also benefited from cost savings related to reduced machine and labor needs.

Well aware of the impact his farm has on the environment, Rihards also practices soil liming and uses buffer zones and catch crops to further prevent nutrient runoff.

Today, Rihards uses what he's learned to inspire others. He regularly organises open farm days and facilitates a WhatsApp group to engage with other farmers interested in strip or no-till systems.



Rihards Kadirovs, Jaunozoli Farm

Location: Sala Parish in central Latvia

Type of farm: Conventional crop farm (450 ha)

Main production: Various crops including winter wheat, beans, rye, and summer rapeseed

National jury motivation: "Rihards Kadirovs, who runs Jaunozoli Farm, is nothing short of an inspiration. His enthusiasm and love for the environment are truly wonderful to witness. With strip-till he has reduced the amount of machinery, and therefore the amount of fuel and emissions. He is also studying and practicing crop rotation and the relationship between different crops to increase the quality of his soil and harvest. On top of that, his soil is absorbing large amounts of CO_2, and he has created buffer zones that help reduce nutrient runoff and serve as important habitats. He's experimenting with killing the weeds using electricity so that he can stop using herbicides all together. He is also continuously attending seminars, participating in forums, and joining projects so that he can learn more, and improve further".

Key practices: Buffer zones, catch crops, minimum tillage, structural liming of soils.

LITHUANIA
Gintaras Bingelis



ILZENBERG MANOR FARM COMBINES NATURE-FRIENDLY METHODS WITH MODERN TECHNOLOGY AND A PEACEFUL ATMOSPHERE.

The story of Ilzenberg Manor Farm begins over 500 years ago. Initially established by Germans, during the Soviet Union years it was expropriated and managed using intensive farming methods. In 2014, yet another chapter began when Gintaras Bingelis took over and reintroduced natural farming traditions. The farm became internationally certified as organic and biodynamic in 2017, and today produces over 100 different products.

"Only nature-friendly farming methods are sustainable and beneficial – not only to those who reap the harvest but also when it comes to maintaining a harmonic human-nature relationship", says Gintaras.

Transitioning to organic and biodynamic methods has required a lot of learning and manual work. It was during this process that Gintaras ran into challenges related to nutrient runoff.

"We were still finding excessive amounts of nitrates in the fields due to previous intensive agriculture practices", he recalls.

Excess nutrients were also showing up in the surrounding water bodies, especially during summer months.

"The desire to farm organically motivated us to look for solutions to the eutrophication problem", Gintaras says.

Several measures have since been implemented on the farm. In addition to using organic agriculture methods free from chemicals, crop rotation is practiced to help maintain humus, increase nitrogen reserves, and decrease erosion risks.

Better manure management has also been a big part of the solution. Liquid manure reservoirs are covered and treated with biodynamic fermentation mixtures to help it decompose faster and to reduce ammonia nitrogen evaporation. The manure, along with any other fertilisers, is then applied to the soil at low rates, no later than within five hours. Protective boundaries have also been established along all water bodies.





Photos: Ilzenbergo Dvaras

"THE DESIRE TO FARM ORGANICALLY MOTIVATED US TO LOOK FOR SOLUTIONS TO THE EUTROPHICATION PROBLEM".

Additionally, a GIS field and crop management system is used to monitor soil and field conditions. The data is included in fertilisation and other activity planning. Feedback is also received from the Lithuanian Agricultural Advisory Service, which takes regular samples for soil composition research.

Since integrating these measures, Gintaras has noticed that nearby waters have already become less polluted compared to previous years. He's also seen an increase in community support.

"The most important result is that there are only a few people left who call us strangers", says Gintaras. "Most of the people we are in contact with respect what we do, and those who work here speak proudly of the farm".

