EU Dare

Designing & promoting sustainable agriculture & food systems

EU DARE

Sustainable Regenerative Farming Systems Guide and Learning Tool

www.eu-dare.com

Co-funded by the European Union

2023 – 2025
Good Practice Compendium

Edited & Published By - Momentum

contents

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

The truth is: the natural world is changing. And we are totally dependent on that world. It provides our food, water and air. It is the most precious thing we have, and we need to defend it

Sir David Attenborough

01

WELCOME - INTRODUCTION

Introduction to EU Dare

The **EU Dare** Erasmus+ project aims to promote sustainable agricultural practices by introducing learners to Agroecology. With an ambitious goal to foster the adoption of holistic and integrated approaches, EU Dare is designed to bring together ecological and social concepts for the advancement of sustainable agriculture and food systems.

The project works to enhance the interplay among plants, animals, humans, and the environment, ensuring a balance **that promotes health, sustainability, and social equity within the food systems**. By aligning with the European Union's directives on sustainable agriculture, including the pivotal Farm to Fork strategy and the 2030 Biodiversity Strategy, EU Dare will empower smallholder farmers across Europe's rural landscapes, who are the vital backbone of European agriculture.

This initiative strives to educate and inspire but also to cultivate a future where sustainable practices are envisioned as well as actively integrated into the fabric of agricultural development.

Through EU Dare, the path to a sustainable, equitable, and resilient food system becomes more that a possibility and develops into a tangible reality, promising a healthier planet and prosperous communities for generations to come.

HOW WILL WE DO THIS?

The EU Dare Erasmus+ project is set to deliver a suite of tangible outcomes and resources designed to promote the adoption of sustainable agricultural practices across Europe. Key deliverables include:

1. This **Good Practice Compendium** - to act as a source of inspiration to smallholders as they gain insight into the how others are already addressing the challenges and barriers via regenerative and sustainable practices and are having positive outcomes.
2. **Open Education Resources** (OERs) - This includes a comprehensive training course tailored for smallholder farmers, focusing on the principles of Agroecology. This course aims to equip farmers with the knowledge and skills necessary to implement sustainable practices in their farming operations.
3. **Educational Material -** A collection of accessible and user-friendly educational materials. These resources will include videos, podcasts,, infographics, and online content, all designed to simplify complex agricultural concepts and practices for practical use.
4. **Digital Platform -** An innovative digital platform that will serve as a hub for knowledge exchange, collaboration, and learning among farmers, educators, and stakeholders involved in sustainable agriculture.

About This Compendium

The EU Dare Compendium, as an integral resource of the EU Dare Erasmus+ project, is designed to serve as a **source of inspiration and practical knowledge for smallholder farmers** embarking on the journey of sustainable and regenerative agricultural practices. By encapsulating a wide array of good practices, innovative case studies, and the distilled wisdom of agroecology, this compendium becomes a crucial toolkit, featuring Agroecological, Organic, & Sustainable farms and organisations and Innovation in practice throughout Europe. Its content, ranging from the foundations of agroecology to the tangible benefits it brings to smallholders, ensures that readers gain both a macro and micro perspective on sustainable farming.
The inclusion of specific methodologies, such as the case study approach, alongside real-world examples from across Europe, equips farmers, educators, and stakeholders with actionable insights. This will foster a deeper understanding of agroecology's impact on biodiversity, soil health, and economic resilience as well as empower them to implement these practices in their own contexts.

By being available for free and online, the compendium extends its reach, providing users with easy access to a wealth of knowledge. This digital dimension ensures that the resource remains relevant, accessible, and adaptable to the evolving landscape of European agriculture. In essence, the EU Dare Compendium stands as a testament to the project's commitment to advancing sustainable agriculture, encapsulating the collective efforts of the EU Dare initiative to pave the way for a more sustainable, equitable, and resilient food system across Europe.

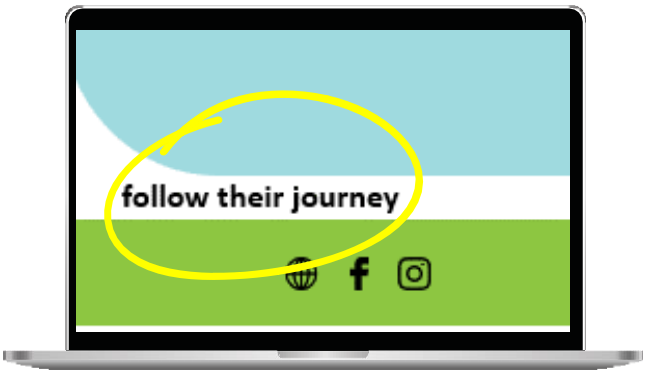
How to use this interactive guide

The **EU Dare** Good Practice Compendium is an online interactive set of resources and additional learning links…This content provides a deeper, self-guided learning opportunity featuring Agroecological, Organic, & Sustainable farms and organisations and Innovation in practice throughout Europe

All case studies that have Business Logos are linked to their respective websites/ social media pages & we invite you to use all links to explore and engage with the case studies and good practices in more detail.

INTERACTIVE CONTENT IS IDENTIFIED IN THIS GUIDE BY THESE **ICONS**

DEEPER LEARNING - Click to find out more about our case studies



TOP TIP

To return to the compendium - use the click to go back option in your browser

FAST AND EASY NAVIGATION

Jump to a case study of choice by clicking on the interactive table of contents

02

AGROECOLOGY & IT'S BENEFITS

What is AGROECOLOGY ?

Agroecology is a holistic and integrated approach that simultaneously applies **ecological and social** concepts and principles to the design and management of sustainable agriculture and food systems.

It seeks to optimise the interactions between plants, animals, humans and the environment while addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced.

It is no longer possible to look at food, livelihoods, health and natural resource management separately. Addressing these complex and interdependent challenges requires embracing systems thinking through holistic approaches.

EU-DARE will bring together European directives on sustainable agriculture, from the Farm to Fork strategy to the 2030 Biodiversity Strategy for smallholder farmers in Europe's rural areas who are the backbone of European agriculture.

What Opportunities & Benefits lie within Agroecology for Smallholders

Agroecology represents an innovative and promising perspective for small-scale farmers around the world.

One of the main aspects of Agroecology is its emphasis on diversification. This means that small-scale farmers can make the most of the local and renewable resources available to them. This leads not only to more efficient production but also to lower costs, which translates into higher incomes for farmers, improving their economic stability and resilience, as highlighted in the part of the texts that refers to Sustainable Development **Goal (SDG) 1**, i.e. ending poverty in all its forms everywhere.

Specifically, diversification in Agroecology refers to the practice of growing a variety of crops or engaging in different agricultural activities within the same land or farm. This diversification can take many forms, including growing multiple crops in one season, combining crops and trees in agroforestry systems, or including domesticated animals on the farm.

Opportunities & Benefits of Diversification

- **Increased resilience:** Diversification increases the resilience of the farm to natural and climatic hazards. For example, if a particular crop is affected by a disease or climate change, other crops or farming activities on the farm can compensate for the losses. This **reduces farmers' vulnerability to crises and market fluctuations.**
- Increased **resource efficiency**: Cultivating a variety of crops can make better use of local and renewable resources, such as soil, water and biodiversity. For example, some plants can enrich the soil with nutrients, improving conditions for other crops. This approach can reduce the need to use chemical fertilisers or pesticides.
- **Reducing costs**: More efficient use of resources and less dependence on expensive inputs such as pesticides and chemical fertilisers result in r**educed production costs**. This can i**ncrease profitability** for small farmers as they **retain** a greater **share of their income.**
- **Increased income:** Diversification allows small farmers to have more options for marketing their products. They can sell a variety of fresh and processed agricultural products, which can lead to increased revenue. In addition, diversification can help ensure a continuous flow of income throughout the year, avoiding dependence on a single seasonal crop.

What Opportunities & Benefits lie within Agroecology for Smallholders

Furthermore, Agroecology optimises the use of local resources, including traditional knowledge. This allows smallholder farmers to harness the benefits of surrounding ecosystems, such as pest control, pollination, soil health and erosion control, while ensuring sustainable productivity. This is particularly relevant to the achievement of **SDGs 2,** namely ending hunger, achieving food security and improving nutrition, and 3, namely ensuring healthy lives and promoting well-being for all at all ages.

Another important feature of Agroecology is its positive impact on **human and environmental health**. By minimising the use of harmful chemicals, it contributes to preserving the health of people and the environment. By **promoting local diets,** Agroecology can help develop sustainable and healthy eating patterns, thus falling under **Sustainable Development Goal 12,** i.e. ensuring sustainable production and consumption patterns.

It should be noted that Agroecolog creates new opportunities for **decent work in rural areas,** especially for young people and women, as indicated in **Sustainable Development Goal 8.** specifically:

- **Growing demand for agro-ecological products**: Globally, there is a growing demand for agricultural products produced in a sustainable and agro-ecological way. This demand offers opportunities for small farmers in rural areas to produce and market these products, generating income and employment.
- **Local food systems:** Agroecology promotes the use of local food systems, including local markets and direct-to-consumer sales. This can create jobs in rural communities, such as in the management of farmers' markets, artisanal food processing and local distribution.

What opportunities & Benefits lie within Agroecology for Smallholders

By enhancing diversification and a territorial approach, Agroecology can contribute to r**educing inequalities**, as emphasized in **Objective 10.** through

- The **valorisation of local skills**: Agroecology promotes the **preservation** and use of **traditional and local knowledge** about the cultivation and management of natural resources. This encourages rural communities to **valorise their local skills**, creating opportunities for older and younger people to share and learn this knowledge, often through **peer-to-peer learning systems.**

In summary, Agroecology emerges as a key response to the challenges facing smallholder farmers today. It offers a sustainable approach that improves their productivity, protects the environment, and promotes the health of local communities, while also contributing to a number of global sustainable development goals. This methodology represents a valuable opportunity for smallholder farmers in pursuing their economic and environmental sustainability.

References:

- https://www.fao.org/agroecology/overview/en/
- https://www.fao.org/agroecology/overview/overview10elements/en/
- https://www.fao.org/agroecology/overview/agroecology-and-the-sustainable-development-goals/en/
- https://www.globalagriculture.org/fileadmin/files/weltagrarbericht/GlobalAgriculture/SmallholdersFeedingtheworld.pdf

Desk Research Carried out In Partner Countries

All partners carried out desk research to examine and clarify the state of agroecology within our selected group of European countries: **Poland, Ireland, Italy, Czechia, Austria, and Slovakia**. By investigating national policies, legislation, and rural development programmes alongside academic and non-academic literature, this study aimed to capture the current trends, and key issues related to agroecology in these regions.

The focus is on understanding how agroecological principles are integrated into each country's agricultural framework, assessing the support for sustainable farming practices, and identifying the challenges and opportunities for the advancement of agroecology. Through this analysis, the research seeks to contribute to the broader discourse on sustainable agriculture, offering insights that could inform policy-making, enhance educational initiatives, and support the transition towards more resilient and equitable food systems.

WHAT the FINDINGS revealed:

Poland

Policies and Legislation:

- **National Rural Development Program 2014-2020** (extended to 2022): Poland has recognized agroecological practices within its rural development programming, promoting sustainable agriculture through various measures including organic farming support, agri-environment-climate payments, and support for young farmers.
- **Organic Farming Act:** The legislative framework for organic farming, which inherently includes agroecological practices, is well established in Poland, providing a basis for the support and development of agroecology.

Research and Literature:

- Polish research institutions and universities, such as the Institute of Soil Science and Plant Cultivation – State Research Institute (IUNG-PIB), conduct research in agroecology, focusing on sustainable farming systems, soil health, and biodiversity.
- Publications in national and international journals frequently address topics relevant to agroecology, including studies on the impact of agroecological practices on biodiversity, soil quality, and farm productivity.

