

V4-Moldova ECO-AGRO-FOOD – New prospect of agriculture

Experiences in Slovakia, Czechia,
Hungary, Poland and Moldova



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Contributors

Authors

Jana Vaverčáková, Slovakia

Marie Křiváková, Czechia

Géza Gelencsér, Hungary

Urszula Sołtysiak, Poland

Zuzana Jezerská, Slovakia

Editing and layout design

Klára Tóthová, Slovak Centre for Communication and Development

Pictures

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Introduction

Agroecology and related environmentally friendly agri-food industry represent a paradigm shift for agriculture and food processing in order to combat climate change, rebuild ecosystems and protect water, soil and all other resources that agricultural production depends on. Encouragement should be given to farmers who undertake to reconsider their practices and relationship with the ecosystem. Reducing chemical inputs, introducing more variety into rotation and conservation agriculture and preservation of biodiversity are steps towards an agroecological transformation of all farms in Europe.

Many businesses practice organic farming or apply other ecological methods in production that are not covered by a national or EU label. Diverse support schemes can be put in place to foster small-scale and environmentally friendly production and support their economic viability. Short supply chains directly connecting consumers and producers allow for the profitability and building up the added value of such small producers. Local goods governance systems, like regional marks, bring together various actors, ensure quality and foster the use of local products.

It is often questioned whether the agroecology, local chains and small-scale food production have the capacity to feed the inhabitants of the world. In Europe, recent work by the Institute for Sustainable Development and International Relations (IDDRI) shows that it will be possible to feed all of Europe's population by 2050 through a gradual agroecological transformation, with a zero carbon emissions target.

This handbook presents the different approaches and models applied in V4 countries and Moldova. It is part of a project that was designed to improve knowledge and build capacities of small agricultural and food businesses to apply agroecological farming methods and technologies for production of innovative, healthy and environmentally friendly agri-food products.



Initiatives in partner countries

Slovakia: Individual Approaches to Start Nature-Friendly Production

Direct sales - or "yard sales" involve the sale of small quantities of primary products by primary producers. Farmers are exempted from the strict hygiene regulations of the European Union, however, they cannot sell just anything. Such sale facilities and farms also have obligations and must, for example, register and be inspected by the Veterinary and Food Administration. As presented by the following examples from Slovakia, healthy and valuable food can be prepared at home or in a small company and sold "from the yard".

Berta Stašková

Originally from the city, she moved 15 years ago to join her husband in the countryside, where they own 5 hectares of meadows and 2 hectares of forest. As foresters, whose life is very closely linked to nature, they decided to manage the surrounding grassland in a nature-friendly way and to use it sensitively and sustainably. Part of the meadows is in a state of uncut honey meadow, which provides grazing for their bees, but is also the source of many species of medicinal plants. In other parts they grow various crops and medicinal plants.



Berta Stašková on the market
Photo: archive Berta Stašková)

After several years of producing for their family, loved ones and friends, in 2019 Berta Stašková registered as an official backyard vendor. She produces syrups made from herbs and fruits, jams and marmalades, dried herbal mixtures, fruit and vegetable juices. The range of products is not always the same, depending on the harvest in a given year.

They offer their produce for sale directly in their 'backyard', but this is not very efficient, as they live in a location almost cut off from busy life, without frequent movement of potential buyers. However, this disadvantage has become their competitive advantage, as they market their produce without the use of any pesticides, despite the fact that it does not have the official label of organic production.

Berta Stašková sells its products in different markets, which also serves as a good marketing tool. Customers can then easily find it thanks to the contact details on each label. By arrangement, she then delivers orders directly to the customers' homes. It may seem complicated and inefficient, but it works.



**Products of
Berta
Stašková –
herbal salts,
fruit sirups,
tomato juice**
Photo: archive
Berta
Stašková)

Andrej Homola

He represents the fourth generation of herbalists; he is part of a small family business that produces tinctures and teas from medicinal plants grown in organic quality on its own eco-farm Odorica near Levoča.

Andrej Franko, the founder of the company, has been involved in the collection, cultivation and processing of medicinal plants, especially plant adaptogens, all his life. When he retired after 1989 and got the land of his parents Anna and Ján Franko, he decided to return to the small farm Odorica, where he was born. He created his own recipes for the processing of medicinal plants and with his daughter Zuzana Homolová founded the company AFRA in 1993.



Andrej Homola on the market (Photo: archive Andrej Homola)

Since 1996 the company has been registered in the system of controlled organic agricultural production and holds BIO certificates for both the cultivation of organic products and the production of organic food. At the beginning it was possible to buy their products only in one shop - AFRA Teahouse in Žilina. Gradually the interest increased and since 2006 they started to deliver their goods also to other shops, teahouses and pharmacies all over Slovakia. Over time, these products have expanded and include pillows filled with herbs.