Gintaras Bingelis, Ilzenberg Manor Farm

Location: Ilzenbergas Village in northeast Lithuania

Type of farm: Organic and biodynamic crop and livestock farm (450 ha)

Main production: Variety of cereal grains, poultry and bovine meat, milk and dairy products, fruits, vegetables

National jury motivation: "Ilzenberg Manor Farm provides a good example of effective farming and environmentally friendly solutions. They use fertilisation plans in order to protect streams, drainage ditches and other open water bodies from nutrient loading. No chemical agents as fertilisers, herbicides, insecticides, fungicides or other chemical compounds are used on the farmland. Liquid manure reservoirs are covered and biodynamic fermentation mixtures are used. Modern technology and software solutions are used to monitor field and soil conditions. The farm cooperates with other farms to spread ideas and measures, and invites farmers to visit and learn about natural agriculture methods and solutions. They are highly motivated to take part in various environmental friendly activities and cooperate with environmental movements".

Key practices: Composting, crop rotation, manure management, no chemical fertilisers or pesticides, precision technology, soil monitoring and analysis.

FARMER OUTLOOK

INSIGHTS AND LESSONS FROM THIS YEAR'S FARMERS ON WHAT IT TAKES TO FARM MORE SUSTAINABLY.

THE SUPPORT WE NEED

"Public recognition, fewer bureaucratic hurdles, and competitive prices".

Wilfried Lenschow, Germany

"The first transition year is the most difficult. Here, it would be very helpful to have support from the state, at least in the process of certification which costs 1,000 euros for large-scale production which is a pretty penny for the farmer. If the state becomes interested and supports organic farms during the transition period, more and more will appear".

Vitaly Belooky, Belarus

"Farmers need more support and encouragement when it comes to holistic management solutions. They need better and more modern rural advice in emerging issues connected to regenerative agriculture, carbon farming, biodiversity restoration and other climate-friendly methods related to agriculture".

Tage och Ulla Eriksson, Finland

"Financial support is crucial for sustainable agriculture, and even more so for organic farming. There should be financial support for organic farming and the following activities: Soil liming, co-financing for seed material for those plant species that are forgotten or very rarely cultivated ... building manure plates, home sewage treatment plants or slurry tanks, and non-returnable installations for Renewable Energy Sources".

Marta and Tadeusz Żerańscy, Poland

"We need more exchange of experience, and we need support from the general public – the more demand there is for the food grown on sustainable farms, the better it is for our budget, and the better it is for nature".

Elena Romanova and Vladislav Kirbatiev, Russia

"In our region, I believe that more dialogue between the authorities will help a lot – including the dialogue between the authorities and farmers. We all seem to have the same kinds of goals and we'll be able to reach them faster if we work together".

Kristian Lundgaard-Karlshøj, Denmark

WORDS OF ENCOURAGEMENT FOR OTHER FARMERS

"These acts do not start from the farm. They start from the farmer's home... So, our advice for farmers is to start doing things! Collect your garbage, make investments in better equipment and buildings to start working properly with minimum input. Invest in your animals and their health, as they are doing the job you are going to get credit for it. Don't make decisions overnight – think through all the plans and investments thoroughly. And mainly, set your goals and start working towards them".

Ivar Baumann & Maarja Maksimov, Estonia

"For anyone who wishes to get into sustainable farming, I say – Go! Don't waste any more time, because the sooner you start the better off you will be. Working with the environment will also help you prepare and deal with the climate change that is already here".

Rihards Kadirovs, Latvia

"Practice crop rotation properly (with a period of 7 years), use cover crops, apply siderites, and compost manure and apply it during the recommended periods".

Ihor Yaroslavovych Oryshyn, Ukraine

"A very good step is to visit an environmentally friendly farm and discover the answers to your current questions. We really want to encourage those who are in doubt to take up this challenge and start farming in an environmental friendly way, because nature will reward them and people will also appreciate eating their products".

Gintaras Bingelis, Lithuania

"My advice is that you should do what you can, based on the conditions of your own farm, to achieve circular agriculture. This is to preserve fertile soils and good conditions, as well as to enable sustainable agriculture for the future".