Desk Research Carried out In Partner Countries - (continued)

Ireland

Policies and Legislation:

- **The Organic Farming Scheme:** Part of Ireland's Rural Development Programme, this scheme supports organic production methods that align with agroecological principles.
- **Agri-Climate Rural Environment Scheme** (ACRES) August 2022, is Ireland's new agri-environment climate scheme under Ireland's CAP Strategic Plan. This new €1.5 billion flagship agri-environment scheme is a farmer-friendly scheme to help address biodiversity decline while delivering an income support for up to 50,000 farm families in Ireland.
- **Teagasc:** The Agriculture and Food Development Authority in Ireland has initiatives supporting sustainable farming practices, including research and development in agroecology.

Research and Literature:

- Irish universities and research institutions, such as the University of Galway and University College Dublin, Ireland conduct studies on sustainable agriculture, biodiversity, soil health and the impacts of agroecological practices on rural economies.
- Publications and reports addressing the benefits of agroecology, such as improved soil health, biodiversity, and economic resilience for small-scale farmers, are increasingly common.

Italy

Policies and Legislation:

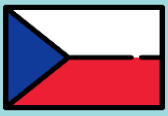
- **National Action Plan for Organic Farming**: Italy supports organic farming through national policies that encourage agroecological practices, with a strong focus on biodiversity, soil health, and reducing chemical inputs. However, to date there is no specific agroecology plan.
- **Rural Development Programmes:** Regions in Italy have tailored programmes that support sustainable agriculture, including agroecology and organic farming, with financial and technical assistance for farmers.

Research and Literature:

- Italian research institutions, like the Sant'Anna School of Advanced Studies, are at the forefront of agroecology research, exploring innovative sustainable farming systems and their socio-economic impacts.
- Italy hosts international conferences and symposia on agroecology, demonstrating its commitment to advancing the field both nationally and globally.

Desk Research Carried out In Partner Countries - (continued)

Czechia



Policies and Legislation:

- **Rural Development Programme 2014-2020 (extended):** Czechia supports the development of organic farming and sustainable agricultural practices through this programme, including measures for agri-environmental-climate schemes**.**
- **National Organic Programme**: This programme aims to increase organic farming's share in Czech agriculture, promoting principles that are closely aligned with agroecology but are nonspecific.

Research and Literature:

- Czech research institutions, such as the Czech University of Life Sciences Prague, engage in studies on sustainable agricultural systems, focusing on ecological farming methods and their benefits. Study
- The country's agricultural research often emphasizes the importance of preserving natural resources and enhancing farm biodiversity through agroecological practices.

Austria

Policies and Legislation:

- **Austrian Programme for Rural Development 2014-2020 (extended to 2022):** Austria's approach to rural development includes support for organic farming, direct marketing, and agri-environmental schemes that encourage agroecological practices.
- **Organic Action Plan:** Austria has one of the highest shares of organic farming in the EU, supported by a comprehensive action plan that promotes organic production methods aligned with agroecological principles.

Research and Literature:

- Austrian research institutions, such as the University of Natural Resources and Life Sciences, Vienna (BOKU), and the Research Institute of Organic Agriculture (FiBL Austria), are active in agroecological research, exploring sustainable agriculture, biodiversity, and ecosystem services.
- Austria hosts numerous conferences and workshops on organic farming and agroecology, facilitating the exchange of knowledge and best practices among farmers, researchers, and policymakers.

Desk Research Carried out In Partner Countries - (continued)

Slovakia

Policies and Legislation:

- **Agri-Environmental Programme:** Slovakia offers support for sustainable agricultural practices that preserve the environment, including subsidies for organic farming and biodiversity conservation measures.
- **National Strategy for Organic Farming:** Aiming to boost organic agriculture, this strategy supports agroecological practices that enhance sustainability and environmental stewardship.

Research and Literature:

- Slovakian institutions, such as the Slovak University of Agriculture in Nitra and Agroecology Research Institute (ARI) In Michalovce, conduct research on agroecological practices, including studies on their impact on soil health and biodiversity. VURV: PPRC
- Slovakia's participation in international agroecology initiatives highlights its commitment to sustainable agricultural development and research dissemination.

Conclusion:

The exploration of agroecology in Poland, Ireland, Italy, Czechia, Austria and Slovakia unveils a concerted effort towards sustainable agriculture, underscored by national policies, research, and rural development programmes that are progressing towards organic farming, biodiversity, and environmental protection. Across these countries, there is evidence to a new commitment to integrating agroecological principles into agricultural frameworks, with developing support for research and innovation driving the advancement of sustainable farming systems. Despite the enthusiasm and policy backing, challenges such as scaling up agroecological practices, securing economic viability for farmers, and broadening adoption remain prevalent. Nonetheless, the increasing environmental awareness and urgent need for climate-resilient food systems present ample opportunities for agroecology's growth, positioning it as a pivotal component in the transition towards more sustainable, resilient, and equitable food systems across Europe.

03

THE CASE STUDY METHOD

Case Studies as a Training Tool

The EU Dare compendium of 30 Good Practice case studies provides a unique training resource that pools the diverse knowledge to provide VET educators with a unique guide to the drivers and opportunities for Smallholder farmers to become more sustainable in their practices and to learn more about agroecology.

We encourage educators to use case studies as part of their teaching/training practice. Why?
Case studies are :

- used as a teaching tool to show the application of a theory or concept to real situations.
- fact and context-driven. They create empathy with the main characters, and are relevant to the reader, in relating to a challenge that needs to be solved.
- a way of discovering the concept of agroecology or sustainable farming in a new manner.

A major advantage of teaching with case studies is that the learners are actively engaged in figuring out the principles by abstracting from the examples.
This develops their skills in the key competencies of:

- Problem-solving
- Analytical tools, quantitative and/or qualitative, depending on the case
- Decision-making in complex situations
- Coping with ambiguities

EU Dare will substantially improve training for VET educators and farmers by:

- **Raising their awareness & commitment to sustainable farming & food systems via innovative sustainable practices, improved knowledge & understanding.**
- **Providing applied industry input to their own professional development, improving their results, and opening doors to future pivots and adaptations.**

The Pedagogy of Case Studies

The main TARGET GROUP of EU-DARE is farmers in rural areas, who have received little training and lifelong learning. Specifically, it will fill the gaps in continuous vocational training to manage the transition into the labour market by acquiring green practices in agriculture by offering a highly practical and straightforward resources that are easily accessible to their needs. VET institutions acting in formal and non-formal education and training can help to improve agro-ecological practices for small farmers. It also addresses **VET providers** adapting their training offerings to the changing needs for green transition skills.

In applying the **EU Dare** Good Practice case studies in your training/teaching, you have the opportunity to address specific pedagogical issues and to develop higher-order skills in learners. We are adapting from the case method, based on a philosophy of professional education that **associates knowledge directly with action** (Boehrer, 1995). The case method is a rich and powerful approach to the development of cognitive skills in learners. It is also a flexible approach, in the sense that trainers can use it in alternative ways.

Velenchik (1995) highlights that the case method **is a motivation to learn theory.** In VET training practice, we often use examples to illustrate the application of theoretical concepts. However, we tend to use the example to reinforce the theory, having taught the theory first, rather than thinking of the theory as a set of tools for answering the question posed by the application. The focus, therefore, is on the theory itself, and the application is often perceived as incidental. When students do not understand the purpose of theory, the process of learning becomes more difficult than it needs to be, and they often fail to grasp the tools they need.

In the case method, the problem that the learners/farmers or stakeholders are challenged to solve takes centre stage. They soon realise that they do not have the tools and they start looking for the tools. They want to learn theory. The case method can also be used in a very effective way to move learners gradually up the cognitive skills ladder from the low skills levels of knowledge, comprehension and application to the higher skills of analysis, synthesis and evaluation. This educational taxonomy was originally proposed by Bloom (1956) and provides a transparent and structured approach to the development of learner skills.

In terms of the Pedagogy Power of Case Studies, The Case Method Delivers:-

Establishing knowledge within a real-world context; the case method supports and facilitates the comprehension of basic knowledge. It involves the recall of a wide range of material but all that is required is bringing appropriate information to mind, not necessarily understanding its meaning. When combined with other training content, the case method is used to broaden knowledge.

Comprehension. This skill is defined as the ability to grasp the meaning of the material. It can be demonstrated by translating material from one form to another, by interpreting material, and by extrapolating information. By basing knowledge within a real-world context, the case method supports and facilitates the comprehension of basic knowledge.

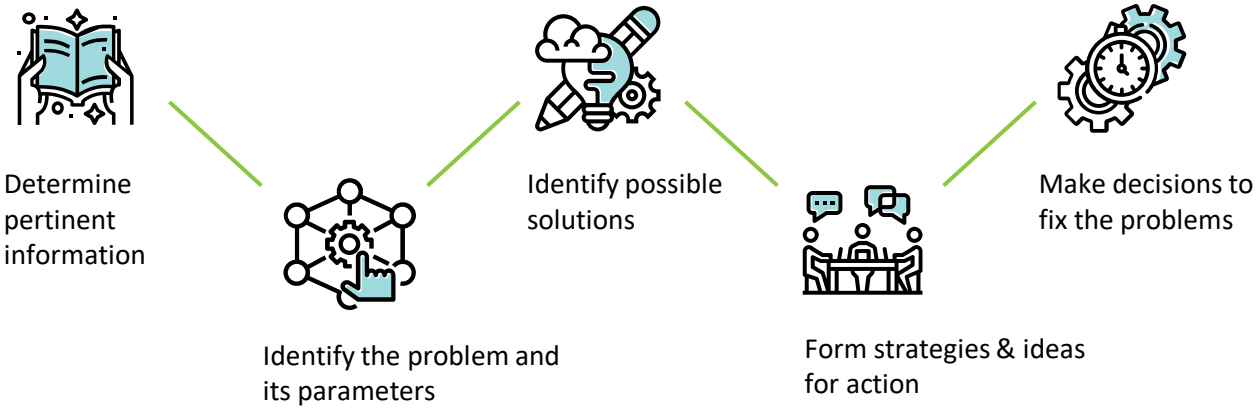
Application. This is the ability to use learned material in new and concrete situations (i.e. taking influence to apply learning in their own agroecology journey). Through our collection of Good Practice cases, learners develop an understanding of how theory is applied in real-world contexts.

Analysis. Our Good Practices require learners to break down complex information, establish relationships and identify issues. The process generally includes identification of the various parts, analysis of the relationships among the parts and recognition of the principles involved. As already mentioned, analysis is at the centre of the case method.

Synthesis. This skill refers to the ability to put parts together to form a new whole. The process may involve, for example, the production their own new business model development plan or research of new avenues to keep up to speed with trends and current events (e.g., efforts to aligns with the Green Deal or the farm to fork strategy).

Evaluation. Critical evaluation is concerned with the ability to judge the value of material for a given purpose. After having analysed and synthesised a particular case, learners should engage in an evaluation of alternative policies or strategies available to the Good Practice business. This can include an evaluation of decisions already taken against possible alternative solutions.

The objective of the Good Practice Guide is to provoke critical thinking and a broadening of perspectives and knowledge of rural smallholders and the VET bodies on the opportunities to innovate the farming sector so that it becomes more sustainable in every essence of the word. Either in groups or in individual learning, empower your learners to take over a Good Practice case, and dissect key information in order to identify the problems that arose and find solutions to the problems. **This allows learners to be able to:**



Instructions for Learners

To achieve the full benefit from our Good Practice Case Studies in your learning we encourage you to approach each case with the following **guidelines**:

- Thoroughly read the Good Practice case and formulate your own opinions before sharing ideas with others in your group or class. You must be able to critically examine the best practice presented, identify the problems/opportunities on your own, as well as be able to offer solutions and alternatives. Before the study is discussed with the group, you must be able to form your own outline and course of action.
- Once you have a clear understanding of the good practice, you can share your ideas with other members of your group.
- Open discussion of the case and listen to the input of others in your group and class.
- Reflect on how your original ideas changed as a result of the group discussion.