The way of growing and processing medicinal plants has remained unchanged until today. From seed to adult plant, through harvesting, processing to final labeling, only 2-3 people are involved in the process, guaranteeing the highest quality of their products. All products are marketed with the approval of the Public Health Office of the Slovak Republic.



In addition to growing medicinal plants, the farm at Odorica also raises mangalitsa. Together with her mother Zuzana Homolová, they organize the annual Eco-camp where participants take part in the daily life of the farm and every day they have activities focused on learning about nature, ecology, recycling, making various items such as magnets, origami and various other interesting things.

Zuzana Homolová among the herbs in farm Odorica (Photo: archive Andrej Homola)

Czechia: Establishment of Regional Trademark

The White Carpathians are a unique landscape on the Moravian-Slovakian border, an unusually varied and rich nature with thousands of hectares of unique flowery meadows with massive solitary oaks, extensive forests and limestone cliffs. A landscape with well-preserved elements of the original pastoral settlement, including folk traditions and culture. A mosaic of forests, meadows, gardens, which is also complemented by preserved orchards with old varieties of fruit trees.

The White Carpathians were declared a Protected Landscape Area in 1980 and a UNESCO Biosphere Reserve in 1996. It covers an area of 746.9 km² and extends over a zone of approximately 80 km. The richness of the flora and fauna here is due not only to its geographical location, with both Carpathian (mountain) and Pannonian (thermophilic) features, but also, and above all, to the careful farming practices and regular mowing or extensive grazing. The origin of the meadow communities of the White Carpathians protected area dates back to the Neolithic period, when man began to adapt the landscape to his needs through his agricultural activities. The unique landscape of the White Carpathians is a rare proof that human action can co-create valuable natural and cultural values. The coexistence of local people with nature can serve as one example of sustainable development.



Rural landscape of White Carpathian
(Photo: archive ZO ČSOP Veronica)

In 1998, people aware of the amazing diversity of the local nature and living traditions founded the association Tradition of the White Carpathians with the mission of preserving the natural and cultural heritage of the region and using it for sustainable development. Tradition of the White Carpathians, z.s. is a voluntary, non-governmental and non-profit association of natural and legal persons united by an interest in helping all activities that sustainably develop the traditional agricultural and craft production of the White Carpathians. Since its foundation, the association has been trying to develop fruit-growing with the aim of preserving the unique gene pool of regional fruit tree varieties. To do this, it maps old and regional varieties,



Apple orchards and production of apple juice in Hostětín juicing plant
(Photo: archive ZO ČSOP Veronica)



establishes gene pool orchards and new plantings. Since 2000, the processing of local fruit became an important activity, in particular the production of apple juice in the Hostětín juicing plant.

ZO ČSOP Veronica is a non-governmental, non-profit organisation, a branch of the Czech Union of Nature Conservationists, which was founded in 1986 in Brno and since 1995 has been active in the municipality of Hostětín, where it has been involved in the implementation of sustainable municipal infrastructure projects. Here it shows through practical examples, implemented projects and the results of their monitoring that a relationship with nature, local resources and traditions, together with considerate management, can protect the environment and the global climate, economically stabilise the countryside and solve unemployment even in relatively remote areas. The Veronica CSOP is a member and one of the founders of the association Tradition of the White Carpathians.

Regional trademark for White Carpathian crafts and services

The Tradition of the White Carpathians Association also tries to support the preservation of local products and crafts. One of the tools is the Tradition of the White Carpathians® regional trademark, which allows local craftsmen to become more visible among local residents and visitors to the White Carpathians. Tradition of the White Carpathians® is the first cross-border trademark in Central Europe, as it marks products in both the Moravian and Slovak White Carpathians. Details can be found at www.tradicebk.cz and www.tradiciebk.sk. Regional labeling helps not only producers, but also consumers, residents and the whole region. It is one of the ways to raise the profile of rural regions and support the development of the local economy in areas that are interesting for their natural and cultural wealth.



The products and services bearing the Tradition of the White Carpathians® regional trademark must meet a set of precise qualification criteria, which focus primarily on the following principles:

- Uniqueness in relation to the White Carpathians
- Tradition of production in the region with a handmade component
- Quality and local origin of raw materials
- Environmental friendliness
- Operation in the region and support for the local economy

The regional trademark is intended for all producers, farmers, craftsmen, companies and their products and services from the White Carpathians. It is a guarantee to customers and consumers of the proven quality that every product protected by the regional trademark must achieve.



Products bearing the Tradition of the White Carpathians® regional trademark
(Photo: archive ZO ČSOP Veronica)

There are currently 44 holders of the Tradition of the White Carpathians regional label on the Czech (Moravian) side and 18 holders on the Slovak side of the border.