Holger van der Woude, Sweden

POLAND
Marta and Tadeusz Żerańscy



RESPECT FOR NATURE AND "QUALITY OVER QUANTITY" IS THE FOCUS ON THIS NATURA 2000 ORGANIC FARM.



Photos: Anna Sosnowska / WWF-Poland



Alongside the twisting Narew River, in a picturesque landscape that has not changed since 1925, is a third-generation farm run by Marta and Tadeusz Żerańscy. Half of the 50 hectares are dedicated to organic agriculture, while the other half – consisting of 100-year-old forest stands, dunes, meadows, and wasteland – is left to nature and a diverse population of wildlife.

Marta and Tadeusz have long respected the sensitive relationship between their farm and the immediate environment – not least due to their proximity to natural water resources. The farm is bordered by the Narew River and contains two lakes, a pond, and several water reservoirs. It is also located within NATURA 2000, the European Union's network of nature protection.

The decision to abandon pesticides and mineral fertilisers, and switch to organic agriculture, occurred in 2001. The first revelation came after learning about organic methods from agricultural advisors. The second after watching a TV program about the devastating effects of eutrophication. Once Marta and Tadeusz had made up their minds, they received support during the transition period through small subsidies.

"We were very pleased when we noticed that the use of organic fertilisers alone is enough to achieve a certain yield and improve soil fertility", says Marta.

When it comes to nutrient management, one of the key changes the farmers have made was inspired by their son who was studying at agriculture school. He told them that their way of storing manure was harmful to the environment since heavy rains could easily leach nitrogen into the surface and groundwater.

"Our son mobilised us and persuaded us to build a manure plate and a slurry tank", recalls Marta. "From that moment on, we've been managing fertilisers rationally".

Among other methods used today, Marta and Tadeusz practice precision fertilisation, crop rotation, conservation tillage, and have catch crops and mid-field margins. Ash is added to the compost to further enrich the soil. They also maintain over 13 hectares of permanent grassland.

The results of the farmers' efforts are evident in the rich biodiversity on the farm, as well as the clean and non-eutrophic water bodies. Marta and Tadeusz have even noticed a growing interest in their farm products.

"We have the great satisfaction that everyone comes back to us to buy products that are healthy, tasty, and organic", says Marta.

"OUR SON MOBILISED US AND PERSUADED US TO BUILD A MANURE PLATE AND A SLURRY TANK".

Marta and Tadeusz Żerańscy, Żerańscy farm

Location: Chełsty Village in east-central Poland

Type of farm: Organic crop and livestock farm (50 ha)

Main production: Winter rye, oats, buckwheat, various vegetables, and dairy products

National jury motivation: "The jury mainly took into account the sustainable management approach which contributes to the protection of waters against pollution. The Żerańscy family implements environmentally friendly practices that allow to limit nutrient losses from the farm. Natural water reservoirs have survived intact for decades without signs of eutrophication, which testifies to the rational use of crop rotation and fertilisation. The farmers promote the idea of management in accordance with respect for the surrounding environment. This farm and its approach to animal and crop production is undoubtedly a pattern worthy of respect and imitation".

Key practices: Buffer zones, catchment water bodies on property including water reservoirs, ponds, and lakes; covered soil, crop rotation, manure management, minimum tillage, no chemical fertilisers or pesticides, permanent grasslands, precision fertilisation, preservation of trees.

RUSSIA Elena Romanova and Vladislav Kirbatiev



THESE FARMERS RE-BIRTHED THE LAND OF PREVIOUSLY ABANDONED VILLAGES USING ORGANIC, LOW-IMPACT METHODS.

In 2008, a small union of farmers came together to restore the agricultural lands of three abandoned villages. Elena Romanova and Vladislav Kirbatiev are among those collaborating for this vision. Using low-impact, organic methods, they produce fruits, vegetables, honey, and an ancient herb which was unexpectedly discovered during restoration.

"While we were clearing the fields from small trees, shrubs, and fireweed *Chamaenerion angustifolium*, an idea came to mind – the fireweed was traditionally used for the preparation of the tea-like product Kiprey tea", recalls Elena.