This is part of a wider suite of training deliverables of EU Dare. As an educator and as the project progresses, you will also benefit from our:-

- **Open Education Resources** (OERs) which realises a classroom course that makes maximum use of multimedia resources and our Educator's guide will introduce educators to the Education 4.0 agenda of forward-looking technology for adaptive learning.
- **Online Course** on "Sustainable, regenerative Farming Systems".

People never learn anything by being told, they have to find out for themselves.

- Paulo Coelho

Good Practice Selection Criteria…

- **Effective and successful:** A "good practice" has proven its strategic relevance as the most effective way of achieving a specific objective; it has been successfully adopted and has had a positive impact on individuals and communities.
- **Environmentally, economically and socially sustainable:** A "good practice" meets current needs without compromising the ability to address future needs.
- **Gender-sensitive:** A description of the practice must show how actors, men and women, involved in the process, were able to improve their livelihoods.
- **Technically feasible:** Technical feasibility is the basis of a "good practice". It is easy to learn and implement.
- **Inherently participatory:** Participatory approaches are essential as they support a joint sense of ownership of decisions and actions.
- **Replicable and adaptable:** A "good practice" should have the potential for replication and should therefore be adaptable to similar objectives in varying situations.
- **Reducing disaster/crisis risks, if applicable:** A "best practice" contributes to disaster/crisis risk reduction for resilience.

The structure of each Good practice follows the PICO Model (Problem – Intervention – Comparison – Outcomes).

04

OUR GOOD PRACTICE CASE STUDIES

Good Practice Cases

1	**Poland**	- Wańczyk ecological farm - Potoland ecological farm - Piorunka Ecological Farm - Stratenwerth's Farm & Baker - Słoneczna Zagroda Ecological Farm
2	**Ireland**	- Cill Ulta - Knocknarea Farm - Melvin Meadows - Castlewood Organic Farm - Mountallen Farm
3	**Italy**	- Xfarm Agriculture Next - Simona di Tuccio - Fattoria Fiorentino - ValMela Project - Marcello Fiscante
4	**Czechia**	- Farma Hruškovi Stvolenská mošt - Lukáš Drlík - Jan Hodoval - Ing. Radovan Tůma Ph.D. - Roman Koutek Sedlak z Hané
5	**Austria**	- Ökoregion Kaindorf - Humus + - Grand Farm 15 - Arche Noah - Via Campesina - BOKU – Community garden
6	**Slovakia**	- Poľnohospodárska Spoločnosť - Ekofarma Važec - Turová Farm - Beckov farm - Ekofarm, s.r.o.

Co-funded by the European Union

POLAND

Wańczyk ecological farm

Krzeszów,POLAND

ABOUT:
Wańczyk is an organic farm located in the Sudetes, specifically in the Karkonosze Mountains, with a beautiful view of Śnieżka (the highest peak in the region). They started with two hectares of land and a donated pig and it wasn't until 2007 that they began making cheese.
Currently, they breed animals and cultivate plants in an ecological system because they know that the quality of the raw material is of great importance for the quality, taste and health benefits of their cheeses. They are proud to present the latest certificate for an organic agritourism farm.

PICO Analysis:
PROBLEM: Their mission was to create an organic farm from scratch in a region where such farms are lacking. The main objective was to implement organic solutions for agriculture and promote these ideas. This involved establishing a production and educational platform. They started with just one cow.

INTERVENTION: The farm started with 2 hectares, one cow, and one pig. They gradually increased their livestock. They also began milk production and later introduced cheese production. Their passion for cheesemaking grew each day, and in September 2007, motivated by guests from agritourism, they made their first rennet-set cheese. The cheesemaking passion continued to flourish. In February 2008, the cheeses they produced won both the jury's first prize and the audience's first prize in a competition for local products from the Kamienna Góra region. These events fueled their passion, and they continued producing cheeses with even greater enthusiasm. The farm participated in a cheesemaking course in Germany, which further supported their commitment to organic production on multiple levels.

Wańczyk ecological farm

Continued…

COMPARISION: Compared to other farms in the region, the described farm stands out for its extensive variety of organic products and services, such as agritourism and cheesemaking workshops. Starting from scratch, the farm has become a model organic farm in the region, which further supports education and training in the field of organic agriculture.

OUTCOME: The farm operates on multiple levels: a certified organic agrotourism farm (animal husbandry and plant cultivation in an organic system), cheesemaking (handcrafted cheeses following the traditions of cheesemakers), products available for purchase directly at the on-site shop, as well as at numerous markets and stores, and through shipping. "Wańczyka“ offers cheesemaking training and workshops designed for cheesemakers seeking to enhance and deepen their knowledge, an online shop for cheesemakers, and technological consulting (providing advice to small-scale and micro-dairy processors, implementing custom cheesemaking projects).
The farm is the exclusive representative of ASTA Eisman GMBH sp z o.o. for Poland and Ukraine, a producer of high-quality cheesemaking equipment and production lines for the dairy processing industry. They also collaborate with TESTO, a global leader in measurement equipment. The farm actively participates in the Farmers and Farmstead Cheesemakers Association, continuously striving to improve their cheesemaking skills. Together with the association, they organize festivals, training sessions, study trips, and scientific meetings.

follow their journey

Potoland ecological farm

Jarosław, POLAND

ABOUT:
POTOLAND Marek Potoczny is an ecological farm covering an area of 28 hectares, which has been operating since 1999. It is located in the village of Tuligłowy, in Jarosław County. Since 2001, it has been progressively implementing recommendations regarding organic production. The total area of the farm, which has been operating for 20 years under the organic system, is approximately 50 hectares, with over 44 hectares being arable land. The farmer conducts a diverse range of production. The main crops include cereals, winter rapeseed, peas, as well as potatoes and red clover. The livestock production consists of pig farming, with the farmer practicing closed-cycle pig fattening. In 2021, the farm was awarded first place in the competition for 'Best Organic Farm in the Podkarpackie Voivodeship.

PICO Analysis:
PROBLEM: How does the farmer make organic products such as cereals and livestock farming profitable despite high inputs? How does he ensure that the organic home-grown products (without harmful chemicals) do not lose quality and weight?

INTERVENTION: The following practices are implemented on the farm: proper crop rotation, taking into account soil-improving plants and increasing organic matter content in the soil (e.g., leguminous plants), field fertilization is carried out using farm-produced fertilizers (compost, manure, green manure), which help maintain soil fertility, only mechanical weed control is employed, agrotechnical methods such as appropriate crop sequencing and intercropping, as well as biological preparations, are used to combat diseases and pests, organic seeds and seedlings are used, animal welfare is maintained through factors such as adequate housing space, access to outdoor areas, and pasture-based rearing, animal feeding is based on the use of feeds produced using organic methods.

Potoland ecological farm

Continued…

COMPARISION: In comparison to others in the region, the farm and within a 20-kilometer radius, there are no industrial facilities. Agricultural land constitutes 54% of the area, while forest complexes make up the remaining 46%. The farm offers a wide range of products, including fruits, seeds, and animal production. The organic food produced on the farm undergoes certification to ensure compliance with the principles of organic farming and processing. The certification is carried out by the certification body BIOEKSPERT, in accordance with Regulation (EEC) No 2092/91 of June 24, 1991, on organic production of agricultural products and the labeling of organic agricultural products and foodstuffs, as well as with the Act on Organic Farming of April 20, 2004.

OUTCOME: The organic farm has been progressively introducing new products, benefiting from national support programs, and participating in competitions evaluating the quality of produced fruits, feeds, and livestock, thereby earning numerous awards and distinctions. Additionally, they place emphasis on local sales by promoting their products within the region.

Na Podkarpaciu hodują świnie i sprzedają po sąsiedzku (youtube.com)

Piorunka Ecological Farm

Małopolska, POLAND

ABOUT:
Mrs Bogumiła Błoniarczyk's farm is situated in the Beskid Niski in the village of Piorunka, on the catchment area of the Biała Tarnowska river. The farm keeps Simmental dairy and beef cattle. The nature of production fits perfectly with the physiographic conditions of the area, predisposed to meadow-pasture farming. The overall area of the holding is 9.27 ha, including 6.63 ha of grassland; in addition, organic vegetables and potatoes are grown on the holding for self-supply and direct sales.

PICO Analysis:
PROBLEM: How to make the organic rearing of Simmental dairy and beef cattle in mountainous conditions profitable despite high expenditure? How do they make sure that organic home-grown products are quickly marketed?

INTERVENTION: In order to maximise yields, the location was very important. The grassland is mostly located on former class IV arable land with a low slope, which results in high yields of forage and hay. The meadow and pasture sward is floristically rich with the right proportion of valuable forage grasses, fabaceous plants, and herbs. This ensures high digestibility of fodder and, above all, high-quality products (milk and livestock). The system of keeping animals on pasture throughout the growing season and the valuable herbs in the sward determine a high level of animal welfare and guarantee good animal health. The pasture is divided into plots along natural boundaries using electric fencing. In this way, the size of the plots is adapted to the regrowth rate of the sward during the season and to the fodder needs of the animals. Surplus fodder from pasture and clover is used for hay and silage. The system of alternate use of meadows and pastures also contributes to maintaining their high biodiversity.

Piorunka Ecological Farm

Continued…

COMPARISION: Mrs. Bogumila has had outstanding success in developing her organic farm. She has the highest yields in the area compared to other organic farms and in 2020 she won first place in the 13th edition of the competition for the "Best Organic Farm in Małopolska.

OUTCOME: After years of developing her organic farm, today the livestock numbers on Mrs. Bogumiła's farm counts as 7 dairy cows, 2 heifers, and 2 calves. Crop and livestock production are balanced, and the farm's natural fertilisers allow high hay yields of 5.5-6 tonnes. The average milk yield per head is 4,200 L/year. The milk obtained is sold to Lucjan Łazarko in Krzeszów Dolny. A small part of the milk production is processed into cheese and dairy products for personal use. In addition, the farm sells 5-7 calves every year.
The annual production volume exceeds PLN 56,000.00 which amounts to PLN 8446.45 per hectare of UR. All production is sold in organic quality.
Mrs Bogumiła Błoniarczyk's farm can serve as a role model for other organic farms involved in dairy production. In terms of proper management of meadows and pastures, selection of the breed for the direction of production, animal welfare, care of equipment and buildings, and aesthetics, the farm does not deviate from the best standards of Alpine countries.

Stratenwerth's Farm & Bakery

Grzybów, POLAND

ABOUT:

Ewa and Peter Stratenwerth's farm is located in the village of Grzybów, 80 km west of Warsaw. Peter is a Swiss who moved to Poland in 1989 and bought a farm. From the very beginning, he farmed using ecological methods. While still in Switzerland, he learned the farming profession and completed a four-year course in biodynamic agriculture. Ewa, on the other hand, was born and raised in Warsaw, she is a biologist-anthropologist. In 1992 she moved to the countryside.
Ewa and Peter's farm has been certified since 1991, from the beginning the certification body is AGRO BIO TEST. In total, Peter and Ewa manage 28 hectares, of which they own over 11 hectares and lease the remaining 17 hectares.

PICO Analysis:

PROBLEM: The big challenge for the Stratenwerths was to start an organic farm business in a small village, where the technology and possibilities were the same as in Switzerland back in the 19th century. The land was not ideal, it was not fertile.

INTERVENTION:

Ewa and Peter worked hard and got their certification in 1991, from the beginning the certification body was AGRO BIO TEST. They obtained all the necessary documents and started their organic business from the beginning of the farm. Their previous experience played a huge part in their success. The vast majority of the farm area is occupied by meadows and pastures which are the basis for feeding animals on the farm: 40 goats, a horse, 8 cows and a heifer. Both cows and goats are raised for milk. Cereals, legumes, pumpkins, fodder beets and buckwheat are cultivated in the remaining area (8 ha). The farm has a tractor and machines for field cultivation and hay harvesting, including: a two-furrow plow, a seeder, a harrow, and a pre-sowing unit.