What the regional label brings:

- It helps producers in the White Carpathians to promote their products and services.
- It strengthens the competitiveness of products and services and their market positioning.
- It supports producers who contribute to the economic recovery of the region and help to renew the regional market.
- Interest in local products promotes the development of disappearing crafts and skills.
- Regional production plays an important role in preserving regional varieties and breeds. An example is Hostětín cider made from apples traditionally grown in the White Carpathians.
- The share of local food of organic quality, whose production is environmentally friendly, is increasing.
- Regional production, cultivation or processing of agricultural products helps the environment because the products do not travel thousands of kilometers.
- Customers are guaranteed to meet the superior conditions and criteria of the label.
- Customers have a greater guarantee of 'freshness' thanks to short distribution routes.
- The customer can see how the product is made - the association organises open days, farmer days, excursions, production demonstrations and awareness-raising events.
- Production for the regional market is unique - in most cases it is not a large-scale production.
- It strengthens the belonging of the local population to the region, encourages the involvement of the population in the region and facilitates contacts between producers and other local actors.
- Support and promotion of the region - promotion of tourism, sustainable tourism, sustainable business, regional traditions, promotion of farming and protection of nature and landscape.
- Promoting employment in the region. Prosperous farmers, processors and retailers are a guarantee that jobs will be maintained or even expanded.

A significant event for the regional brand and the holders themselves was the visit of Prince Charles to Hostětín in April 2010. This visit also included a visit to the craft fair of the regional brand holders. Prince Charles shook hands and exchanged a few words with each of the holders. He was delighted with the products and went on to buy more products from the holders, even though they were part of a gift he received during the visit.



Visit of Prince Charles to Hostětín
(Photo: archive ZO ČSOP Veronica)

Hungary: Soil Improvement Action

Soil improvement experiment in the Koppányvölgy

The state of the local soil

The Koppányvölgy is located in the South Transdanubian Region, in the hilly area of Outer-Somogy. On the steep hillsides, originally covered with brown forest soil with loess bedrock, the cultivated areas have been transformed into a barren soil with very low organic matter content as a result of intensive arable farming over the last 40-50 years, which has caused extensive erosion. In a large part of the area, erosion is slowing down slightly to a compacted, high lime layer with poor permeability, creating what is locally known as 'white clay', which maximizes surface run-off and prevents infiltration, and which is large and of minimal productivity. These are generally formed on hillslopes above the inflection point of the slope profile and exacerbate soil erosion in the sections below the inflection point due to the runoff acceleration effect.



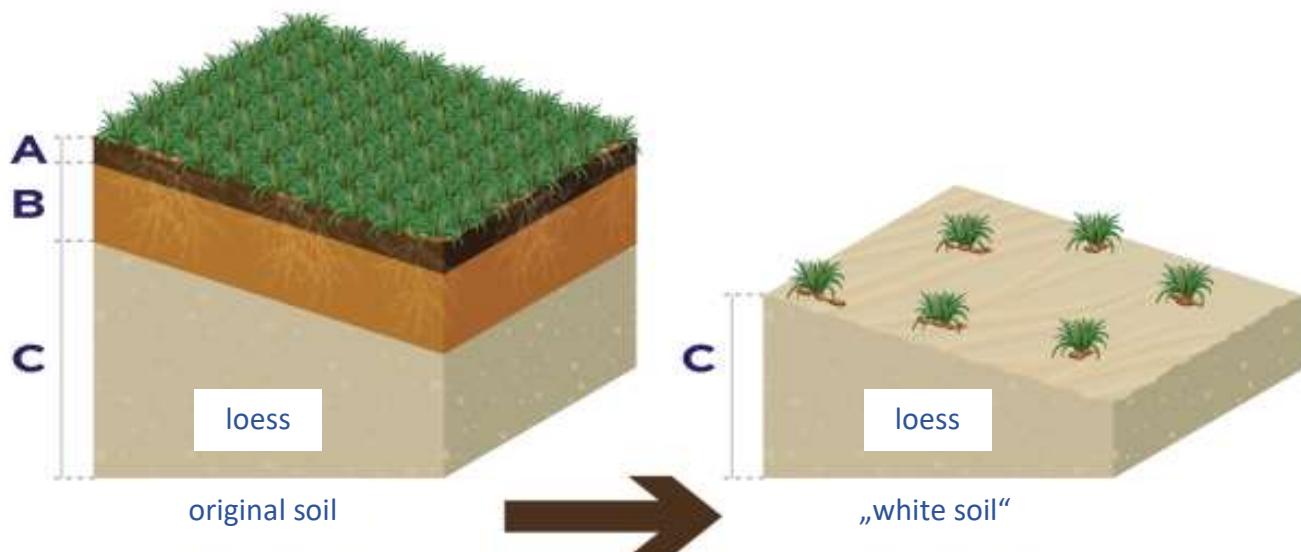
Soil erosion on hillslopes (Photo and illustration: Géza Gelencsér)

Climate change typically increases the frequency of climate extremes (extreme droughts, short periods of high intensity precipitation events) due to the accelerating hydrological cycle, so climate adaptation should adapt to extremes rather than to a one-way shift in weather patterns. This is the most difficult task, since both extremes, e.g. water balance, have to be prepared for, even at the same time.

