

# AN AWARD FOR INNOVATIVE FARMERS

Many farmers take measures to reduce nutrient runoff to the Baltic Sea on their own initiative. With this award WWF wants to show how important their work is.

You are holding a booklet of solutions in your hands. The problem is already known: agriculture is responsible for much of the eutrophication in the Baltic Sea. The solutions to this problem are often mentioned but rarely applied, even though they can be simpler than you think.

### That is why WWF has introduced the Baltic Sea Farmer of the Year Award.

"We want to inspire farmers and decisionmakers in the agriculture sector by showing them concrete examples of positive things farmers are doing," says Lennart Gladh, WWF Sweden, one of the creators of the award.

Farmers often receive the blame for causing environmental problems, with little acknowledgement given to the initiatives farmers take that are making a positive difference. The award aims to raise awareness about all the good initiatives being practiced on farms all around the Baltic Sea to achieve sustainable agriculture.

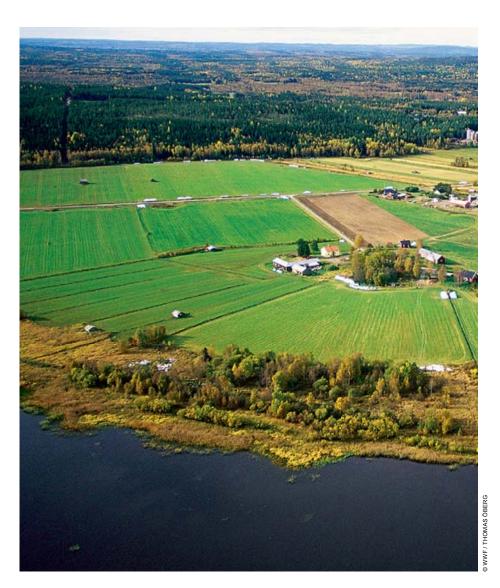
"This award is also one way to show how farmers and environmental groups can cooperate for a common cause," says Lennart Gladh.

To win the Baltic Sea Farmer of the Year Award, a farmer must have done something out of the ordinary to reduce runoff of phosphorus and nitrogen from their farm.

A national award is given to one farmer in each of the participating countries: Estonia, Finland, Latvia, Lithuania, Poland, Russia and Sweden. Among the national winners an international jury selects a regional winner, who receives the prize of €10,000.

### The first award in 2009 was given to Katariina Vapola and Jyrki Ankelo from Finland.

"The award gala was festive and memorable, and we had engaging discussions at the dinner table. As a winner it was easy to smile, especially with the prize money in the back pocket," they say.



This award is also one way to show how farmers and environmental groups can cooperate for a common cause"

After winning the competition, they have received publicity in Finland and been contacted by many people from the agricultural and environmental sectors who are interested in learning about their methods. Katariina Vapola and Jyrki Ankelo continue to develop their water protection measures and send a greeting to this year's winner.

"We will keep a close eye on the competition and our ears open for new good examples," say Katariina Vapola and Jyrki Ankelo.

On the following pages, you will meet the winners of the 2010 competition.

### FARMERS CAN SAVE THE BALTIC SEA

Farmers can help rid the Baltic Sea of algal blooms and dead zones, as there is great potential for reducing nutrient output from farms.

Eutrophication is another term for overfertilization or nutrient overload. It is what happens when excess nutrients such as nitrogen and phosphorus are transported from the land to the sea.

Eutrophication is the single largest environmental problem in the Baltic Sea, because it disrupts the functions of the whole ecosystem. Fish populations, seabirds as well as plants are affected.

One visible sign is the algal blooms recurring every summer. When the algae die they consume a lot of oxygen, which results in vast dead zones in the sea.

When an extensive assessment of waterborne inputs to the Baltic Sea was made in 2006, agriculture was found to contribute to almost 50 percent of the total nitrogen and phosphorus inputs. If we consider only the man-made nutrients, then agriculture stands for more than half of the nutrients that enter the Baltic Sea.

This may sound bleak, but in fact reveals a great promise: agriculture has the potential to drastically reduce nutrient overload in our sea. Farmers can become the rescuers of the Baltic Sea.

The award-winning farmers in this brochure have all decided to take steps towards sustainable agriculture. Not only have they helped the Baltic Sea ecosystem, they have also found new joy in their work and many of them have increased their profit in the process.



#### Sources

Helcom (2010): The extended summary of the main results of the Fifth Pollution Load Compilation (PLC-5)

Helcom (2009): Eutrophication in the Baltic Sea: Baltic Sea Environment Proceedings No. 115B

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### The negative effects of nutrient overload

Nutrient overload causes certain algae to grow at the expense of other species. This can be seen as a green or brown layer on the sea surface or a thick "soup" in the water - an algal bloom.

When the algae die, oxygen is consumed as they decompose. Areas with little or no oxygen are called "dead zones" and cover up to 100 000 km² of the bottom of the Baltic Sea.