The rising popularity of the traditional tea combined with the fact that the herb was flourishing on otherwise unproductive land was a good sign that the farmers should try adding it to their agricultural mix. Today it has become one of their most distinguishing products.

Combining modern measures with a traditional approach, Elena and Vladislav are committed to farming in a way that is as respectful to nature as possible. And they're aware that staying true to this commitment requires thinking beyond property lines.

"Organic farming is not neutral in any way in terms of nutrient runoff", says Vladislav. "While we don't use commercial chemical pesticides and fertilisers, we realise that there can be some runoff from the soil anyway".

To prevent nutrient runoff, Elena and Vladislav have enclosed their land with hedges and trees. They also work to maintain a good nutrient balance in the soil through crop rotation, and by applying fertilising compost consisting of a mix of turf, manure, and food waste. Instead of using chemical pesticides, the farmers attract specific birds to the farm that hunt destructive insects. To further boost crop productivity and support local bee populations, a variety of plants and fruit trees with high nectar production are kept on the property.



Photos: Personal collection of Elena Romanova and Vladislav Kirbatiev

"THE AGRICULTURAL LAND WAS NOT THIS PRODUCTIVE WHEN WE STARTED 11 YEARS AGO".

"The agricultural land was not this productive when we started 11 years ago", says Vladislav of the results.

Elena and Vladislav's efforts are also bringing a sense of community back to life in the villages. Their community already collaborates in several ways – including by sharing compost, and by organising rubbish and recycling collection in their region which otherwise does not benefit from waste management services. They are currently introducing the concept of self-sustaining "environmentally friendly villages".

"People joining our community agree that this kind of farming is how agriculture should look in the region", says Elena.



Elena Romanova and Vladislav Kirbatiev

Location: Sheltozero Village and Grishino Village in northwest Russia

Type of farm: Organic and biodynamic crop farm (3 ha)

Main production: Fruits, vegetables, Kiprey tea, and honey

National jury motivation: "The primary jury motivation this year is that Elena and Vladislav implement a good combination of basic how-to practices that help the group of farmers re-develop abandoned farmlands. These measures include planting hedges around fields to prevent wind-blowing of upper soil level, crop rotation with use of leguminous plants, composting of organic waste from the farm which is used as fertiliser. These indeed are very basic measures but they are organic and support re-birth of old villages. Furthermore, this farm is a good example of how a cluster of small farms can collaborate to achieve both a low environmental impact and better production sales".

Key practices: Buffer zones, crop rotation, manure composting, no chemical fertilisers or pesticides, preservation of trees and shrubs.

SWEDEN
Holger van der Woude



THIS FARM SHOWS HOW A CIRCULAR APPROACH CAN HELP PAVE THE WAY TO FERTILE SOILS AND A SUSTAINABLE FUTURE.



Photos: Erik Olsson



One of the first biodynamic farms in Sweden, Yttereneby gård has been run as a biodynamic and organic dairy farm since the 1960s. Today, the tradition continues with farmer Holger van der Woude who is committed to maintaining a balance between crops and animals, and what the farm gives and receives as it interacts with the environment.

"It has always been important to me to be able to stand for what I do and work so that in the future, it will be possible to run agriculture sustainably", says Holger.

Holger has known about the problem of eutrophication for a long time. It was one of the issues covered during his university studies, in a program focused on organic and biodynamic agriculture.

"Already then, I was fully determined to reduce my negative environmental impact as a farmer", recalls Holger.

Yttereneby gård employs a number of measures to prevent nutrient runoff, while also supporting efforts to maintain a closed-loop ecosystem on the farm. No chemical fertilisers are used but instead, composted manure and straw are spread during low-risk periods. The farm practices minimum tillage and the soil is structurally limed, which helps to reduce surf water runoff of nutrients. All animal fodder is produced on the farm. The farm also maintains permanent grasslands, buffer zones, and a constructed wetland to absorb excess nutrients and encourage biodiversity.