This is not a local problem, but a general problem in the country's loess bedrock hilly and mountainous areas. In these areas, it is almost impossible to produce profitably, in many cases only because of land subsidies, but more and more people are abandoning arable farming, leaving room for the spontaneous growth of shrubs (mainly *Ailanthus*). This degradation is present on the vast majority of the 1.6 million ha of arable land in the hills at risk of erosion and its management, especially in view of the adaptation pressures of climate change, is a major economic factor. Its topicality and importance is reflected in the fact that there is currently no agreed procedure for the rehabilitation of such 'white soil' areas, and that the accounting and licensing rules for land reclamation do not encourage farmers to carry out interventions that pay off in the long term. A further difficulty is that organic and inorganic materials that can be used for soil improvement

and are available and affordable are predominantly waste (e.g. sewage sludge, wood ash from power plants), making their use very difficult.

The rehabilitation of such degraded land is key to maintaining the competitiveness and climate resilience of the regions concerned. Typically, the humus topsoil is completely absent in these areas, and the former bedrock ('C-layer') cannot be considered as a productive layer, as the humus and dead organic matter responsible for soil structure and water management, as well as the soil micro-, meso- and macrofauna, are absent. Rehabilitation is based on the restoration of these soil-forming factors.



Soil degradation of hillside ploughland (Illustration: Géza Gelencsér)

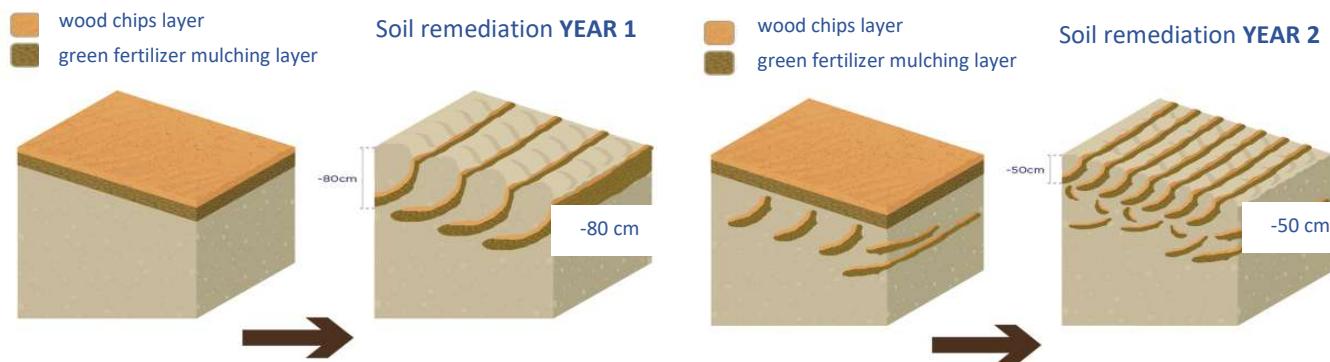
The solution options and the selected procedure

Almost 10 years ago, the experts of Vox Vallis Development Association started to study environmental factors, especially soil degradation, which significantly reduce the local agro-ecopotential. The solution could of course be to change the type of farming, the most beneficial of which would be the creation of permanent grassland, but this is not a realistic objective given the decline in livestock farming. In order to plant plantations or forests effectively, prior soil improvement would also be necessary. In the light of climate change, the aim is also to increase the soil C content of these areas and to increase their capacity to absorb and store more rainwater.

To solve this problem, experts of the association developed a new innovative soil improvement method, which consists of forming a biomass layer on the soil for two consecutive years, using the following materials, and rotating it below the usual ploughing depth:

- large wood chips (phyto- and dendromasses) from the immediate vicinity of the fields to be repaired, mostly from the restoration of land register boundaries, or from nearby spontaneously afforested fields, harvested and chipped locally and of a larger mass;
- a layer formed by mulching green manure crops to give a greater green mass;
- a layer of straw;
- cultures of microorganisms (soil biology preparations, soil life conditioners) to ensure proper biomass uptake.

The biomass layers thus formed are rotated in the soil by means of a deep rotation tool (rigging plough) at a depth of around 70 cm in the first year and in the second year between 40 and 50 cm.