### Other examples of negative effects:

- Species such as green and brown filamentous algae have grown at the expense of the perennial bladder wrack, which in turn has had severe impacts on the ecosystem.
- Algal blooms, some of them even toxic, are frequent in the summer.
- Water transparency has decreased by 2.5 3 meters.
- There has been a decrease in the number and spread of predatory fish, such as pike and pike-perch, in coastal waters.



# **SWEDEN Håkan & Teri Lee Eriksson**

"We enjoy the challenge of finding practical and profitable applications of new technology that can help move the farming industry forward," say Swedish winners Håkan and Teri Lee Eriksson.



Håkan Eriksson describes himself as an entrepreneur and technically interested innovator. "Trying new methods to create sustainable farming is what motivates me. Part of our daily routine is dedicated to finding practices to make worthwhile improvements to reduce nutrient losses and contribute to conservation of our environment," says Håkan Eriksson.

He emphasizes that all the employees at the farm deserve credit for the award. "They are very committed to doing the necessary work in documentation," he says.

#### Large database

The Erikssons and their employees at Wiggeby farm document everything they do during the year, field by field: how they cultivate the soil, how they fertilize and how much they harvest. They have done this since 1994 and have accumulated a large database, which serves as a tool for analysis.

Many changes in farming practices at Wiggeby have originated from the results in the analysis. The statistics illustrate the progress being made on reducing nutrient losses without reducing yields.

The same documentation is done by the other 16 farms in the network "Odling i balans" – Farming in Balance. Farms in this network develop and practice new methods and share experiences. They work in close cooperation with agricultural universities and organizations, forming a bridge between research and practical application.

Håkan Eriksson says, "We all need help from the world around us. Our farm's success is dependent on the shared knowledge from "Farming in Balance".

### N sensor

Both phosphorus and nitrogen utilization are monitored at Wiggeby. Recently a sedimentation pond was constructed to reduce phosphorus runoff. The farm aims to achieve nitrogen utilization of more than 80 percent. The most successful applica-



It takes

mistakes to

make progress."

tion of new technology on the farm for reducing nitrogen loss has been the N sensor.

This tractor-mounted device calculates the nitrogen content of the crop in real time by measuring biomass and color. The N sensor continuously controls the application dose of the fertilizer being applied in relation to the nitrogen content at that exact location of the field. This improves fertilizer utilization, and results in more even crop quality.

The N sensor has been profitable. However, it is a large investment and the Erikssons say that it is understandable that farmers are hesitant when it comes to investing in new technology. Farming is a business with small profit margins. Teri Lee Eriksson remarks, "It's so discouraging to invest in a new technology that is not fully developed and realize that it was the wrong thing. Not all of our investments have been good ones.

**Progressive conventional farming** 

Media often paints the picture of a conflict between ecological and conventional farming. The Erikssons do not like this illusionary conflict. They are convinced that both sides have a lot to learn from each other. Both methods of farming have nutrient losses.

"I am convinced that there are many pro-environmental improvements that can easily be incorporated in conventional farming practices. What excites me is the potential! A change of, say, ten percent in conventional farming would benefit the environment substantially since the majority of agriculture products in the world are derived from conventional farming," says Håkan Eriksson.



The N sensor continuously measures the nitrogen content of the field and adjusts the application dose of fertilizer being applied at that exact location. The N sensor is an expensive investment, but several farmers can cooperate and share the costs of one sensor.

### Håkan & Teri Lee Eriksson

Location: Wiggeby farm on Ekerö island in Lake Mälaren

Type of farm: Grains, oilseeds, flax, field peas and haylage.

### International Jury's Motivation for the Regional Winner of the Baltic Sea Farmer of the Year Award 2010

The jury awards Håkan and Teri Lee Eriksson for their dedicated commitment to showing how a modern farm can apply environmental measures to reduce nitrogen and phosphorus losses. By using modern and innovative techniques that are being systematically documented, nutrient losses have been significantly reduced. It is the jury's belief that the Erikssons have really gone the extra mile to save the Baltic Sea, and that the measures they have taken can be replicated by many other similar farms in the Baltic Sea region.

- · Everything that is done on the farm is documented in a database that is used as a tool for follow-up analysis.
- · An N sensor helps in applying an accurate dose of fertilizer on the crops according to instant calculations based on "in field" readings.
- Openly shared experiences with farmers in the organization "Farming in Balance".
- Permanent grass buffer zones, 6 meters wide, along major drainage ditches.
- In recent years the number of hectares used for cultivation of grass for haylage has increased.
- The aim is 75 percent of the farm's tilled land to be planted with a catch crop over the winter to minimize surface runoff.
- A sedimentation pond has been created to reduce phosphorus seepage into the aquatic environment.



### **ESTONIA Toomas Jaadla**

Estonia has vast areas of deserted peat fields that are constantly leaching nutrients to the sea. But these peat fields can be cultivated and the leaching reduced. The Estonian winner, Toomas Jaadla, shows how this can be done.