"IT HAS ALWAYS BEEN IMPORTANT TO ME TO BE ABLE TO STAND FOR WHAT I DO ..."

The farm also participates in several external research projects. In one study with the Baltic Sea project BERAS (Building Ecological Regenerative Agriculture and Societies), it helped demonstrate that converting to circular farming can help reduce nitrogen and phosphorus leakage to the Baltic Sea. Measured nitrogen leakage from the farm's fields was 7-9 kilograms of nitrogen per hectare, which is 70-75% lower compared to other agriculture in Sweden during the same time period. In a current project, the Biodynamic Research Center is studying how 15 years worth of accumulated sediments and nutrients in the farm´s constructed wetland can best be emptied and recycled as nutrients on the fields.

Holger is hopeful that his farm can continue to serve as a good example of sustainable agriculture. When asked how others have reacted to his successful efforts, Holger says. "It's generally perceived as positive, but there is still a lot of work to do in terms of increasing society's knowledge of what we actually do on the farm".

Holger van der Woude, Yttereneby gård

Location: Yttereneby in east Sweden

Type of farm: Organic and biodynamic crop and livestock farm (339 ha)

Main production: Milk, grass, and grains including oats and wheat

National jury motivation: "Holger is receiving this award for developing a well planned and diversified agricultural enterprise with grass, grazing, and ecological production; and for implementing a range of measures to protect the Baltic Sea – all of which have been well documented. All fodder (100%) is produced on the farm. To reduce nutrient leakage, Holger does minimum tilling in the spring, and maintains protected zones and catch crops. He has also constructed a wetland. Additionally, Holger participates as a test farm and in knowledge building activities within the framework of the Association of Swedish Farmers, the County Board, the agricultural school, and the Baltic Sea project BERAS".

Key practices: Buffer zones, catch crops, closed nutrient cycle, cover crops, constructed wetland, manure composting, manure management, minimum tilling, no chemical fertilisers or pesticides, permanent grasslands, structural liming of soil.

UKRAINE
Ihor Yaroslavovych Oryshchyn



MAINTAINING HEALTHY SOILS IS THE CORNERSTONE OF THIS FARM'S STRATEGY FOR REDUCING NUTRIENT RUNOFF AND ACHIEVING GOOD HARVESTS.

In Soviet times, Turynka Village was the site of a large collective farm whose natural pastures were plowed intensively for crop production. As a result, the soil did not yield the expected harvests and ended up taking many years to recover.

This is a piece of village history that farmer Ihor Yaroslavovych remembers well. It was then that he realised how easy it is to break the natural balance of the land. Today, Ihor and his family work consciously to maintain the health of the soil on their farm.

"Our farm cultivates 20 hectares of rented community land", says Ihor. "That's why we, more than anyone else, are interested in introducing sustainable methods. We want to convince the people who entrusted their lands to us that the technologies used by our farm do not cause harm, but favor soil fertility now and in the future".

Also driving the use of sustainable methods on the farm is Ihor's awareness of eutrophication, which he first learned about at a seminar. He immediately thought of the natural lake located near his farm's pastureland, which provides drinking water for the farm animals and helps preserve the populations of many different species.

The maintenance of healthy soils has become the cornerstone of Ihor and his family's strategy for preventing nutrient runoff on his farm.

"To improve soil aeration, we bought a special cultivator which enhances fermentation processes in the upper soil layer where a lot of microorganisms live", says Ihor. "Healthy soils allow us the opportunity to get good harvests and make crops more resistant to disease".

To further support the soil and reduce nutrient runoff, the family employs a seven-field crop rotation and applies composted manure as fertiliser during the right periods. They also use cover crops and maintain buffer zones along the edges of fields





Photos: Nataliya Cholovska

"HEALTHY SOILS ALLOW US THE OPPORTUNITY TO GET GOOD HARVESTS AND MAKE CROPS MORE RESISTANT TO DISEASE".

where freely growing wild plants offer habitats for beneficial insects.