Soil remediation year 1 and year 2 (Illustration: Géza Gelencsér)

The altered soil structure will be able to absorb and store rainwater more efficiently and bind nutrients that are subsequently applied. The biomass, especially forestry wood chips, is rich in fungi and other microorganisms and acts as a grafting agent, revitalizing and repopulating the soil. In addition, the method results in the permanent sequestration of about 12-15 tonnes of carbon per hectare in the soil. This, given that the original soil C content is cca. 40 t/ha, and the current loess bedrock is close to 0 t/ha, is a significant result.

Process of the soil improvement project

The project period is 36 months. Based on the measurements and site knowledge, 10 hectares of already extremely eroded land were identified, in which 4 plots of 0.25 ha with a buffer zone were established. One of the plots is used as a control and receives no treatment, the remaining 3 plots are used with different treatment variations. Based on the performance of the two growing seasons, the most effective soil improvement treatment will be selected. Not only the crop yield will be considered, but also the differences in photosynthetic activity at different phenophases using remote sensing (RGB and NDVI camera drone imaging) will be monitored.

Year 1:

- Preparation of the sampling and measurement plan;
- Selection of plots for testing the soil improvement method;
- Identification of dendro- and phytomass production sites;
- Identify the soil types and the soil conditions to be used;
- Green herb seeding;
- Green manure mulching;
- Preparation, transport, depositing and spreading of wood chips (phyto- and dendromass);
- Spreading microbiological and other additives;
- Min. 70 cm deep, level turning;
- Control tests;
- Sowing of autumn cereals.

Year 2:

- Control measurements (soil, photosynthetic activity);
- Harvest, followed by green manure sowing;
- Autumn mulching;
- Preparation of wood chips (phyto- and dendromass), transport, depositing, spreading;
- Microbiological additive addition and leaching;
- Min. 50 cm deep level line rotation.

Year 3:

- Sowing maize in spring;
- Control measurements (soil, photosynthetic activity);
- Harvest, control measurements and evaluation;

The direct effects of the project - rehabilitation of the productivity of eroded slopes with extremely poor productivity by developing a new soil improvement method - are particularly important for climate change mitigation and adaptation. The mitigating effect lies in the significant carbon sequestration in the soil, both through the less degradable woody material of the dendromasses introduced into the deeper layers and through the increased biological activity resulting from the increased resilience and regeneration of the soil due to the other inputs (green manures, microbial conditioners). An important effect is that the vegetation used for the development is mainly of the local species (*Alianthus*, *Acer negundo*, etc.), which are not suitable for wood processing and do not require significant transport costs (energy). In addition, unlike the other currently popular alternative to utilisation, i.e. harvesting for incineration in power plants, this form of utilisation results in a permanent C sequestration.

It can increase the climate resilience of an area's agriculture by improving infiltration and retention of rainwater, reducing soil erosion, diffuse nutrient loading to surface waters and pesticide pollution. The dependency of the improved cropland on weather conditions is greatly reduced, mainly due to the significantly improved water balance resulting from improved soil structure and increased organic matter content. This becomes very important for farmers in the face of increasingly extreme weather events (extreme rainfall intensity, drought, heat shock, etc.). In order to increase the positive effects, it is worthwhile to apply environmentally friendly cultivation techniques in the improved areas, in particular the combined use of green manures and mulching can bring good results by preserving soil moisture and biological activity.



Illustrative photos: archive Koppányvölgy Nature Park

Poland: Initiative Inspiring Others – Medium Scale Natural Farming

The three provinces (voivodeships in Polish language) whose eastern borders are at the same time the border of Poland, is perceived as a land of conservative people, passively waiting for the course of events, referred to somewhat dismissively as "the eastern wall." It is a traditional agricultural region, without large industrial plants that pollute the environment and disfigure the landscape. On the contrary, it is famous for its beautiful views, mushroom forests and delicious cuisine. And the example of the Kuryluk couple's farm and processing and trading company proves that the region's residents are active, innovative and open to the world.

Organic production for people and for nature – example from the east of Poland

Robert Kuryluk is a local person (countryman) from the village of Holeszow, located near the Polish border with Belarus and Ukraine. As a 20-year-old, he took over the running of the farm after his father's death, although he graduated from a forestry technical college. His naturalistic approach quickly attracted him to organic farming: in 1996 he was certified by the EKOLAND organic farmers' association as one of the youngest operators.



He struggled for a long time, farming on light, sandy soils, requiring a lot of effort to achieve satisfactory yields, including careful cultivation and care, and not only of rye and buckwheat - the symbol of light soils. A lot of fresh energy was brought by Monika Styczek - a Warsaw resident, a graduate of the Warsaw University of Life Sciences with a specialty in organic farming, who, after several years of working in the cities (including at the office of the International Federation of Organic Agriculture Movements, IFOAM), decided to move to the countryside, joining Robert.