On Marjasoo farm, Toomas Jaadla looks out over his fields of blueberry and cranberry bushes. The berries give his family their income. Below ground the bushes do their share to help the environment of the Baltic Sea. The roots and rhizomes fixate the peat on which they are cultivated.

On other abandoned peat fields, where nothing is cultivated, the peat erodes into waterbodies at a rate of about 1000 m<sup>3</sup>/ha every year. These thousands of hectares of peat fields, abandoned since the Soviet

era, have been and still are an unsolved ecological problem.

A big advantage of cultivating on peat is that the peat provides the bushes with all the nutrients they need. No extra fertilizer is required.

"I hope that I can inspire more people to do this kind of farming," says Toomas Jaadla.

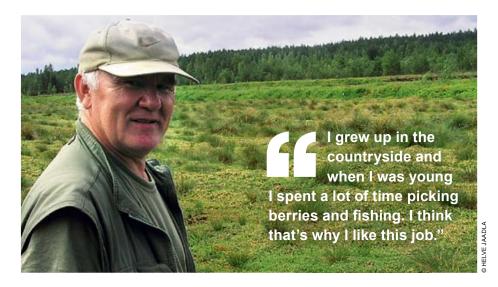
Being the first in Europe to cultivate lowbush blueberry on abandoned peat fields, he has already become a source of inspiration to others. Similar farms have been established in Estonia and Latvia. Toomas Jaadla's farm operates as a training centre for Räpina Gardening College and the Estonian University of Life Sciences has run field experiments on the farm for ten years.

Toomas started cultivating cranberries in 1988. He got the idea when he heard about Estonian peat being sold to greenhouses in the Netherlands.

"I started thinking about how the peat could be used here in Estonia instead," says Toomas Jaadla.

As a young student he had worked on peat fields during school holidays, but he had no previous experience of farming. Being a building engineer, his training has been helpful. "I know a lot of chemistry," says Toomas. But he had to learn many things about farming from scratch.

"I grew up in the countryside and when I was young I spent a lot of time picking berries and fishing. I think that's why I like this job. I get to do interesting work in the countryside," says Toomas Jaadla.





### **Toomas Jaadla**

Location: Marjasoo farm, Rannu

Type of farm: Berry production: lowbush blueberry, common cranberry

### Jury motivation

The Estonian government has not adopted regulations to stop the erosion of peat from abandoned peat mines. Despite this, Marjasoo farm is innovatively combating peat erosion with fields of lowbush blueberry. The effects of this innovation is well supported and validated by relevant research institutions. The concept and the method are well disseminated in the Baltic Sea region.

#### **Key practices**

Recultivating deserted peat mines avoids the erosion of residual peat.
 The estimated effect is the annual reduction of peat erosion to water bodies of up to 1 000 m³/ha. With the farm's current coverage of 16.5 ha, the farm may avoid annual erosion of up to 16 500 m³ of peat.



# FINLAND Teppo Heikkilä

"I have always been considering environmental issues. It is the most important aspect of everything I do as a farmer," says Finnish winner Teppo Heikkilä.



When he started farming in 1996, Teppo Heikkilä had never studied agriculture, only engineering and environmental studies. But the step to become a farmer came naturally, he says, because his interest in environment and agriculture are two sides of the same coin. Teppo Heikkilä's farm has been organic from the start.

"It has always been important for me to think about the consequences of my work. Our agriculture here in southern Finland affects the Baltic Sea so heavily and we need to avoid these effects," says Teppo Heikkilä.

He regrets that other Finnish farmers do not seem to share his views.

"The attitude is somewhat against environmental effort here in Finland. That is a problem in our system. We are not so ready to make changes in our methods," he says.

Teppo believes that the organic share of the market will continue to grow in Finland, but he says that both producers and consumers need to learn more about the environmental effects of food production.

The Finnish jury praises Teppo Heikkilä for using a wide range of methods. There is a comprehensive dry manure system with covered manure pits, permanent bedding base in the cattle housing, and all manure and urine is being absorbed in peat. Fields that are kept green during winter with catch crops to reduce runoff are some of the other measures.

Teppo mentions different economic benefits from preventing nutrient loss: less use of fertilizer is one benefit, and financial support from the EU for organic farming is another. For instance, he gets EU support for not cultivating fields next

Teppo Heikkilä says, "I think this competition is an excellent initiative. I hope it will get great publicity. I am proud to be an example of a producer of environmentally friendly food, and I hope that organic farming will become more popular in the future."



Our agriculture here in southern Finland affects the Baltic Sea so heavily and we need to avoid these effects."

### Teppo Heikkilä

Location: Loimaa, in the catchment area of river Loimijoki

Type of farm: Organic grain and organic beef cattle keeping.