Stratenwerth's Farm & Bakery

Continued…

COMPARISION: Not only do Ewa and Peter farm their organic farm but they run two processing plants: a cheese factory, where they produce ripened yellow cheese using only organic milk, and a bakery. In total, they produce around 20 kg of cheese every week. The bakery, meanwhile, bakes about 1,000 loaves of Hruby Bread every week. There is also a mill on the farm where grains are ground into flour used for breadmaking and a wood-fired bread oven.

OUTCOME: Products made on the farm (mainly bread and cheeses) are sold in dozens of organic food shops in Warsaw and Plock. In addition, Peter Stratenwerth has been selling his products at the Warsaw Bio-Bazaar since its inception. Here he has the opportunity to meet and talk to regular customers, and to create awareness of the benefits of organic farming and produce, which he greatly appreciates. In total, Hruby Bread and cheeses from Grzybów are bought by around 1000 individual customers every week.

Ewa and Peter Stratenwerth are co-founders of the ZIARNO Ecological and Cultural Association based in Grzybów. Since 1992, together with the Association, they have been organizing workshops for children and youth from towns and villages, which they run on the farm and in the bakery. Together, they are socially involved in the activities of organizations associating organic farmers. In addition, they both take part in many conferences, workshops and study trips.

follow their journey

Słoneczna Zagroda
Ecological Farm

Wola Batorska, Poland

ABOUT:
Mr. and Mrs. Gaweł run an organic farm in Wola Batoska, located between the Niepolomicka Forest and the Vistula River. They have been certified organic since 2003. Their main crops include potatoes, cabbage, carrots and turnips. There are greenhouses on the farm, so we can enjoy the new vegetables earlier. The farm raises cows, rabbits and green-legged hens. They provide the natural fertilizer used later in cultivation.

PICO Analysis:
PROBLEM: In the first years of their work, the farmers of Słoneczna Zagroda delivered their produce to organic shops in Kraków. In the long run, however, this proved unprofitable and unrealistic. The orders were small and delivery took a really long time. They had to find some other method to sell their products.

INTERVENTION: The solution was direct sales. This change required a lot of sacrifice on the part of farmers. Encouraging customers to buy is a big challenge and requires a wide range of products so that the customer has plenty of choices.

COMPARISON: In comparison to conventional production, ecological farming means that yields are often about three times less than conventional production, and often not as good and beautiful. On the other hand, they are very healthy and rich in nutrients. In addition, in general, the taste and smell of such food is much better than conventional produce (although, after all, the chemical flavor enhancer monosodium glutamate gets the job done quickly and easily in cheap processed foods). Lower yields, often achieved through more difficult and manual work, make organic food cost two to three times more than conventional products.

OUTCOME: After a while, sales increased a lot. Customers make appointments directly with the farmers and regular customers come to the farm. Customers come from close by and from more distant cities and their positive feedback greatly motivates the farmers to continue.

IRELAND

Cill Ulta

Donegal, IRELAND

ABOUT:

Cill Ulta (LAN Ctr), located along the Wild Atlantic Way in the Donegal Gaeltacht (Irish Speaking Area) in a Special Protection Area (SPA – Corn Crake) and adjacent to a Special Area of Conservation (SAC – grey whorled snail), began in the 1960s as a tomato growing enterprise supplying the Dublin markets. When the price of oil skyrocketed in the 80s, the enterprise was no longer cost-effective, and the glasshouses were abandoned. Over the years, various community groups have worked tirelessly to preserve as much of the structure as possible. One acre of glasshouse remains with the rest of the site having been classified as industrial wasteland. In the late 1990's, Lárionad Acmhainní Nádúrtha (LAN), a non-profit with charitable status, was formed to use and revive the site.

Since then, the industrial waste has slowly been cleaned and converted into prime growing land and now includes 9 production poly-tunnels, the original 1 acre of the glasshouse, an apiary, and multiple production fields. LAN now operates as Cill Ulta – a Centre for Sustainability that promotes food sovereignty, sustainable energies, farm-to-fork research, Irish agricultural heritage and craft, and the Irish language.

PICO Analysis

PROBLEM: While this area has always been predominantly agricultural, recent developments in national and EU policy have seen a trend towards agricultural specialisation – namely single-enterprise cattle or sheep operations. Earning a living from these markets alone when faced with small farm sizes and challenging soil and weather conditions is difficult and has led to many young adults leaving the region in search of employment. Through these actions, many lands in the parish have been left to grow wild.

While this return of the land to nature can be beneficial for some wildlife, others – which are currently experiencing dangerous declines in population – are utterly dependent upon the habitat created through cultivation. Unfortunately, a 2017 survey carried out on the lands in one of the local SPAs found **less than 1% of the land was under cultivation!!**

Today, the remaining farms are dependent upon just one or two markets, and as a consequence, we are seeing a developing **lack of resilience that is needed to survive shifting markets, climate change.** The primary challenges they face here are securing economic viability for the region's farms, rejuvenating the area's rural enterprise, and regenerating ecologically critical habitat created by tillage.

Cill Ulta

Continued…

INTERVENTION: One project, Cill Ulta is involved in is Cúlra Créafóige (Agricultural European Innovation Partnership) addresses an element of the problem by using regenerative agriculture and enterprise diversification to support the development of economically viable small-farm enterprises. However, while making a profit is crucial, they cannot continue to do it at the expense of our air, water, and soil. So, **every action they take is carried out with ecological sustainability in mind.** Following a whole-systems approach, Cúlra Créafóige is investigating and developing modern, novel crop markets to drive the demand for cultivation: because there is no point in growing it if you can't sell it.

COMPARISON: Currently, they have 23 land sites in the project and will be adding more every year. These sites are being used to investigate various crops such as oats, linseed, garlic, comfrey, nettle, chicory, sunflower, fodder crops, blueberries, and various green manures. All crops grown through the project will be used for market testing; matching project-grown materials with regional niche markets and artisan producers.

Beyond crops, the project is also focused on developing regional agricultural knowledge through participant training in areas such as ecology, farm-to-fork enterprise & food tourism. Cill Ulta is also working closely with the youth of the parish. Between volunteers, children of participants, and the teenagers who have joined our Youth Work Experience Program, there has been fantastic support from the youth. The Cill Ulta team feels it doesn't matter what innovations are pursued, or what solutions are derived – if the next generation is not interested, farming in this region will fail. The good news is that there is evidence of interest. They just need to be reached.

OUTCOMES: Falcarragh is not the only rural area with marginal lands, decreasing populations, threatened eco-systems, and socio-economic uncertainty. These trends are clearly visible along the entire Western Coast of Ireland. However, the team at Cill Ulta hope that the **measures they are taking in this project, will be expanded to all of the other corners of Ireland**.

They believe that diversified, regenerative Small-Farm Enterprises can be profitable. It can be self-sustaining and have a positive and lasting effect on habitat creation, regional tourism and enterprise, population stabilisation, and the cultural survival of Gaeltacht regions.

These mixed-enterprise smallholdings would be a viable solution to the economic, ecological, and heritage crises being faced by all of the marginal areas across Ireland.

follow their journey

Knocknarea Farm

Sligo, IRELAND

KNOCKNAREA FARM

ABOUT

Knocknarea Farm is a small mixed farm in the North-West of Ireland run by two young farmers, Sean and Rob. The farm consists of 28 acres located at the foot of Knocknarea Hill in County Sligo. The farm is mostly made up of pastoral cattle and hens along with one acre of horticulture.

PICO Analysis

PROBLEM: Farms throughout Ireland rely on pesticides and fertilisers to efficiently produce crops & feeds. Sean and Rob believe there is a better way.

These young farmers want to attain goals that result in the improvement of their local environment. They are striving to do this by increasing biodiversity, building or regenerating soil and providing local people with nutrient-dense food.

INTERVENTION: Sean & Rob's work started by engaging and experimenting with regenerative farming practices that negate the need for artificial fertilisers and pesticides and create a higher quality product and a richer ecosystem. Knocknarea Farm achieves this by engaging in many sustainable practices. They have 300 hens in total which they rotate across their meadows allowing them the free range of 5 acres at a time.

Through their efforts to work with nature, they are regenerating soils and increasing biodiversity within their local environment by incorporating livestock into systems that mimic how herds/flocks behave in the wild. They are providing a path for them to reach their full potential. They use coups with mesh bottoms that allow the droppings to fall through and naturally fertilise the land promoting a more diverse field.

For their horticulture farming, they adopt a no-dig approach to their growing and simply sowing into the topsoil. This approach has also been successful, and they haven't had to weed or use any pesticides as the tilling both promotes soil diversity and doesn't allow weeds to flourish

They have also established a Community Supported Agriculture (CSA) system where they produce food for their 'shareholders' within their own community. Therefore, The farmers can receive capital at the start of the season when times are tight and when they need it most. For the investment, their members receive top-quality nutrient-dense food grown within the community.

COMPARISON: The Knocknarea pair are standing up as young farmers and taking responsibility for the direction farming goes in the future. Rather than only focusing on the here and the now and causing more damage,.

Knocknarea Farm

Continued…

they are leaving behind a legacy for the next generation who can continue to build soil after they are gone. This means caring for & regenerating the microbiome, biodiversity, mycorrhizal fungi, the water cycle, minerals, the energy cycle, and community dynamics through farming methods and practice.

OUTCOME: Despite being a new farm, Sean and Rob have had great success with their regenerative practices in the past year. By introducing the pastoral hens, they have consequently promoted multiple species in their meadows, which has seen the return of native species such as white and red clovers which are naturally nitrogen-fixing, negating the use of artificial nitrogen fertilisers.

By adopting sustainable regenerative farming practices, Knocknarea Farm has been able to have a productive season without compromising the natural ecosystem of the area. They are supporting the local community and giving them a local affordable option for their food. Their business model is based on both the CSR approach and via sales through a Weekly Veg or Egg Bag.

- The CSR system can be bought as a 12-week share or a 24-week share
- The Veg Bag membership consists of 4 weekly supplies which include 6 to 8 items each week that are available during the season starting in early May. The cost equates to €15 per week. To reduce food miles, there are three collection points. They also operate a very popular honesty farm shop (Click here to watch a short **TikTok video**)

follow their journey

Melvin Meadows

Leitrim, IRELAND

ABOUT:
Melvin Meadows is a small rural Irish mixed-use farm of 34 hectares located on the steep north-facing hillside shores of Lough Melvin in North Leitrim. It is home to a Rare & Native breed of cattle known as Dexter's along with Organic Hens.

PICO Analysis

PROBLEM: The topography of the land is a challenge due to it being on a north-facing steep hillside overlooking a local lake. The owners had to look for a way to make the land productive when conventional cattle were deemed too heavy for the sloped terrain, and the tight grazing of sheep was seen to have a detrimental effect on the land as well.

INTERVENTION: Dexter cattle are an important breed in Irish culture, originating from the early herds of the Celts and being bred in the mountainous southwest for their hardiness and small size. Being the smallest breed in Ireland and the British Isles at roughly half the size of the more popular Herefords, the Dexter was perfect for Melvin Meadows' challenging terrain. The Melvin Meadows farm converted to this breed in 2010 and now has a small herd of 12 cows. By choosing a breed naturally suited to the Irish landscape, they can be largely self-sufficient in summer months, allowing the farm to engage in conservation grazing, and letting the semi-natural, biodiverse landscape flourish. The cattle are easily finished on grass and are then slaughtered and butchered locally. The high-quality meat is sold locally in 10kg boxes of various cuts, promoting 'nose to tail' eating.
All vegetables on the farm are grown without the use of artificial fertilisers, pesticides or herbicides. The organic methods employed produce plants that are healthy and strong enough to repel pests and diseases naturally. As a result, the vegetables are of high nutritional value and taste great. In 2020 they trialled egg production with 12 laying hens. They found the local demand to be strong and have since expanded to a flock size of 60. A mobile hen house was designed which allows for the flock to be moved around the land increasing forage management and promoting species-diverse meadows.