"The important task on our farm is maintaining the natural balance and minimizing environmental impact", says Ihor.

The continued absence of eutrophication in local water bodies provides proof of the family's good agricultural practices. And so does their successful harvests.

Ihor and his family actively share what they have learned about using sustainable agricultural practices with other farms in the region. In the future, they plan to develop agro-ecotourism on their farm to spread knowledge and inspiration to even more people.

Ihor Yaroslavovych Oryshchyn, Oryshchyn I.Y., family farm

Location: Turynka Village in west Ukraine

Type of farm: Conventional crop and livestock farm (80 ha)

Main production: Volyn meat cattle, cereals, oilseeds, and legumes

National jury motivation: "In the opinion of the national jury, the special thing about this family farm is that it maintains permanent natural pastureland, upon which cattle grazes almost nine months out of the year. These pastures help to preserve biodiversity and keep more carbon in the soil. The system for keeping livestock on this farm is different from industrial farming. To minimize the runoff of nutrients, the farm uses a seven field system of crop rotation, siderites, and post-harvest crops. These measures support natural balance of nutrients in the soil, resistance to disease, and weed control. Compensational territories along the fields support beneficial insects".

Key practices: Buffer zones, cover crops, crop rotation, cultivation technology, manure compositing, manure management, minimum tillage.

WINNING MEASURES THAT REDUCE NUTRIENT RUNOFF

Healthy soil, sustainable water management, and effective nutrient management are all central objectives in the effort to prevent eutrophication. The 12 measures identified here stand apart not only for their ability to effectively curb nutrient runoff, but for the environmental co-benefits they yield – such as biodiversity protection and climate change mitigation.



MEASURES FOR HEALTHY SOIL

Soil erosion and degradation are common challenges on farms across Europe. When fertile topsoil is lacking, the risk of nutrient loading to nearby water bodies increases. Healthy soil has a porous structure, rich organic matter, good water retention, high biological activity, and enables more fruitful harvests.

1. Maintain year-round plant cover
On agricultural land, the highest erosion rates occur in crop systems where soil is left bare for extended periods of time. Maintaining year-round plant cover protects the soil against erosion and reduces runoff of phosphorus bound to soil particles. It also helps to maintain organic matter in the soil and improves soil structure and microbiological activity.

2. Protect soil structure
Compaction adversely affects the air capacity, permeability, and water retention of the soil. It reduces root development and biological activity, and leads to decreased crop yields. Diversifying crop rotation, using lighter machinery, and working the soil in dry conditions can help prevent compaction.

3. Use catch crops or intercrops
Catch crops and intercrops are used to bind nutrients that have not been used by the main crops and are released from the soil after harvest. Sown together with the main crop or after the harvest, they are left to be buried in the soil, or to serve as plant cover over the winter. This can help maintain organic matter in the soil, and reduce nitrogen leakage by absorbing nitrogen and then releasing it for the benefit of the next crops.

"MORE ORGANIC MATTER IN THE SOIL CONTRIBUTES TO IMPROVED SOIL HEALTH AND PRODUCTION CAPACITY".

4. Add organic matter to the soil
More organic matter in the soil contributes to improved soil health and production capacity. It also helps to mitigate climate change by fixing carbon in the soil. Growing catch crops or intercrops, and mechanically adding dry cattle manure or compost are ways to incorporate more organic matter in the soil.

5. Maintain buffer zones
Buffer zones of perennial vegetation along major ditches, riversides, and lakes help to reduce erosion and the transport of nutrients and plant protection products to water bodies. These are especially useful on fields prone to erosion or flooding. Maintaining grasslands and other vegetation in riparian zones also enhances biodiversity.

MEASURES FOR SUSTAINABLE WATER MANAGEMENT



Excess water in agricultural areas raises the risk of nutrient runoff, while water shortage can have a devastating effect on crop yields. Measures that control water movement can help retain water and capture nutrients, forming areas for flood water and storage for irrigation. These measures also support climate adaptation by preventing large fluctuations between water excess and dry periods.