### Jury motivation

Teppo Heikkilä has an exemplary farm that succeeds in combining profitable major production with a vast variety of environmental measures. The list of water protection measures is highly impressive. On top of that, Heikkilä is managing magnificent traditional biotopes, and he pays careful attention to animal welfare and energy efficiency procedures.

- · Extensive grassland production, with catch crops that are used to reduce runoff during winter.
- · Comprehensive dry manure system.
- · Manure-spreading only during the growing season.
- · Deep buffer zones at the riverside.
- Use of undersown crops.
- · Calculation of nutrient balance.
- No artificial fertilizers, due to organic production.

# LATVIA Rihards & Vanda Valtenbergi

Ponds that catch water runoff from fields do not only prevent nutrient loss. They can also be used for fish cultivation – and to reduce fuel expenses.



"We are surprised and glad that we won this award! It gives us a responsibility to find and spread new solutions for environmentally friendly agricultural activities," says Vanda Valtenberga.

When Rihards and Vanda Valtenbergi took over the farm in 1992, they renewed ponds that had been there in the 1930s and dug new ones. The aim was to collect rainwater from the fields to give their cattle free access to drinking water.

When the cattle herd grew bigger, new ponds were created.

"That way, we didn't have to provide the water to these groups with a tractor. The investments paid off because the expenses for fuel and the salary of a tractor driver were saved," says Rihards Valtenbergis.

The ponds have led to environmental benefits for the Baltic Sea as well, because they reduce nutrient runoff and preserve biodiversity.

The Valtenbergi stock the ponds with fish. Nutrients are assimilated by the fish and water plants. Besides cleaning the water, the organic aquaculture also provides additional income. Nutrient sediment is collected at the bottom of the ponds and is then used as a crop fertilizer.

Another measure on the farm is crop rotation. Legumes provide the soil with nutrients, and a large part of the land is





covered with catch crop during the winter to reduce runoff. Soil analysis and a farm field history are used to calculate the appropriate amount of manure to spread.

The Valtenbergi say they have learned about the problems of eutrophication from the press and TV.

"To decrease eutrophication we need to increase the quantity of the sustainably managed agriculture areas. In conventional farms, the amount of artificial fertilizers needs to be justified with soil analyses," they say.

The Valtenbergi conclude, "We want to leave a clean environment for coming generations. That is more important than the forgone income from short-term intensive farming. It is important that we don't impoverish the soil and water resources, including the Baltic Sea."

### Rihards & Vanda Valtenbergi

Location: Valti farm in Skrunda municipality.

Type of farm: Beef cattle, breeding fish, pigs, some crop production.

### Jury motivation

The Valti farm utilizes sedimentation ponds in a creative and productive way where the collected nutrients are used to sustain organic aquaculture. This, in addition to many other measures such as crop rotation and a closed mineral cycle, sets an admirable example of how farmers can fight eutrophication.

- Six ponds catch water runoff from the fields. Nutrients are assimilated by fish. Nutrition sediment is collected and used as fertilizer.
- Closed nutrition and mineral cycle. Manure from livestock is used as fertilizer.
   Legumes provide the soil with nitrogen.
- Soil agro-chemical analysis and field history about all the fertilization and crop yield on every field are used to calculate the appropriate amount of manure to spread.
- Crop rotation ensures that part of the tilled land is planted with catch crop over the winter to reduce runoff. The "green area" on the farm is 80 percent.

### LITHUANIA Jonas Sidaravičius

"Being environmentally friendly is the main purpose of my farm. This prize will encourage my further work to sustain a harmony between wildlife and agricultural activities," says Jonas Sidaravičius.



Lithuanian winner, Jonas Sidaravičius, has a background as a forestry engineer.

"It is an inner desire for me to live in a beautiful and healthy environment with sufficient space for wildlife - birds, frogs, bees and others – and with the personal benefits of growing healthy food for my family and other people. Those were my reasons for taking up farming from the very beginning," says Jonas Sidaravičius.

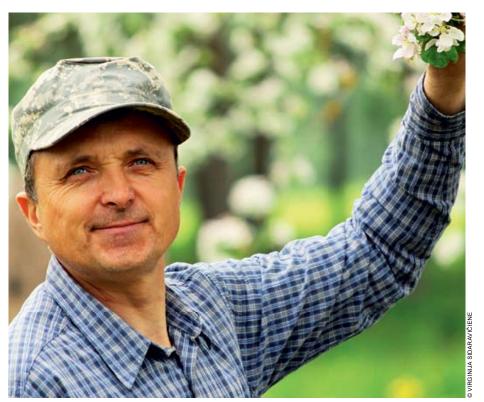
On the farm, he has planted buffer strips of trees and shrubs to reduce the wind and rainfall effects on the soil. Livestock manure is piled under the cover of plastic wrap to minimize evaporation of ammonia. During the winter manure is stocked in the barn, so it is excluded from the environment.

On the shores of the lake, natural and seeded grasslands are kept to reduce the runoff into the lake. Biodiversity is ensured by maintaining a clean environment, abundant greenery and no use of pesticides.