COMPARISON: Often times farms attempt to make the land suit the practices rather than the practices suit the land. Here at Melvin Meadows, they act as caretakers for the land and promote biodiversity and organic practices. By raising and farming Dexter cattle they are also keeping Irish cultural heritage safe.

Melvin Meadows

Continued…

OUTCOME: Melvin Meadows, identified that their land was not suited to conventional farming practices and instead took a regenerative approach to farming that saw them select specific livestock that suited their land, rather than artificially making their land suit the livestock. By selecting a breed of cattle that is naturally suited to the challenging landscape they have preserved the area while also making their land productive. The hens' droppings promote multi-species meadows which are better at naturally fixing nitrogen negating the use of artificial fertilisers. With minimum inputs and direct local sales, Melvin Meadows has ensured maximum economic benefit while respecting the land.

In 2021, Melvin Meadows was certified organic, and their eggs and meat boxes regularly sell out. By slightly tweaking the operating system, this farm on challenging land has been not only rendered more economically viable but is also environmentally beneficial.
Melvin Meadows is a member of the Organic Centre. This Centre is also located on the shores of Lough Melvin and is a charity & social enterprise that works hard to increase knowledge, and awareness about **organic growing, biodiversity, climate change, food sovereignty** and **sustainable energy**.

follow their journey

Castlewood Organic Farm

Laois, IRELAND

ABOUT:
Castlewood is a Beautiful IOA Certified Organic Farm set in the rolling midlands of Co Laois beside the river Nore, where you can visit to walk on their trails or take a guided tour or even buy some organic meat. Castlewood Farm grows its own crops for feeding its animals as well as a growing vegetable patch, a small orchard, and taking care of some hens. The farm is owned by Dominic Leonard & Alison Duck and their family.

PICO Analysis

PROBLEM: Organic is a term becoming increasingly recognised in Ireland, especially in the last ten years when it started receiving more meaningful support from the government. However**, organic farming is still relatively low in Ireland at only 2%.** The Castlewood team wishes to see this change and they want to foster an increase in the uptake of organic farming. They want to eliminate the need for biological pest control and artificial fertilisers across the country of Ireland.

INTERVENTION: Castlewood's organic system of agriculture relies on techniques such as crop rotation, green manure, compost, and biological pest control. Currently, crops include oats for Flahavan's porridge and feed crops for their animals. They follow a rotation of three years of cropping followed by three years in grass or red clover, which they grow to produce silage for the winter. They have about 30 suckler cows and 125 ewes and then a few pigs and hens. The animals also follow a rotation of grazing around the farm since sheep and cattle do not share the same stomach parasites. Their few pigs usually have a field or part of a field for a year before being moved on.

As for composting, this is something Castlewood does every summer with the dung that has built up over the winter underneath the cattle. It is turned a few times over the summer and spread in the autumn on the red clover which will be cut for silage the following summer. Slurry also builds up over the winter and is spread in the spring on tillage fields where it is ploughed in before sowing.

They avoid biological pest control by the sowing of combi crops of wheat and peas or oats and barley and peas which certainly seem to be mutually beneficial leading to increased yields and healthier crops. When plants are not forced to grow artificially quickly through the application of synthetic nitrogen, they tend to be much healthier and stronger and, therefore less likely to be affected by pests and fungus.

Castlewood Organic Farm

Continued…

COMPARISON: They now have ORGANIC Bord Bia-approved beef and lamb as well as organic pork and bacon that are available directly from the farm shop or a local farmer's market. They have therefore added value and quality to their products by producing them in a chemical-free manner and selling them on-site, therefore, creating short supply chains and cutting out the middleman, thus, acting in a competitive way.

OUTCOME: The Leonards have established a great business and farming model that provides the local community with fresh and organic produce. They are also very active in biodiversity management and environmentally conscious, thus they are great caretakers of the planet within their region.
In the future, they are hoping to expand on this including the establishment of an educational side to the farm. They want to share their story and the importance of the great biodiversity they are fortunate to have on the farm and they want to create learning experiences, therefore having a wider reach and impact.
Castlewood Farm produces a wonderful bounty of produce along with their meat throughout the year, all of which can be found for sale in their farm shop or at the local farmer's market. Produce includes organic eggs, jams, cordials, juices, fruit, and treats baked on the farm.

follow their journey

Mountallen Farm

Leitrim, IRELAND

MOUNTALLEN
Eco Tours

ABOUT:
Tommy Earley manages his 100-acre organic Aberdeen Angus suckler farm on the shores of Lough Allen, Co. Leitrim. He has been farming organically on the site since 1996 with a clear focus on nature and habitat conservation. His farm has high natural value with a variety of habitats such as intact raised bog, mature native woodland, species-rich acidic grassland, wildflower meadows, lakeshore, and river.

Throughout Ireland's farmlands, there has been a rapid decline of diverse and rare species (such as the Marsh Fritillary butterfly, Large Heath Butterfly, Lady's Tresses Orchid and Mudwort) and habitats, brought about by intense farming models and monoculture. Also, recent EU audits and reports are critical of the State's management of our protected nature sites, & they cite **insufficient ecological knowledge** that makes it difficult to establish effective conservation measures.

INTERVENTION: Tommy strives to protect and promote the natural biodiversity and habitats on Loughallen farm. He has created a wetland habitat on his land to support the populations of breeding and wintering wildfowl and waders such as Curlew. He is also involved in the Raised Bog Project aimed at enhancing and restoring the raised bog on his farm. Tommy actively promotes environmental awareness both on the farm and in his local community. He **offers personally guided farm walks aimed at educating visitors & schoolgoers about local biodiversity, history, and farm management**.
The farm also offers many ecology-based workshops such as moth trapping, conducting butterfly transects, and hedge coppicing. Tommy also keeps some ponies for habitat management. He has been involved in a variety of community-based projects such as community public information meetings on sustainable tourism for the Lough Allen region and hosted weekly Social Farming conservation and farming workshops to improve farmer's self-awareness and empower the participants.

Mountallen Farm

Continued…

COMPARISON: By growing just one crop species in a field at a time, monocultures enable farmers to use machinery, increasing the efficiency of activities like planting and harvesting. However, the current lack of rotation and limited cropping options combine to threaten future viability and production sustainability, as the increasing level of monoculture leads to reduced yields (due to diseases & pests) and higher costs over time.

OUTCOME: Tommy has seen the benefits of promoting biodiversity on his farm. Some include seeing rare species of plant, animal and insects re-emerge, limiting soil erosion, improvements in the storage of soil carbon and a reduction of the amount of nitrogen entering the water. To share and promote and create awareness among the community and other farmers Tommy has developed the eco-tourism side of his farm business. He is able to demonstrate that through farm maintenance techniques, restoration initiatives and species recording, we can show how an ecological approach to farming can have a lasting impact on the environment.

Tommy Earley Farming For Nature Ambassador 2019 - YouTube

follow their journey

ITALY

Xfarm Agriculture Next

Apulia, ITALY

ABOUT:
XFARM Agriculture next is a project of the *Something Different Social Cooperative* born within the experience of the ExFadda Urban Laboratory of San Vito dei Normanni, in the heart of Puglia. Here they are transforming 50 hectares of land confiscated from organised crime into an agricultural, ecological and social company that is capable of generating work, and well-being for the community and improving the ecosystem.

PICO Analysis
PROBLEM: In the municipality of San Vito dei Normanni, there were 50 hectares of land confiscated from the Mafia in 2004, which then remained abandoned for more than 10 years. This is an area with a strong vocation for agriculture. Agriculture has had both social and environmental impacts on the territory. The techniques used are mostly intensive with a strong negative impact on the environment. From a social point of view, the territory is infamous for the phenomenon of 'caporalato', which exploits seasonal workers employed in the harvesting of foodstuffs, without contracts or guarantees.

INTERVENTION: In 2015, the municipality of San Vito took over the abandoned land and put it up for tender. The social cooperative 'Qualcosa di Diverso', took over the land *'because we believe in this land and its resources, which are often unexpressed and underutilised*'. The farm is run according to the practices of agroecology. They regenerate the soil through practices that increase soil fertility, aim to eliminate environmental contamination by synthetic chemicals, and are active in valorising farm waste and self-production. They manage water efficiently, guaranteeing plants care and treatments that favour their health and their constant physiological balance. They stimulate the recovery and increase of plant and animal biodiversity. Agroecology, however, is the holistic system that brings together agriculture, the land and the communities. The cooperative promotes knowledge as a collective asset to be acquired and passed on in a dimension of openness and interaction with others.

Xfarm

Agriculture Next

Continued…

COMPARISON: Confiscated land lies idle all over Europe. This is a fantastic example of how this land can be reclaimed and regenerated not just for economic and environmental purposes but to have an immense social impact too.

OUTCOME: In recent years, many agro-ecological techniques have been used to regenerate soils. An interesting and innovative practice used is the intercropping of chicken breeding and olive growing. This technique makes it possible to increase soil quality by using poultry manure. In addition, free-range hens graze the grass and make it possible to avoid chemical fertilisers and herbicides. The agroecological techniques used thus make it possible to safeguard the environment, and from an economic point of view, they make it possible to cut the costs that would have been incurred by using chemical inputs from outside the farm. Agroecological practices are also a circular-economy practice as what is commonly referred to as waste is fed back into the production cycle.
From a social point of view, It establishes working and exchange relationships based on the protection of rights and transparency. They currently generate stable employment for 9 people: 2 planners, 1 tractor driver and 6 farm workers. During harvesting periods, more than 20 workers are involved. Other professionals collaborate with them on communication, educational projects, and events.

XFARM has made its farm a hub of innovation not only from an agricultural point of view, but also from a social one. They have managed to create a very strong and cohesive community base that supports their activities. Today XFARM is a centre for people whom each bring their own experience, theatre makers, independent artists and ordinary people who feel part of a supportive community. This is the true essence behind agroecological science: a holistic science that sells agriculture not just as a production model but as an open and dynamic system where people, communities, and land are an integral part.

follow their journey

Simona di Tuccio

Foggia, ITALY

ABOUT: Simona di Tuccio is a young female farmer, who returned to her native Ascoli Satriano with the ambition to help her father to farm more sustainably. She rotates oilseeds and grains with legume crops.
Simona graduated in linguistic and cultural mediation in Siena, and after living and honing her studies in Vienna, she moved to work in Dresden, Germany. She felt that 'something was missing from her life' and instinct led her to where her paternal great-grandmother had lived and worked the land. Simona now has taken over part of the family farm, which covers about 9 hectares and includes a small house, 88 olive trees, walnut, almond, and fig trees. The rest of the land is uncultivated, an advancing desert that no one seems to want to recognise, as described by Masanobu Fukuoka.

PICO Analysis

PROBLEM: The practice of intensive wheat production is a major issue, as it presents a number of challenges and negative impacts that span several dimensions. In particular, the intensive approach to wheat cultivation entails a significant dependence on chemical inputs and advanced processing. This aspect, unfortunately, is twofold, with significant environmental and economic consequences.
From an environmental perspective, the excessive use of chemical inputs and intensive tillage has a significant impact on biodiversity and soil health.
On the economic side, dependence on chemical inputs and the adoption of intensive tillage practices increase production costs for farmers. This becomes particularly problematic when one takes into account the fact that grain selling prices tend to decrease, putting the economic sustainability of cereal agriculture under strain.while sale prices continue to fall

INTERVENTION: During her travels, she became aware of the lack of sustainability within the food industry. Once back in Monti Dauni, she studied to find a new sustainable approach to farming. Her research concluded that if she starts to reduce the tillage and cut down the chemical inputs it would have a significant impact. Less tillage of the soil increases its ability to retain water.