The Kuryluk couple cultivates more than 30 hectares, including 24 hectares of arable land, 4 hectares of meadows, 2 hectares of their own forest and a small home orchard, there is also a small flock of laying hens, about 30 head. After several years of farming together, living in an old cottage with their two daughters, they built a beautiful house made of wood, using energy-saving technologies and eco-friendly solutions. They also planned guest rooms and a training room, as both Monika and Robert are involved in promoting organic farming and educational activities. Both are active in NGOs.

The flagship of the farm is the cultivation of hulless pumpkins, for which specialized machinery has been completed: a precision seeder, specialized weeders, a facility pushing pumpkins into rows, a threshing harvester, a stone washer, a drying room, a cleaning room and packaging facilities. The second flagship product since 2014 is valerian (*Valeriana officinalis*), a biennial plant that requires considerable manual labor for weeding. The dried root of valerian is used in the pharmaceutical industry to extract



Robert with daughters (Photo: U. Soltysiak)

valerian. During the growing season, the Kuryluks give work to several people, and they also use apprentices from the Ecological People's University. Other crops grown on their certified organic farm include Red Kidney beans, spelt, rye, buckwheat, serradella, narrow-leaved lupine and oats.

Monika Styczek-Kuryluk's entrepreneurial spirit has also found expression in the establishment of a company on the farm that processes raw materials from Kuryluk own farm, as well as those purchased from other organic farmers in the region. Many of them decided to farm organically at Robert's urging, and those who are members of the EKOLAND Association receive an additional premium for their products. As an enterprise in the food industry, Monica's company had to properly set up storage and packaging facilities to obtain approval from the national sanitary inspection to market the products.



Monika at work
(Photo: Kuryluk family archive)

Since 2018, it has been confectioning organic pumpkin oil and rye and spelt flour, but the physical processing of their raw materials is handled by subcontractors. The farm's dried pumpkin seed oil is pressed by a specialized certified processor in Austria's Styria, famous for the product throughout Europe. Rye and spelt flour and buckwheat groats are produced by a mill in the region, which - on behalf of the Kuryluks - is inspected by AGRO BIO TEST (PL-EKO-07) – a certification body, the same one that inspects their farm and trading company.



Monika and Robert and their tractor-mounted row weeder
(Photo: Kuryluk family archive)



Some of the farm's crops (mainly grain) are sold to other organic processors, and packaged products, in retail packaging - to wholesalers and organic boutiques. Some products also go to contractors abroad. Direct sales and cooperation with food cooperatives linking eco-producers with urban consumers are developing well.

Monika Styczek-Kuryluk and Robert Kuryluk have earned their success in the organic farming market: thanks to hard work, perseverance, openness to innovation and cooperation, and the belief that original food quality starts in the soil.

**Flagship products: spelt flour and
pumpkin seed oil** (Photo: U. Soltysiak)

Moldova: Innovative Start-up for the Regional Development in Agri Food Production

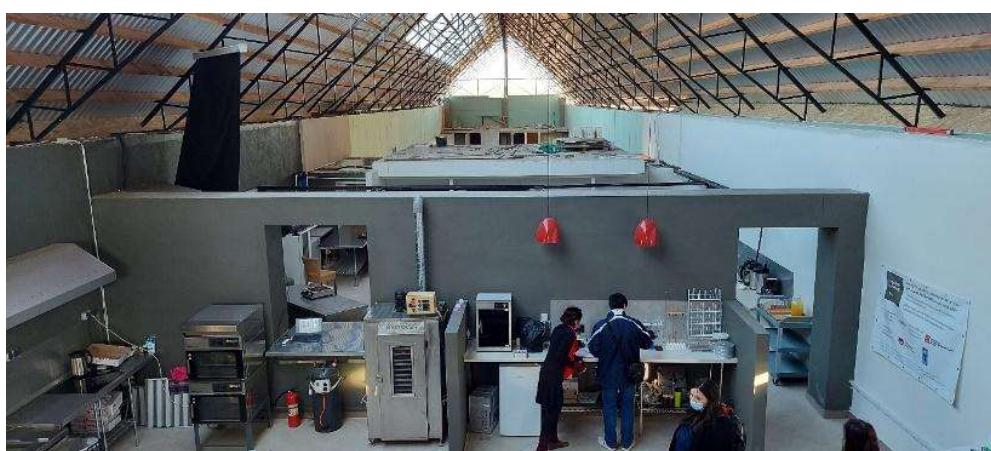
Agrifood Business Incubator

The Agrifood Business Incubator (AFB incubator) with a shared kitchen for the production of agri-food products was built in Moldova in village Riškova, about 40 km from Chişinău during the years 2020-2022, with the support of the Slovak Development Cooperation Programme. The aim was to support Moldova's economic growth by improving the conditions for the development of innovative micro- and small agri-food businesses. Slovak Centre for Communication and Development partnered with two Moldovan organization - NGOs Katalyst and EcoVisio. Both Moldovan partners already had a lot of experience in systematic expert work on targeted issues prior to the project.