Jonas Sidaravičius encourages other farmers to adopt his methods. The effect of increased nutrient output from other farms is something he has seen firsthand.

"I have been watching the shores of the lake for a long time. During that time a lot has changed: the reeds have spread along the shores and the process of lake overgrowth has started," he says.





It is an inner desire for me to live in a beautiful and healthy environment with sufficient space for wildlife."

### Jonas Sidaravičius

Location: Paterai village, located between the lakes of Snaigynas and Skaistis.

Type of farm: Sheep: livestock and wool. Grain, hay and straw. Forestry production.

#### Jury motivation

The winner implements very diverse measures on the farm and the jury is also impressed by his personal engagement. The farmer is not ecologically certified, which means that almost all the measures are on a voluntary basis. This farm can serve as a good example for other farmers on how some measures can be made by quite simple means.

- The barn has a clay foundation, thus sheep urine does not penetrate into the groundwater and is instead absorbed by litter and manure.
- · Sheep manure is kept in the barn during winter and placed in compact piles outside during spring, covered with plastic wrap to reduce nitrogen losses. In October manure is spread on the fields and ploughed in.
- · A line of trees stretching 200 meters was planted to reduce the impact of rainfall on the arable land and to reduce runoff.

# POLAND Lidia Ordysińska

"For me, the biggest prize is to have an opportunity to encourage conservative farmers to change their views in favor of organic farming," says Lidia Ordysińska about her victory in the Polish competition.

It was the nearby lake Miedwie that convinced her that nutrient runoff must be reduced. At the time when Lidia Ordysińska was a student, blue-green algae multiplied on an unusual scale and all creatures disappeared from the lake.

"There was a controlled economy in Poland and nobody realized how risky it was to use artificial fertilizers on the huge state-owned farms," says Lidia Ordysińska.

Now, 27 years later and after some efforts to reduce nutrient input to the lake, Baltic and European whitefish have returned to the lake.

"This has convinced me that organic methods are the best solutions and that the use of fertilizers should be limited on farms," says Lidia Ordysińska.

Earlier, as a graduate of the Agricultural Academy, she believed that the most important issue in agriculture was productivity. After a few years, however, she started to think about the biological value of her products and in 1998 she started implementing organic farming methods.

Impermeable concrete floor and slurry tanks secure the farm's manure storage without leaching. The soil stays under plant cover all year round and midfield afforestations limit soil erosion. The local community has worked hard to attain a new biological sewage treatment plant, to which the farm household has been connected.

Farmers are normally vulnerable to rising prices of agricultural products such as pesticides and fertilizer. But as an organic farmer, Lidia Ordysińska does not buy any artificial fertilizer or other chemical products.

"The labor costs are certainly higher in organic farming but overall costs are lower. My farm is less dependent on external factors because I am in possession of my own processing plant," says Lidia Ordysińska.

She also says the health of her animals has improved after switching from traditional farming, something that has lowered her veterinary costs.

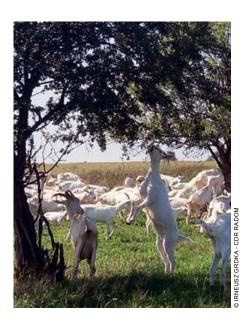
Lidia Ordysińska gives lectures and organizes open farm days to propagate the ideas of organic farming and water and soil protection. She has noticed that winning competitions such as the Baltic Sea Farmer of the Year Award increases the



This has convinced me that organic methods are the best solutions and that the use of fertilizers should be limited on farms"

number of students who want to do internships at her farm.

"I try to show that farmers can achieve excellent results by returning back to nature, and that economic success depends not only on quantity but also on quality," she says.



### Lidia Ordysińska

Location: Wołczkowo village, near Szczecin

**Type of farm:** Crops: cereals, bulb and root plants. Dairy production of goat's milk and cheese. Organic cultivation.

### Jury motivation

Lidia Ordysińska has taken many measures on her own initiative, such as building manure plates and slurry tanks and establishing buffer strips from willow trees. These efforts inspire by going beyond what is done on the average Polish family farm. The farmer popularizes her experience to other farmers, agriculture advisors and students.

- · No artificial fertilizer is used, only organic manure and compost.
- The ground is under plant cover all year round.
- Animals housed on a deep straw bed; basalt dust is mixed into the manure.
- Buffer strips are created along the fields (400 willows).

# RUSSIA – Vyacheslav Komov

Vyacheslav Komov's farm is situated by the shoreline of a small river. Preventing manure from discharging into the water is difficult – but it is a high priority.



When he began working on his farm in 1998, Vyacheslav Komov decided straight away that he would design the farm to reduce water consumption. The stalls, coops and cages of his more than 600 animals can all be cleaned without using any water.

"This makes it possible to reduce water consumption and farm expenses as a whole. At the same time, these methods enabled me to reduce the threat of eutrophication to our local rivers and lakes," says Komov.