Simona di Tuccio

Continued…

She then started to study and research the local crops and determine which ones are better suited to the local environment and are therefore more resilient. This factor and the rotation of crops with legumes can improve the soil.
Simona starts planting trees and forest plants, throwing seeds here and there and sowing cereals scattered in the rain. She began to experiment directly with the earth, trying to put into practice Mario Pianesi's teachings on polyculture and those of Kutluhan Özdemir, who spread Fukuoka's non-doing agriculture all over the world. In San Carlo di Ascoli, he dreams of creating a lush forest surrounding fields cultivated with ancient grains. These grains, when kneaded with sourdough, turn into fragrant loaves of bread baked in a straw oven in need of renovation. Or they can become taralli or pasta.
Simona is also involved in the cultivation of oil seeds, such as sesame to make sesame paste, and in the cultivation of shrubs, such as lavender, from which she extracts essential oils useful for her massages.
Simona's heart is full of determination and passion for this project.

COMPARISON: Sustainable agricultural practices such as minimum tillage or crop rotation are quite widespread in the Daunian mountains, thanks also to financial contributions from the European CAP to farmers who adopt these practices.

OUTCOME: Sustainable practices incorporated into agricultural activities have made it possible to be independent of external chemical inputs. Everything required is produced on the farm and processing waste is used to produce organic fertiliser.
Adapting practices have made it possible to:

- Produce increased resilient crops
- Have a reduced consumption of water
- Eliminate the use of chemical and external inputs
- Produce High-quality food
- Increase the farm’s profitability

Fattoria Fiorentino

Puglia, ITALY

ABOUT:
Michele and Chiara are fifth-generation farmers on the farm Florentine established in 1820. The pair take care of the production and know that the earth is precious, they feed and respect it. They grow their own organic wheat, select it and clean it for reseeding or milling. In 2016 they started transforming the wheat into wholemeal flour with a stone mill from which they then produce slow-dried Pasta. There is no chemistry and no extreme mechanisation in Chiara and Michele's work. Through their approach, they have been able to control all the steps of the supply chain in order not to depend anymore on unsustainable practices or on the unstable selling market prices of wheat.

PICO Analysis
PROBLEM: Fattoria Fiorentino was falling victim to fluctuating ingredient costs. Intensive wheat production practices require a high level of chemical inputs and processing. This can make production costs rise while sales prices often continue to fall. Simultaneously grains in the supply chain being grown with the addition of chemical fertilisers and herbicides, and via intensive farming methods are destroying biodiversity and old traditions.

INTERVENTION: Michele and Chiara have always paid a lot of attention to the care of the soil, and they have always used the least impactful approach possible. They used to produce mainly wheat, but since 1999 they have built their own stone mill so that they can control their supply chain and maintain the quality of the product, and they have started to produce their own pasta.
Biodiversity also plays a part and Centuries-old olive plants also have their roots in the history of their land. They give them fine fruits, hand-picked while still green and cold-pressed the same day. These are the origins of their EVO oil, their 'purest gold'.
With the introduction of goat farming, which produces very good cheese, they have also been able to internalise the production of fertiliser, becoming a true example of a farm as a system and a circular economy.

A SPECIAL PASTA
CULTURED SUPPLY CHAIN.
SHORT LABEL.
TRUE KILOMETRE.
ZERO CHEMISTRY.

Fattoria Fiorentino

Continued…

COMPARISON: Wheat and pasta production is often carried out through intensive, unsustainable farming practices and ultra processing methods. Although, financial contributions from the European CAP fund are available to farmers who adopt agroecological and sustainable practices.

Fattoria Fiorentino - YouTube

OUTCOME: This process of innovation and diversification has allowed Fattoria Fiorentino to be less dependent on the unstable market prices of wheat. It has allowed them to close the pasta production chain and to have a 0 km product with much less impact on the environment.
The minimal tillage of the land makes it possible to reduce considerably the emission of CO_2 into the atmosphere plus to save a lot on production costs.
Having a product that is completely self-produced within the company makes it possible to meet the ever-increasing demand for quality and environmentally friendly food products.

follow their journey

ValMela Project

Panni, ITALY

VALMELA
La Mela Limoncella
dei Monti Dauni

ABOUT:
Giovanni Calitri, a farmer from the town of Panni in the Daunian mountains, decided to diversify his production, as wheat is not very profitable, opting for sustainable agriculture. He opted for the rediscovery of an ancient variety of apple the Limoncella apple, an indigenous variety, robust and well adapted to the local arid climates, requiring few chemical inputs. The Limoncella, in addition to its fruit, produces excellent fruit juices and jams and it is rich in nutritional and beneficial properties. It contains a high amount of pectin, a natural antioxidant that allows it to be preserved for a long time.

PICO Analysis
PROBLEM: Agriculture in the Daunian mountains is mainly characterised by cereal cultivation, also driven by the European CAP contributions for these crops. The last few decades have seen a constant instability in wheat prices, making this crop less and less economically viable.
The type of farming used for wheat is intensive, requiring large quantities of chemical inputs which are reflected in higher production costs.
Due to industrial agriculture, many of the native varieties have been lost or are in danger of extinction.

INTERVENTION: Giovanni started producing Limoncella apples in 2003, in order to diversify his production from the increasingly unprofitable wheat. He carried out a study in the field, which lasted 5 years to select the best and most suitable plants for the territory, observing the iteration of the plants with the soil and in which type of soil they grow best.
His work has not gone unnoticed, attracting the collaboration of the University of Foggia, which has studied the properties of this apple and its possible uses. Giovanni is now able to exploit the full potential of the Limoncella apple, producing not only the fruit but also apple extracts, cider, jams, and even perfumes made from the skin.

CLICK TO VIEW

GAL Meridaunia, il rilancio della mela limoncella - YouTube

ValMela Project

Continued…

The Gal Meridaunia also believed in the potential of the rediscovery of the Limoncella apple, offering its organisational and financial support, bringing together the various producers of this apple variety, and trying to create favourable market conditions for this crop.

COMPARISON: There are other similar experiences in the rediscovery of local varieties in southern Italy, such as the Annurca apple in the Campania region.
The experience of the Limoncella apple is unique in the Monti Dauni, which then became a broader project, ValMela, aimed to relaunch apple production in the Monti Dauni region and to involve various local players, from the Gal Meridaunia to the University of Foggia, creating a synergic system to safeguard this variety of apple, which, thanks to its robustness and ability to adapt to the clay soils of the Monti Dauni, is well suited to sustainable agriculture with minimal use of pesticides and chemical fertilisers.

OUTCOME: The effects of this project are multiple and wide-ranging…

- Offers an alternative to the poor profitability of cereal cultivation.
- Rediscovery and preservation of local heritage varieties that are more resilient.
- Improvement of biodiversity.
- Limoncella apple cultivation is done along the slopes of the Daunian hills, which have a high risk of hydrogeological instability. The roots of the apple trees are able to hold the soil, preventing landslides and soil leaching.
- The Limoncella apple, being a hardy plant, requires few treatments, especially chemical ones, making it an environmentally sustainable crop.
- Increased profitability thanks to the inclusion of quality and sustainable products in niche markets.
- It has triggered a series of actions that have led to cooperation with various local farmers, Gal Meridaunia and the University of Foggia.

follow their journey

Marcello Fiscante

Foggia, ITALY

ABOUT:
Marcello is a farmer in the Daunian region of Puglia who looks to heritage wheat crops as a method of sustainable and resilient farming. He believes the historic varieties are better suited to the poor clay soils and the regional climatic conditions. He looks to varieties that have never been genetically modified and that produce lower yields but of higher quality and flavour. However, being part of the digital age, he believes that it is important to keep up to speed and to use technological innovations to manage the farm and crops effectively.

PICO Analysis
PROBLEM: Marcello has to deal with poor soils and often tough conditions to grow his wheat crops. Intensive wheat production practices require the high use of chemical inputs and processing. This has a double negative impact, from an environmental point of view, excessive tillage and the use of chemical inputs cause the loss of biodiversity and leaching of the soil, but this makes production costs rise while prices continue to fall. It also leads to lower-quality grains with less nutritional benefits.

INTERVENTION: To cope with falling wheat prices, Mr Marcello uses sustainable farming methods, reducing tillage and reducing the use of pesticides against weeds. Marcello's

identification of the best sustainable practices in agriculture is the result of years of experiments and observations in the field. He has introduced local heritage varieties of wheat that are more resistant and require fewer chemical inputs.
Marcello has also introduced the use of high technology to rationalise and limit waste in cultivation using GPS technology.

CLICK TO VIEW

A CASALNUOVO L' AGRICOLTURA E' SMART. LA STORIA DI MARCELLO - YouTube

Marcello Fiscante

Continued...

The application of GPS in farmland management has done nothing but avoid the occurrence of double fertilisation in some areas and no spraying in others. In fact, GPS has enabled operators to cover the ground with all the necessary operations and above all to do so in the shortest possible time. The aim of using a GPS in the agricultural sector is, in fact, to ensure that every area of land is subjected to the same practices.
As well as ensuring that all the land receives the same treatment, the use of GPS makes it possible to store data on all the work carried out, to map the land to be subjected to agricultural activities, to reduce management costs and thus obtain a higher income. In general, a cost saving of about 10% can be achieved.

COMPARISION: Marcello's technological innovation may be one of the few examples in the area. The GPS system makes it possible to minimise waste and to know in detail what needs to be done in the different parts of the field. According to him, the investment in the GPS system will be returned in two years.

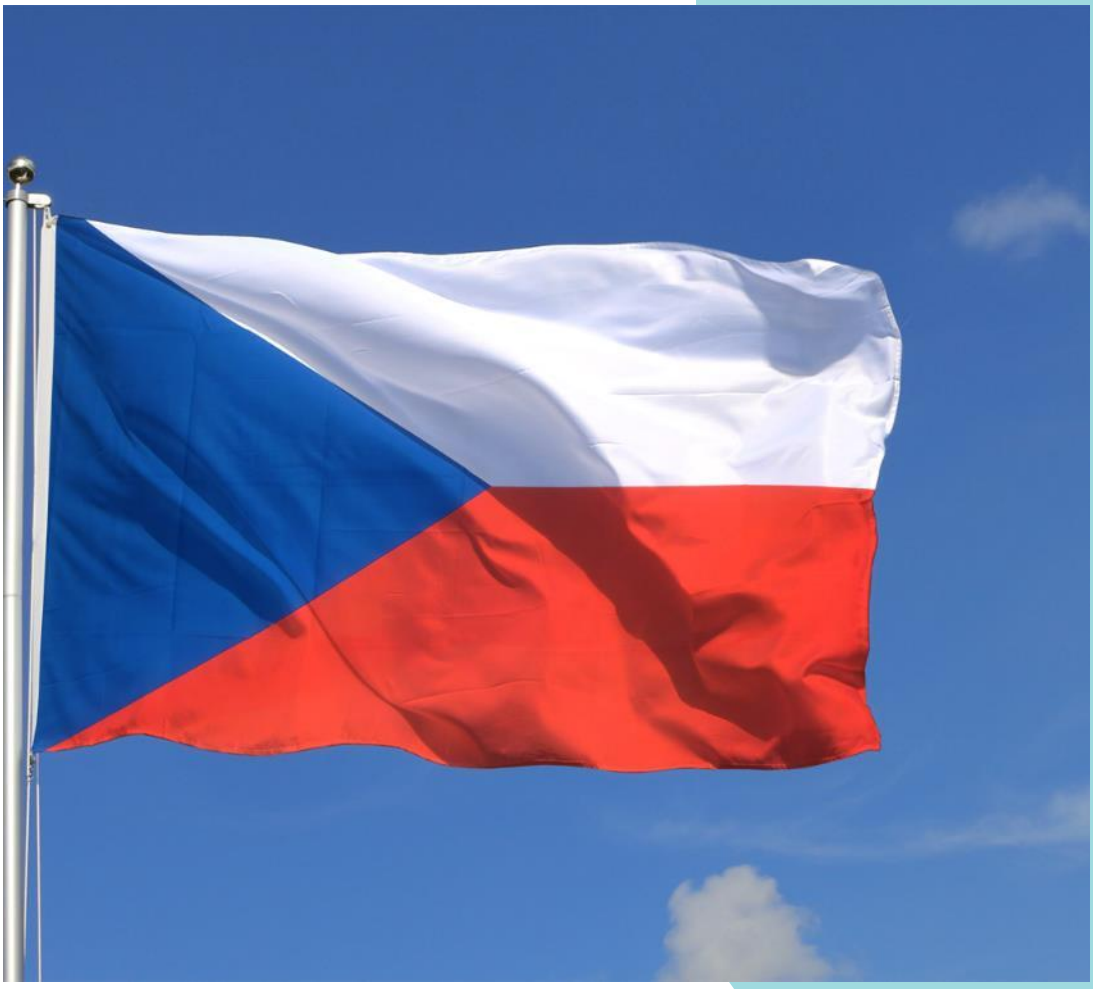
OUTCOME: The fewer chemical inputs used has not only the immediate cut of production costs but also a long-term impact. The typical increase in chemical pesticides makes the weeds more resistant to them and every year farmers must use more and more pesticides to kill the weeds, in a vicious cycle that brings farmers to spend more money to buy chemical inputs against a decreasing price of the final product.