The core of the project was the establishment of a so-called "certified shared kitchen" (which the project was literally building from the ground up, from the reconstruction of the devastated original pigsty) and the creation of a core group of "users" of the incubator, i.e., 6 newly established start-ups and 26 supported, approaching small and micro-enterprises. The creation of this format has also created new jobs (14, of which 11 were for "vulnerable groups - preferably women").



State of the future shared kitchen area before the project (Photo: Iurie Popovici)



...and status in October 2021 (Photo: Zuzana Jezerská)

In addition to the creation of the physical space (which included an experimental eco-farm, situated near the shared kitchen, in a location called Eco-village, which was under the care of the project partner EcoVisio), an important moment of the project as a coherent incubator concept was the trainings, workshops and

consultancy advice for SMEs, focused on capacity building and food processing technologies. These trainings and coaching sessions were very practical in nature and fulfilled various indicated requirements identified by the Moldovan partners in a survey prior to the start of the project.

The target group (small-scale agri-food entrepreneurs or sole traders, small-scale farmers and food processors, start-ups) was engaged in an extensive needs assessment process prior to applying for the grant

using individual interviews identifying general strengths and weaknesses of start-ups, as well as specific needs and interests related to training and shared kitchen space combined with an online survey aimed at prioritizing and refining specific services provided by the food incubator to businesses.

A great emphasis was placed on the environmental aspect of all activities in the project, which was an integral part of all planned training, as well as activities in the incubator and the shared kitchen. Equal opportunities and support for women entrepreneurs were also cross-cutting themes fully implemented.

The experience gained from the implementation of the project (such as the one with the representation of women) meant validating the concept of the AFB incubator and subsequently the possibility of its replication in other regions of Moldova (and, possibly in other countries).

Building a shared kitchen

The shared kitchen model, specifically in the Moldovan project, was inspired and practically "transferred" from the USA, where it has a long tradition ("co-working kitchen space"). This model is already widespread in many countries, also in Europe, e.g. in Wien (<https://www.herd.wien/>). However, in developing or low-income countries, a different approach needs to be taken than in richer countries with a different income quotient.

a) At the outset, it is important to thoroughly map out the situation where the future AFB incubator is to operate, especially if it is not a direct requirement of local farmers and/or entrepreneurs. This is particularly the situation of agricultural activities, the state of the infrastructure, the structure and social composition of both the population and the existing SMEs or individual growers, their needs, the constraints they face. Often, however, there is already a clear awareness of the need for change, farmers are aware of where the gaps are and are looking for solutions and assistance.



Equipment in shared kitchen (Photo: Zuzana Jezerská)

b) The AFB incubator must offer concrete, practical solutions, so such a project must always be seen as a bottom-up initiative. The other way around simply does not work in the long term. As experience has shown, even in a less favorable climate of state support an AFB incubator can be developed; indeed, initial funding is essential.

c) An integral part of the AFB incubator, i.e., its material base, is the technical equipment (assuming there is a space). The instruments must have professional parameters, and it is these features that increase their price and make them unaffordable to the average SME. Their possible use (optimally for a modest fee) adds value to the products, making them competitive in the market. However, not all MSPs can afford even the smallest payment. In the case of the project in question, these small entrepreneurs were handing over between 5 and 10 % of their products to the incubator in lieu of financial contributions.

The basic equipment must include in particular:

- storage space for several variants of cold storage (freezer, then 80 to 150 C, storage over winter without the need for electricity) and dry storage without access to moisture,
- basic dehydration equipment,
- professional cookers and ovens,
- large-capacity grinders and slicing machines,
- washing machine,
- sufficient number and size of sinks, access to potable water and a suitable waste system.

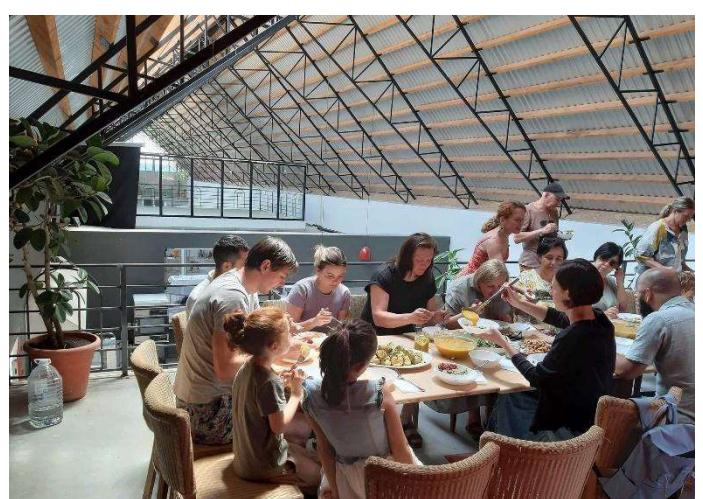
The investment in technical equipment is a prerequisite without which this AFB incubator concept cannot exist. In the Moldovan project, this amount was approximately EUR 13 000.