Sawdust is used in the cage housing as one way of preventing manure leakage. The mixture of manure and sawdust is sold to other small farmers and garden owners in surrounding villages, further preventing the waste of nutrients.

Vyacheslav Komov regularly reads scientific articles on eutrophication and discusses the problem with his colleagues in national or international conferences and agriculture exhibitions. For the last few years, he has been engaged in local social activities to spread environmentally friendly farming.

As the chairman of "St Petersburg Association of Animal Husbandry Farmers" he shares his ideas and experiences with other members of the association.

"I hope new farmers in Russia will follow the European examples and experiences of sustainable farming practices," he says.

Vyacheslav Komov sees the Farmer of the Year Award as a good incentive to continue working with sustainable farming.

"I am proud to represent my business and to receive this acclaim. This is a good stimulus for future progress."

I hope new farmers in Russia will follow the European examples and experiences of sustainable farming practices."









### **Vyacheslav Komov**

Location: Lembolovo village, close to Saint Petersburg.

Type of farm: Dairy production, eggs, animal breeding. Poultry, rabbits, goats, sheep and pigs. Organic farming.

### Jury motivation

This farm has pioneering experience in organic farming and environmentally friendly management. Vyacheslav Komov is always ready to learn more about sustainable farming.

- · Cage housing on sawdust litter.
- · Stall, coop and cage cleaning without water.
- Choosing breeds of animals with particular environmentally friendly characteristics.





# **COOPERATION IS THE WAY FORWARD**

We hope this competition will encourage the development of new partnerships between farmers, authorities and environmental NGOs.

The conditions for agriculture vary between countries with different environmental, economic and legislative prerequisites. The winners of this competition show that improvements are possible in every context.

As described in the farmer interviews, measures can range from digging ponds and constructing solid barn foundations, to using N sensors and creating databases. No matter the point of departure,

there are constructive measures that can achieve more sustainable farming practices

There are many methods to prevent manure leakage on farms with livestock and to fix nutrients in the soil on crop farms. The winners in this competition have shown the effectiveness of some of their methods. We hope they will inspire others in moving towards more Baltic-friendly farming practices.

We also hope that this competition will open doors to new partnerships between farmers, authorities and environmental NGOs in the region. There are already some international collaborative projects to fight eutrophication, such as the Baltic Deal and Baltic Compass briefly described on this page. We look forward to more cooperation in the future!

### Other projects to reduce runoff from agriculture

#### The Baltic Deal

The Baltic Deal is a flagship project within the EU Strategy for the Baltic Sea Region (SBSR). The objective is to reduce agriculture's contribution of nutrients to the Baltic Sea using a cost-efficient and sustainable approach that is attractive to farmers. The projects focus is to enhance agricultural advisory services and raise farmer competence in efficient water and nutrient usage around the Baltic Sea.

Baltic Deal was initiated by five Baltic Sea region farmer federations. More than 30 associate partners constitute the larger co-operative network. The total project budget is approximately €3.7 million for three years.

Website: www.balticdeal.eu

#### **Baltic Compass**

Baltic Compass is a project that runs from 2009 to 2012 and is financed by the European Union as a strategic project for its support to investments and policy adaptation. The 23 partners represent national authorities, professional and industrial organizations, scientific institutes and innovation centers from Baltic Sea Region countries.

Baltic Compass is a response to the need for a transnational approach to reduce eutrophication of the Baltic Sea. The project will particularly aim to remedy the gaps in the stakeholders' resources to combat eutrophication and the lack of trust between the environmental and agricultural sectors.

Baltic Compass stands for Comprehensive Policy Actions and Investments in Sustainable Solutions in Agriculture in the Baltic Sea Region.

Website: www.balticcompass.org

### A VISION FOR SUSTAINABLE AGRICULTURE

WWF has a vision for a better rural Europe. Steps must be taken to make this vision a reality.

The way that the winners presented in this brochure have taken environmental action themselves, without waiting for new legislation, is promising. However, one thing is clear: The EU's Common Agricultural Policy (CAP) promotes practices that are not sustainable and it has to be reformed.

Over the past fifty years, European farms have grown big and specialized. Mixed farming is not as common anymore and this causes problems. Extensive EU subsidies are given to a minority of European farmers and little is used for promoting environmental practices and a vibrant rural society.

WWF calls on European and national decision-makers to work in partnership with environmental NGOs, farmers' representatives and others to develop a Common Environmental and Rural Policy (CERP) for implementation in 2019.

Food and other commodities that can be sold to customers should not be subsidized by public funds. But farming also produces public goods which farmers cannot charge a price for. The regulation of water and soils and the maintenance of landscapes are key examples. Delivering public goods should be the primary purpose of a reformed CAP in the future.