6. Construct wetlands
Constructed wetlands can reduce nutrient runoff from the surrounding fields in its catchment by absorbing nutrients and storing them in biomass and sediments. However, effective nutrient retention is only possible if they are well dimensioned and well-managed, and if organic matter is regularly removed to avoid accumulation. Wetlands may also prevent flooding during heavy rain, store irrigation water and provide biodiversity benefits such as breeding habitats for birds.

7. Manage water
Effective water management helps ensure good yields, nutrient balance, and water protection. Measures such as controlled subsurface drainage, two-stage ditches, flood meadows, natural stream beds, and irrigation water storage help solids settle on the banks of ditches or streams and slow down water flow at high peaks to prevent over-flooding. Vegetation enhances this effect while also reducing erosion along banks.

MEASURES FOR MANAGING NUTRIENTS

Employing measures that monitor the amount, timing, and methods of fertilisation is key to reducing nutrient losses and improving nutrient use efficiency.

8. Practice balanced fertilisation
Balanced fertilisation is the key to good plant growth and the efficient use of farm resources. Soil analysis provides information on what is needed. Fertilisation should be planned according to plant needs, yield potential, and the phosphorus status of the soil on the field. Nutrient balance calculations can help farmers estimate how efficient their nutrient use is during growth seasons. Over the course of several years, such data provides a valuable overview of fertilisation plans so key improvements can be made.

9. Apply fertilisers at the correct time
When fertilisers are applied at the wrong time or in the wrong conditions, the risk of nutrient loss greatly increases. Manure and biogas digestate, similar to mineral fertilisers, should be applied to the fields during spring and early summer when growing crops directly take up nutrients. Adequate storage and spreading capacity are important factors that allow for this.

10. Use careful manure application techniques
When manure is spread there is a risk of nitrogen and phosphorous loss to the water and air. These emissions contribute to the eutrophication of water bodies, acidification, and can also have a negative impact on human health. This risk can be minimized through the use of incorporation, injection, or slurry acidification techniques. Manure spreading with incorporation or earthing equipment reduces the risk of



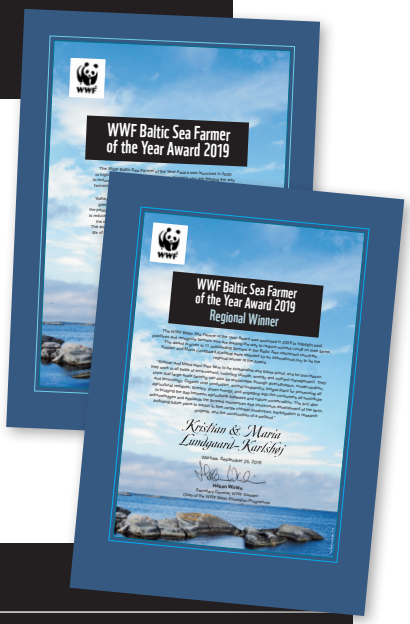
nutrient leaching to surface waters by moving nutrients away from the water flowing on the soil surface.

11. Use manure in plant production
The use of manure or manure-derived fertiliser products on plant production farms has the potential of substituting mineral fertilisers. Furthermore, it can increase and improve the organic matter content in agricultural soils for carbon storage capacity.

12. Practice precision farming
Uniform fertilisation can lead to part of the field getting too much fertiliser, and another part too little. Precision agriculture equipment and techniques minimize resource use and the risk of over-application. By looking at data of different parts of the field, management activities can be adapted to local conditions. This type of site-specific farming has a great potential to increase nutrient use efficiency and reduce environmental impacts.

Graphics: Brandline

FACTS ABOUT THE WWF BALTIC SEA FARMER OF THE YEAR AWARD



WWF created the WWF Baltic Sea Farmer of the Year Award in 2009, together with farmers' organisations from around the Baltic Sea, to show support for the agricultural sector and highlight good examples in the region.