The advantages of GPS in agriculture:

- Less consumption of plant protection products, fertilisers and pesticides;
- Lower management costs;
- Greater time savings;
- Higher profitability;
- Ability to operate at any time of day or night: the operator is guided by GPS and does not need to see.

follow their journey

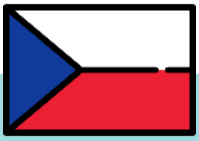
CZECHIA



Farma Hruškovi

STVOLENSKÁ MOŠT

Manětín, CZECH REPUBLIC



ABOUT:

The eco-farm and cider house was established in 2008. The Hruškovi family started farming on 11 ha of meadows in the forgotten settlement of Radějov near Manětín, with 2 ha of extensive orchards. Today they farm 95 ha, breeding sheep and goats, beef cattle of the Salers breed and in the village of Stvolny we run a fruit cider factory. They run the farm and the cider house mainly by their own means. Their philosophy is a natural lifestyle and farming in an organic farming system. They see farming as an opportunity to exploit their natural heritage and the legacy of our ancestors. The production of ciders is also adapted to this philosophy and they therefore place emphasis on quality and natural origin without any chemical preservation.

PICO Analysis

PROBLEM: The area is situated in a gently undulated and mostly wooded terrain, which is located in a moderately warm climate zone. The soil here is characterised by a weakly acidic reaction and medium fertility. Prior to the wetland project, the site was characterised by non-functioning drainage systems.

INTERVENTION: The farmer has created three cascading ponds and a 1.5-hectare wetland on his land. In addition, the tree plantations lining his land, which average between 2 and 5 hectares in size, contribute to maintaining the water regime in the agricultural landscape. The farmer has also actively promoted the restoration of historic paths and the construction of bio-corridors as part of the land improvements. In cooperation with the nearby town of Manětín, he planted a 2.5 km long avenue. The innovative aspect lies mainly in the combination of the water retention function with conservation activities focused on ornithology.

Farma Hruškovi

STVOLENSKÁ MOŠT

Continued…

COMPARISON: Prior to the introduction of wetland measures on the site, the existing drainage systems were dysfunctional, causing water retention problems in the landscape. After the construction of the wetland, which includes an area of water, nature returned to the area, the landscape was retaining water more effectively and the ponds were serving as a reserve water source.

OUTCOME: Ponds and wetlands are becoming an important backup source of water for farmers. As they are restored, rare animals such as the sea eagle, the common marten, and the European beaver are also returning to the landscape. Wetlands also serve as resting places for waders during migration and as nesting sites for whooping cranes.
The implemented measures and the return of native fauna to the landscape also bring educational value. For example, Mr. and Mrs. Hruska organise an annual bird ringing for the general public, which contributes to public education. Thanks to his activities, the farmer has been able to restore the landscape to its natural ability to retain water.
In the future, this farmer has plans to acquire more land, which would allow him to further develop his projects to protect the environment and promote biodiversity.

CLICK TO VIEW

Stvolenský mošt - YouTube

follow their journey

Lukáš Drlík

Levandulový statek Bezděkov

Úsov, CZECH REPUBLIC

ABOUT:

The farm in Bezděkov has been successfully farmed for many years with the support of the whole family. Even nowadays they are trying to follow in the footsteps of their grandparents and maintain and develop everything around the farm and agriculture. They are thriving here in growing fruits, vegetables, and herbs, but most of all...lavender.

With the help of Mr. and Mrs. Dusek from the Research and Breeding Institute in Olomouc, they grew lavender from seeds in their well-prepared conditions. In 2014, 500 small plants were planted in a part of their first lavender field, which they managed to replant in the autumn of 2015, and they finally have a whole lavender field. Since 2016 they have been planting another, much larger field with around 25,000 seedlings and they are still adding more. In the next few years, they are planning an entire lavender kingdom, in the form of 5 hectares of lavender fields surrounding the Bezděk farm.

They will process most of the produce from the harvest for their cafe, farmer's markets, and some for customers. They are also very proud to have signed up for BIO certification right from the beginning of this endeavour. The word BIO is not that important to the family, but the philosophy of BIO definitely is.

PICO Analysis

PROBLEM: They had a problem with extensive soil erosion on their farm. As the land was situated on a slope, there was considerable washing away or leaching.

INTERVENTION: The intermediate row was planted with grass to strengthen the slope and at the same time, a flock of thirty sheep was acquired.

COMPARISON: Sheep are an effective solution to weed control, making it unnecessary to rely on mechanisation or chemical sprays.

Lukáš Drlík

Levandulový statek Bezděkov

Continued…

OUTCOME: Thanks to sheep farming, the farm's offering has expanded to include quality lamb products. The Sheep contribute to improving soil properties as their grazing helps to loosen the soil and eliminate weeds. As a result, the soil is of higher quality and there is no excessive water evaporation after rain. In addition, a group of 30 sheep has replaced the work of five employees who previously had to deal with weed control. These workers can now direct their efforts to other areas, which has led to an increase in overall yields.

Levandulový statek Bezděkov - YouTube

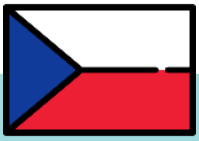
In addition to the environmental and financial benefits, sheep farming also has aesthetic benefits for the landscape - the scenery with a flock of sheep against a backdrop of arable crops is more appealing than an empty, lifeless field. In this way, sheep offer a range of environmental as well as financial benefits, underlining their importance for sustainable agriculture.

Their farm has also become a popular space for community events and festivals. By being on the farm, the community are exposed to farming life and learning about their local environment and the importance of biodiversity.

follow their journey

Jan Hodoval

CZECH REPUBLIC



ABOUT:

The father of the current farmer started farming in 1993 on 13 ha of land returned by the JZD through restitution. The farm is already run by a young farmer, Jan Hodoval, who took over the 30 ha farm from his father in 2009. In the beginning, he was helped by a grant for new farmers, which he used to buy his first tractor. The farmer started his business with a vision that the current farming practice (consisting of 10 to 15 vegetables, potatoes and 20 bulls) needed to change as it was labour-intensive.

At present, about 100 ha are farmed conventionally. The range of crops grown is very diverse. He grows cereals (winter and spring wheat), sugar beet, soya beans, oilseed radish, winter and spring poppy and peas. Even before compulsory greening, he voluntarily started growing catch crops on 90% of his land. He is a member of the Brassica marketing cooperative, through which he sells most of his production. The marketing cooperative specialises in the storage and marketing of cereals and oilseeds.

On the farm, the farmer invests mainly in the repair of buildings, the purchase of land and the acquisition of new modern equipment, which enables him to cultivate the land quickly and, above all, with good quality and within the agronomic deadlines. The use of modern machinery saves moisture, reduces fertiliser costs and improves soil structure. The farmer cultivates all the land himself. He also helps neighbouring farmers and spends his free time with his family. He believes that the basis of the farm is healthy, biologically active and unfertilised soil. He achieves this by growing value-added crops (such as peas, oil radish and bindweed), ploughing, subsoiling and regular organic fertilisation. He spreads 1,300 tonnes of manure on the land each year. He prefers organic pesticides to synthetic ones. The basis of cultivation is the selection of healthy varieties that are not susceptible to disease. The vision for the future is to replace herbicide treatment of crops with mechanical cultivation of the entire area using an optically guided weeder, which allows the plants to better manage soil moisture.

Jan Hodoval

Continued…

PICO Analysis

PROBLEM: Excessive fertilisation was observed during cereal and poppy cultivation, which resulted in increased soil nitrogen content. This phenomenon had a negative effect on the optimum growth of the crops. In addition, poppies faced problems with molds and pests, which posed a further complication in the cultivation process.

INTERVENTION: In order to avoid excessive nitrogen accumulation in the soil, the weeding method was introduced. This technique made it possible to reduce the amount of fertiliser needed, as weeding allowed the fertiliser to be distributed more efficiently to the crop roots instead of to the weeds. As a result, the crops outgrew the weeds more quickly and there was no need to use chemicals to suppress weed growth.
As for the problem of parasites in poppies, the solution was to plant the poppies earlier. By the time it was time for the parasites, the poppies had matured/grown sufficiently, and the damage caused by the parasite had become negligible. On the other hand, downy mildew began to be prevented with bacterial fungicides. These fungicides only need to be applied once, as the bacteria will 'wake up' and start working against the fungus again in the event of rain.

COMPARISON:
Of greatest importance to farmers is the use of bacterial fungicides in providing crop protection. In the case of the use of chemical sprays to combat fungi or parasites, this process must be carefully monitored and, above all, timed correctly. Incorrect timing could lead to a reduction in production of up to 40%.

OUTCOME:
The weeding process achieves the most significant results as it can save approximately 20% of fertiliser costs. As a secondary benefit, thanks to strong crops and weak weeds, there is no need to use herbicides.

Ing. Radovan Tůma Ph.D.

CZECH REPUBLIC

ABOUT:
Private farmer Radovan Tůma cultivates 10 hectares of land in an area with unique natural conditions for hop growing, historically known as Polepská blata. The famous local varieties (clones) of the mildly aromatic Žatec semi-early red hops are sought after by breweries literally all over the world. The agricultural area of Litoměřice is very dry and local growers are increasingly facing problems related to climate change. However, with the help of irrigation, the farmers can supply the market with high-quality fresh local produce. In addition to hops, early potatoes are also widely grown. In recent times, irrigation has also been used for common crops such as cereals, maize, and lucerne. In this area, a large irrigation system has been built on 2,200 ha with a total length of 100 km of pipe network, which supplies irrigation water to 700 farmers of all sizes.

PICO Analysis

PROBLEM: During the cultivation of traditional hop varieties, there were sometimes problems associated with the death of some plants due to the fight against mildew.

INTERVENTION: A new plant variety was introduced and planted, which was obtained by taking a sample from the plants and moving this sample to the laboratory for the nutrient solution. The result is a newly grown plant that is more resistant to viral diseases, more vigorous and produces better quality fruit.
A decision was also taken to grow the plants with more spacing between them. Although this means fewer plants are planted, it gives each plant more room to grow, eliminating shading and allowing better airflow between them. In this way, it is possible to prevent mold and save on costs associated with treatment products. The irrigation process has also been changed to use drip irrigation instead of the original strip system. This new method allows more targeted watering of crops and minimises evaporation.