### Some key principles that should underpin all future rural investment

- The Polluter Pays Principle. All the beneficiaries of public payments should be able to demonstrate compliance with the standards established by the EU, such as the Nitrates Directive and national legislation.
- **Public Payments for Public Goods.** Public money should only be used for the provision of public goods. The definition of public goods should include environmental functions such as sustainable water management, carbon sequestration and preservation of biodiversity, as well as non-environmental benefits such as rural employment and public access to rural areas.
- Payments should be linked to the delivery of clear objectives and targets. These objectives should reflect the environmental and socioeconomic needs of rural areas.
- Information on payments should be available in the public domain.
   This ensures that the use of public funds is transparent and open to public scrutiny.

Read more about our vision of sustainable subsidies: http://bit.ly/CAP-reform



WWF / SAMPSA

# MEASURES THAT CAN REDUCE NUTRIENT LOSSES ON FARMS

Here are the main measures practiced by the winners of the Baltic Sea Farmer of the Year Award 2009 and 2010.



### **Animal production**

- Unfortunately, many farms around the Baltic Sea still store manure directly on open ground. This practice should be avoided. Instead, manure should be stored in a way that prevents leaching before the manure is spread on the fields.
- Having a solid barn foundation for example made of clay or concrete – prevents urine from livestock from penetrating into the groundwater. It can be absorbed by litter and manure on the barn floor.
- One way to handle manure is to keep it in the barn during winter and place it in compact piles outside during spring, covered with plastic wrap to reduce nitrogen (ammonia) losses.
- Another method is to store manure in tightly closed containers to reduce gas emissions.
- Manure storage should have an impermeable base, such as concrete.
   Manure can be stored in slurry tanks before spreading it on the fields.
- Adding basalt dust to manure absorbs ammonia.
- Reducing the number of animals per hectare helps to ensure that the soil can absorb all the manure.
- Cleaning stalls, coops and cages without water prevents runoff to surrounding waters.



### Crop production

- Crop rotation, intercrops and undersown crops keep a good nutrient balance in the soil. In crop rotation, nitrogen-fixating plants ensure that subsequent plants have access to biologically fixated nitrogen.
- Keeping the soil covered by plants all year round even during winter fixates nutrients to the soil surface.
- Permanent grass buffer zone along major drainage ditches, riversides and lakes reduces runoff from agriculture.
- Likewise, trees can be planted around fields to reduce the impact of rainfall on arable land and to reduce runoff.
- Documenting everything that is done on the farm in a database provides a tool for follow-up analysis.
- Calculation of nutrient balance as well as agro-chemical analysis of the soil ensures the appropriate amount of fertilizer is used.
- An N sensor helps in applying an accurate rate of fertilizer on the crops according to instant calculations based on "in field" readings.
- Sedimentation ponds reduce phosphorus seepage into the aquatic environment. They can also be used for aquaculture.

- Manure should only be spread during the growing season.
- Recultivating deserted peat mines avoids the erosion of residual peat.
- Manure should be ploughed into the soil right after it has been distributed.
- Fertilizer can be procured in innovative ways. In Estonia, for instance, a farmer cooperates with a cheese factory and receives the residues from the factory's wastewater treatment plant.
- Direct seeding of grasslands for silage and hay – i.e. seeding without previous tillage – minimizes soil disturbance and reduces erosion.





# FACTS ABOUT THE BALTIC SEA FARMER OF THE YEAR AWARD

The Baltic Sea Farmer of the Year Award was created in 2009 by WWF together with Swedbank, in partnership with the Baltic Farmers Forum on Environment and farmers' organizations from around the Baltic Sea.

The competition is held annually and is intended to inspire farmers from the entire Baltic region to take an active part in combating eutrophication.

Applications have been received from farmers within both organic and conventional farming, representing many different types of agriculture, including animal breeding, crop production and agrotourism. The national winners have been chosen by WWF and our partner orginizations around the Baltic Sea, in cooperation with farmers' and advisory organizations and, in some cases, the Ministry of Agriculture in respective countries.



### Members of the national juries

#### **ESTONIA**

Meelis Annus, member of jury, Swedbank Kristjan Piirimäe, Eutrophication Expert, Estonian Fund for Nature - ELF Indrek Rohtma, Advisor, Estonian Farmers' Union - ETKL

#### FINLAND

Tarja Haaranen, Environment Counsellor, Ministry of the Environment Johanna Ikävalko, Head of Environmental Affairs, MTK Lauri Kontro, Editor-In-Chief, Maaseudun Tulevaisuus ("The Rural Future") Antero Nikander, Senior Inspector, Ministry of Agriculture and Forestry Sari Peltonen, Plant Product Group Director, The Association of ProAgria Centres

Katariina Vapola and Jyrki Ankelo, regional winners 2009, Farm Vapola, Kalanti Finland

**Sampsa Vilhunen,** Head of Marine Programme, WWF Finland

Helena Algars, Attorney with the Central Union of Swedish-Speaking Agricultural Producers in Finland (Svenska Lantbrukarnas Centralförbund SLC)