d) Another important factor is formal certification. The certificate guarantees that the shared kitchen has professional parameters, maintains a quality level of production and that the products created in it meet the quality conditions for market access. This increases visibility, credibility, export, etc. However, the certification process is very demanding and bureaucratic, with many, often absurd, obstacles. The less democratic the country, the more difficult, even impossible. The Moldovan partners were unable to obtain certification during the two years of the project.

Creating a critical mass of entrepreneurs and human resources

It is optimal for the incubator to be co-created by agricultural SMEs or sole traders, who would also form the nucleus, the initial cell of the incubator (approximately 5-10 entities). Without human entrepreneurial capital, an AFB incubator is difficult to start. At the same time, it is a flowing component that can change dynamically; therefore, it is important to create a net of allies, if possible, sometime during the needs mapping process.

An important part of the operation, development, and sustainability are the additional services provided by the incubators, such as trainings, workshops, presentations, demonstrations of cultivation, preparation, etc. This value, which again must be based on a specific declared interest, helps the formation of a "cluster" of SMEs, even very specialized ones, which exchange their experiences and practices, often experimenting in a shared kitchen, and thus creating new products. It is also an area where the funds needed to run the incubator can be generated, as these activities are always open to the wide interested public. In the



Trainings and workshops in shared kitchen (Photo: archive Katalyst)

Moldovan project, these demonstrations and interesting working meetings have motivated even large enterprises to participate.

The incubator management team should include a food technologist, in addition to basic administrators and cleanliness and hygiene staff; several specialists may be external. Based on experience, consultancy in technological areas as well as in economic areas (accounting, promotion, sales) is in demand, many times on an ad hoc basis.

Distribution and sales

Agricultural producers either sell their products themselves, through their established network of traders or distributors, but in the case of smaller and micro-enterprises, or sole traders, this part of the chain is mostly absent or underdeveloped, due to a lack of capacity, either financial or human.

The AFB incubator can assist in two ways - through training (marketing, business skills, etc.) or by providing its own network of contacts, database of vendors, its own distribution, participation in exhibitions, etc. - all of which individual farmers would find difficult to do on their own.

Adaptability of the module in other countries

In the case of the creation of an AFB incubator module applicable in a different socio-economic context, replicability cannot be discussed terminologically, since (1) it is not a classical research process, (2) the notion of replicability is excluded in the case of development interventions that are built based on adaptation to given circumstances and local conditions. Therefore, we can speak of adaptability, based on change.

The concept of the sharing kitchen and the sharing economy is as old as humanity itself. Today's modern modification is, of course, somewhere else and must have the necessary features and prerequisites to be implemented efficiently, with added value and ultimately commercially. As already mentioned, in the case of development projects, the added value of prospective community development is the most important.

The prerequisites for the implementation of the AFB incubator are as follows:

- an assessment of the socio-economic and political situation, whether it allows the creation of a module at all
- thorough familiarization with the micro-region (local partners necessary)
- map the initial human resources and human potential of the future "cell"
- ensure and involve expert(s) at all basic levels
- apply a bottom-up approach
- to build the technical facilities of the AFB incubator
- basic business plan
- apply flexibility
- systematically building sustainability

As in all innovative activities, people are the foundation of success. This is perhaps doubly true in the case of development projects. Without the will, conviction and belief in the functionality and prosperity of the AFB incubator by a group of local people, the implementation of this progressive agricultural module is a very long-distance run.

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For any further information, please visit the project website:

<https://sccd-sk.org/projekty/v4-moldova-eco-agro-food-nova-perspektiva-polnohospodarstva-2/>





Slovak Centre for Communication
and Development (SCCD)
Pražská 11
Bratislava, SK-81104, Slovakia
sccd-sk.org



Centre Veronica Hoštětín
Panská 9
Brno, CZ-60200, Czech Republic
hostetin.veronica.cz



Katalyst – Agrifood Business
Incubator
Vladimir Korolenko 5, ap. 7
Chisinau, MD-2028, Moldova
katalyst.md



Vox Vallis Development Association
Nyugati utca 122
Somogydöröcske, HU-7284, Hungary
koppanyvolgy.com



Polish Chamber of Ecological Food
ul. Kickiego 1/lokal U4
Warszawa, PL-04373, Poland
jemyeko.com

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