The purpose of this award is to inspire farmers from the Baltic catchment to take an active part in fighting eutrophication and contribute to a healthy Baltic Sea. Applications are received from farmers practicing both organic and conventional farming and many different types of agriculture. The national winners are selected by juries in each country and receive a prize of 1,000 Euros. From the pool of national winners, an international jury selects a regional winner who receives a grand prize of 10,000 Euros.

Members of the national juries

BELARUS
Viktor Khalaydov, agricultural enterprise of the OJSC "Nesyata-AGRO"
Ekaterina Kuznetsova, Ministry of Natural Resources and Environmental Protection of the Republic of Belarus
Viktor Yermolenkov, the Department of Regional Development Management of the Academy of Management under the President of the Republic of Belarus

DENMARK
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Anne Sloth, Centrovice
Irene Asta Wiborg, SEGES

ESTONIA
Aveliina Helm, Estonian Seminatural Community Conservation Association (ESSCA) and University of Tartu
Silja Kana, Estonian Fund for Nature
Aleksei Lotman, Estonian Fund for Nature
Lii Sammler, Estonian weekly rural life newspaper "Maaleht"
Leho Verk, Head of Advisory Service, Rural Development Foundation

FINLAND
Jenny Jyrkänkallio-Mikkola, WWF Finland
Airi Kulmala, Central Union of Agricultural Products and Forest Owners of Finland
Tuomas Mattila, Kilpiä farm, national winner of the BSFYA 2018

GERMANY
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Michael Berger, WWF Germany
Reinhold Stauß, State Agency for Agriculture, Environment and Rural Areas of the German Federal State Schleswig-Holstein
Susanne Werner, Bauernverband Schleswig-Holstein e.V. - Farmers' Association

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Jānis Rozītis, Pasaules Dabas Fonds
Kaspars Žūriņš, Latvian Rural Advisory and Training Centre

LITHUANIA
Artūras Kaučikas, The Chamber of Agriculture of the Republic of Lithuania
Marek Krysztoforski, Agricultural Advisory Center in Brwinów
Nerijus Zableckis, Lithuanian Fund for Nature
Romualdas Zemeckis, Agriculture Academy of Vytautas Magnus University

POLAND
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Andrzej Podściański, Ministry of Agriculture and Rural Development
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Evgeny Genelt-Yanovskiy, Baltic Fund for Nature
Matteo Guida, Four Seasons Hotel Lion Palace, St.Petersburg
Viacheslav Komov, national winner of the BSFYA 2010, Poultry society, St.Petersburg and Leningrad Region
Marina Vilner, Baltic Fund for Nature

SWEDEN
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Martin H. Larsson, Ministry of the Environment

UKRAINE
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Dmytro Skrylnikov, Bureau of Ecological Investigations (BEI)
Alla Voicikhovska, Environment-People-Law (ICO)

Members of the international jury

MARKUS EEROLA, BSFYA 2015 regional winner, Palopuro Agroecological Symbiosis

IVAN GAVRAN, Organic standard LTD, Ukraine

BO GUSTAFSSON, Baltic Nest Institute, Stockholm University

ALDIS KARKLINS, Latvia University of Life Sciences and Technologies

ENN LOIGU, Water and environmental engineering, Tallinn University of Technology

DOROTA METERA, Bioekspert Ltd & International Federation of Organic Agriculture Movement (IFOAM)

KARIN STEIN-BACHINGER, Leibniz Centre for Agricultural Landscape Research

TROELS TOFT, Sector for Plants, Danish Agriculture and Food council

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Paper from responsible sources
FSC® C006329

Design and production: ODELIUS & CO, #19-6478 • odelius.se
Printed at Norrmalmstryckeriet, Stockholm, 2019

WWF Baltic Ecoregion Programme

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COOPERATION

We promote constructive interactions to create awareness, spread ideas and stimulate discussion among stakeholders and partners



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We represent the largest membership network in the region and are present in every country surrounding the Baltic Sea

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