#### LATVIA

**Ugis Rotbergs**, Pasaules Dabas Fonds **Ilze Skudra**, Latvian Rural Advisory and Training Centre

**Kaspars Zurins**, Latvian Rural Advisory and Training Centre

#### **LITHUANIA**

**Rovena Budrevičiūtė**, Agriculture Ministry of Lithuanian republic,

Agri-environment and ecological farming department (LR Žemės ūkio ministerijos Agroaplinkosaugos ir ekologinio ūkininkavimo skyriaus vedėja)

Alvydas Grigaliūnas, Chamber of Agriculture of republic of Lithuania, Self-government and public relations department (LR Žemės ūkio rūmų vicedirektorius savivaldai ir ryšiams su visuomene)

Pranas Mierauskas, Member of the Board of Lithuanian Fund for Nature (Lietuvos gamtos fondo valdyba) – chairman

Edita Mikašauskienė, Lithuanian Farmer Union (Lietuvos ūkininkų sąjunga)

**Kristina Narvidienė**, Lithuanian Agriculture Advisory Service (Lietuvos žemės ūkio konsultavimo tarnyba)

### **POLAND**

Anna Litwinow, Agricultural
Advisory Centre in Brwinow Branch
Office in Radom – member
Paweł Mikusek, Ministry of
Environment – member
Michał Rzytki, Ministry of Agriculture
and rural Development – chairman
Marta Szumańka, Ministry of Agriculture and rural Development – member

#### RUSSIA

Sergey Rezviy, expert and coordinator of international agricultural projects, Baltic Fund for Nature, Russia
Rustam Sagitov, director of the Baltic Fund for Nature, chairman of national IUCN committee (Russia)

Suvorovtsev Vladimir, specialist of North-Western Research institute of agricultural economical development, Russia Evgeny Genelt-Yanovskiy, communication officer of WWF Baltic Ecoregion programme at the Baltic Fund for Nature

#### SWEDEN

**Lennart Gladh,** Baltic Project Coordinator, WWF Sweden

**Sindre Langaas,** Project manager and expert, The Federation of Swedish Farmers (LRF)

Fredrik Wulff, Professor Emeritus in Marine Systems Ecology, Stockholm University

# Members of the international jury

Mats Abrahamsson, Director, WWF Baltic Ecoregion Programme Johanna Helkimo, Centre for Economic Development, Transport and the Environment of Northern Ostrobothnia Nick Jacobs, European Editor, Agra Europe

**Professor Enn Loigu**, Institute of Environmental Engineering, Tallinn University of Technology

Lars-Göran Pettersson, The Federation of Swedish Farmers (LRF)

Hans Wennberg, Responsible for segment Forestry and Agriculture, Swedbank

### **SPONSOR**

Swedbank is the sponsor of the Baltic Sea Farmer of the Year Award.

"Last year's competition was a success. It drew attention to the important issue of eutrophication and highlighted good examples of things that are being done," said Claes Fagerström, Group Sponsorship Manager of Swedbank.

Swedbank is significantly involved in farming: the bank has many customers in the agricultural and forestry sectors. The bank's origins can be traced to the early 20th century and the Common Agricultural Funds which provided the agricultural sector with financial resources.

This link to agriculture remains. As an organizer of events and seminars as well as a developer of products and services to the agricultural sector, Swedbank helps farmers to finance their business.

"We are very committed to improving the quality of the Baltic Sea. We are very pleased with the attention this competition is getting because it gives our experts in agriculture and forestry an extra boost," Claes Fagerström continued.

Swedbank's home markets are Sweden, Estonia, Latvia, and Lithuania. Swedbank also has a presence in Finland and Denmark. The Baltic Sea Farmer of the Year Award is just one of many environmental projects Swedbank is involved in.

"The Baltic Sea is one of our most prioritized environmental projects. It is an inland sea that is currently in a very bad condition. Since our home markets border on the Baltic Sea the environment in this region is important to us," Claes Fagerström went on to say and concluded that:

"It is positive that the Baltic Sea Farmer of the Year Award is so widely appreciated. I hope we can continue working with this competition to create a more sustainable Baltic Sea region."



### **PARTNERS**





Lithuanian Fund for Nature



**Pasaules Dabas Fonds** 



in association with

### IN COOPERATION WITH

The Baltic **Farmers** Forum for the **Environment** 











**VALSTIECIU LAIKRASTIS** 



# **WWF Baltic Ecoregion Programme**



### **DELIVERING RESULTS**

WWF Baltic Ecoregion Programme is an active and effective agent of change in the conservation and sustainable management of the Baltic Sea

### **COOPERATION**

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



## REGIONAL NFTWORK

WWF Baltic Ecoregion Programme represents the largest membership network in the region and is represented in all the countries surrounding the Baltic Sea

We are and continue to be a watchdog that monitors how governments manage our common resource the Baltic Sea



#### Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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### Please contact us for more information!