COMPARISON: The introduction of the drip system has drastically reduced the time required for the preparation and maintenance of the original strip watering system, which was also relatively prone to breakdowns. In addition, more efficient watering allows water saving and ensures better crop conditions.

OUTCOME: There has been a significant overall decrease in input costs as well as a decrease in the level of crop death or failure. The new crop is stronger, more resilient and produces better quality fruit.

Roman Koutek

Sedlak z Hané

Hané, CZECH REPUBLIC

ABOUT:

Roman Koutek is a peasant farmer from Hané. His family has been farming in Topolany near Olomouc for several generations. The exception was the period of communism. In 1989, as soon as it was possible, farming activity resumed, and livestock returned to the buildings. They started on a few hectares and over time the area increased. The farm now includes about 75 hectares of land, more than half of which is their own.

In Olomouc - Topolany they focus on growing field crops typical for the Hané region, their specialisation is the production, processing and sale of oilseeds and oils, especially from soybeans (GMO free), rapeseed and sunflower. The whole family, parents, wife and their two sons are involved in working the farm. In 2013 Roman took over the responsibility for the running of the farm. During harvest and seasonal work, he cooperates with farmers from the surrounding area.

They are members of the presidium of the Association of Private Agriculture of the Czech Republic and Roman is the chairman of the committee of the Association of Private Agriculture of the Olomouc district z.s., and a member of the board of directors of the Association of Growers and Processors of Legumes z.s.

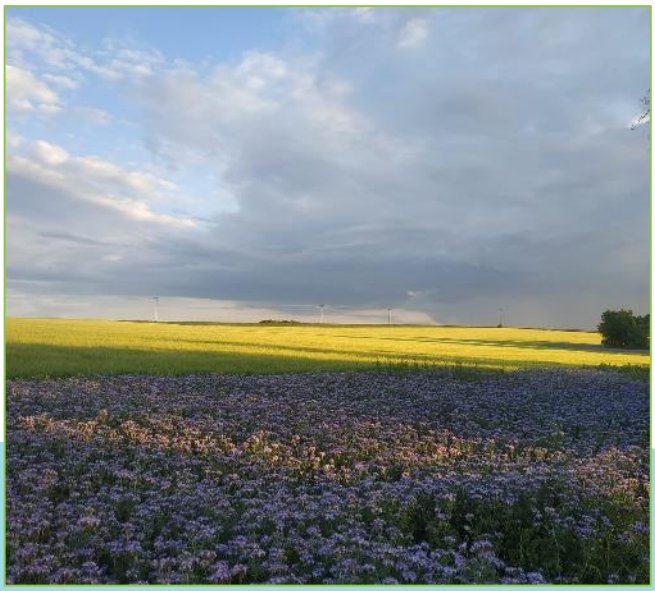
PICO Analysis

PROBLEM : During the year there was a lack of rainfall, which had a negative impact on the process of degradation of the pesticides used in the soil. As a result, residues of these substances accumulate in the soil, which had a negative impact on subsequent soil establishment and crop production. One of the factors contributing to the inefficient degradation of pesticides was the lack of organic matter in the soil.

Roman Koutek

Sedlak z Hané

Continued…



INTERVENTION: First, it was necessary to change the crop rotation and crop rotation planning in the selected area. Subsequently, in order to reduce the use of herbicides, mechanical rod harrows were introduced, which ultimately reduces the need for the application of chemicals such as herbicides or pesticides and thus contributes to a more environmentally friendly management of the soil. In the area, which is characterised by drought, intensive soil mixing cannot be carried out as this would lead to further drying out of the soil.

OUTCOME: Above all, these practices have enabled the cropland to be fully utilised again, while saving tens of percent in pesticides and herbicides. Leading to more environmentally sound farming. The Kouteks now offer their sunflower and rapeseed oil and flavoured roasted soybeans with chili. The sunflowers, rapeseed, soybeans and chili peppers grew in their fields around Topolan and it is a 100% regional product. It is 200 meters from the field to the press, from there to the oil mill and another 20 meters, here it is already prepared for you.

Food doesn't always have to travel halfway around the world.

follow their journey

AUSTRIA

Ökoregion Kaindorf - Humus +

Styria, AUSTRIA

ABOUT:

Ökoregion Kaindorf is located in Eastern Austria (federal state of Styria) where the eastern slopes of the Alps are slipping into the Southeast-Austrian lowlands and hillsides. The Humus-Program of the "Ökoregion Kaindorf" is a contract solution developed for voluntary trading of CO_2 certificates: Based on an initial soil sampling at the start of the contract (by a certified civil engineer and accredited national laboratory), farmers set their own measures to increase the humus content in their soils. After a period of three to seven years (according to the farmer's needs), humus content is determined again by a second soil sampling. An increase in humus content is converted into additional tons of CO_2 stored in soil. Farmers receive a success fee of 30€ per additional ton of CO_2 stored, which is financed by companies who voluntarily compensate for their unavoidable CO_2 emissions. The amount of CO_2 purchased by the companies cannot be traded. After the payment, farmers must guarantee that the increased humus content remains in place for at least five years. This requirement is verified by a third soil sampling taken five years after the payment. Decreases in humus levels lead to partial or complete refunding of the success fee. Contracts and carbon verification are organised and managed by the association "Verein Ökoregion Kaindorf" while emission trading is managed by a standalone company.

PICO Analysis

PROBLEM: Background factors for the endeavour include climate change, recent exposure to periods of water shortage, increased danger in the following decades, and a decline in the humus content of arable land.

INTERVENTION: Three municipalities with a combined area of 79 km^2 and a population of 6,150 support the region's commitment to improving soil fertility (Kaindorf, 2019). 42% of the region's 316 farms, as reported by INVEKOS 2013, are engaged in intensive arable farming; pig husbandry, fruit production, and cattle fattening are less significant farm production types. 16 of the farms are organically farmed (INVEKOS 2013); 25 farms in the core region of Kaindorf engaged in the "Humus Project" in 2019 (Krobath, 2019).

The "Humus Project" farmers are dispersed throughout Austria's entire north and east, even though the Association "Koregion Kaindorf" conducts most of its activities within the region's boundaries. 250 farms are participating throughout Austria with 2,500 ha of arable land.

Ökoregion Kaindorf - Humus +

Continued…

COMPARISON: The “Humus project” of the umbrella group “Ökoregion Kaindorf” focuses on boosting soil fertility and carbon sequestration. The program calls for the sharing of knowledge with farmers (e.g., through the "Humusakademie"), the purchase of CO_2 offset certificates primarily by local businesses, the use of compost and a biochar initiative, the reduction of soil tillage and the mandatory greening of arable land, mixed cropping, etc. In a gathering of regulars (the "Humus-Stammtisch"), experience on boosting soil fertility is exchanged. Meanwhile, an international audience participates in the “Humus project” events.

OUTCOME: On 2,500 hectares, approximately 10 tons of CO_2 are sequestered annually. The amount of water that can be stored has substantially increased. Several minor agro-ecological initiatives, including assistance for agro-forestry, conventional large grassland-orchard management systems, and hemp cultivation, are carried out simultaneously. Farmers in the network interact closely with a broad cohort of partners in politics, society, the consumer market, schools, business, and research. The Humus Project and its focus on soil health and regenerative agriculture have several implications for teaching tools and educational programs.

Hands-on learning: Soil health and regeneration are complicated subjects that can be difficult to grasp solely through lectures and textbooks. The hands-on learning experience, can help students learn about the importance of soil health and how to enhance it in a more engaging and memorable way.

Multidisciplinary approaches: The Humus Project is based on principles from a variety of fields, including agriculture, environmental science, and climate research. As a result, teaching methods and programs that include many topic areas can provide a more thorough grasp of soil health and regeneration while also assisting students in seeing the linkages between other disciplines.

Community partnerships: This project highlights the need for collaboration and community involvement in maintaining soil health and regeneration. Partnerships with local farmers, companies, and community organisations create opportunities for students to witness the real-world impact of their learning and participate with the larger community through teaching tools and programs.

Global perspective: The Humus Project is a global project because soil health and regeneration are critical issues worldwide. Also, teaching tools and programs can help students grasp the range of approaches to soil health and regeneration around the world, as well as the cultural and economic variables that influence these methods.

follow their journey

Grand Farm 15

Absdorf, AUSTRIA

ABOUT:
The GRAND FARM is an organic farm with a high research component. In addition to arable farming, work is also being done on the development of grassland, agroforestry, vegetable cultivation and animal husbandry. According to the motto: Innovation - Research - Demonstration! The GRAND FARM is the first research and demonstration farm in Austria.

PICO Analysis

PROBLEM: The major challenges of the future, such as world nutrition, climate, environmental and species protection, must not be assigned to science alone, but require the cooperation of all sections of the population.

INTERVENTION: In order to improve this cooperation, Grand Farm has developed the concept of the research and demonstration farm. It includes two important areas: First, finding solutions together (research) and second, sharing knowledge (demonstration) of the results and experiences from this research. In addition to normal production, they work closely with research, making their ideas and innovations accessible to science.
The research and demonstration focuses are on soil health and agroforestry. Soil is the most important asset for all farmers and must be preserved for future generations. A healthy soil enables the production of healthy food and is therefore also of enormous importance for human health. Agroforestry is the joint cultivation of trees and shrubs on a field with crops. In addition to harvesting the annual field crops, a yield is also obtained from the fruits or the valuable wood growth of the trees.

COMPARISON: The farm aims to change or adapt practices by involving stakeholders (farmers, advisors, and researchers). They co-design solutions and develop networks within to disseminate and spread the learning.

Grand Farm 15

Continued…

OUTCOME: A healthy soil enables the production of healthy food and is therefore also of enormous importance for human health. Careful handling of the soil enables stable yields, even under difficult weather conditions, which can even be generated with reduced effort.

The importance of our soils in terms of nutrition (quality and quantity), climate change, water quality and biodiversity is enormous. Research topics are all regenerative measures to restore soil health. GRAND FARM research projects, therefore, deal with organic farming, humus formation, erosion protection, crop rotation, mixed sowing, greening management, reduced tillage and direct sowing.

In regard to agroforestry, in addition to a higher total biomass yield (up to 1.4 times that of a field), agroforestry offers a multitude of other advantages. Reduced wind speed on the field leads to less evaporation, the flowering trees promote pollinators and beneficial insects, provide habitats for both wild and farm animals and thus support the preservation of biodiversity. CO_2 is taken from the atmosphere, stored in the wood and stored in the soil. Agroforestry thus serves to adapt to climate change and to actively slow down climate change.
The right selection of the tree and shrub species, the choice of the right rootstock, row and tree spacing as well as training methods must be planned precisely in order to achieve an optimal effect

follow their journey

Arche Noah –
(Noah's Ark)

Schiltern, AUSTRIA

ARCHE NOAH

ABOUT:
The organisation called Arche Noah was founded in 1989 and is particularly concerned with the destruction of seed biodiversity. They collaborate with farmers and gardeners to establish a living seed bank, engage in a wide range of educational initiatives, and influence policy at the national and international levels in order to lessen this loss of biodiversity. The degrees of **education, politics, and technology** are illustrated by Arche Noah.
It was chosen as a case study for agroecological innovation because it perfectly demonstrates all three of these aspects and demonstrates how agroecology functions as a movement that combines these elements in order to work cooperatively towards a diverse seed bank and overall biodiversity through collective action, policy work.

PICO Analysis:
PROBLEM: Since 1900, the diversity of our cultivated plants has decreased dramatically worldwide - by 75% - due to the industrialisation of agriculture. Today, genetic engineering, seed monopolies, climate change, and wars endanger this precious heritage.

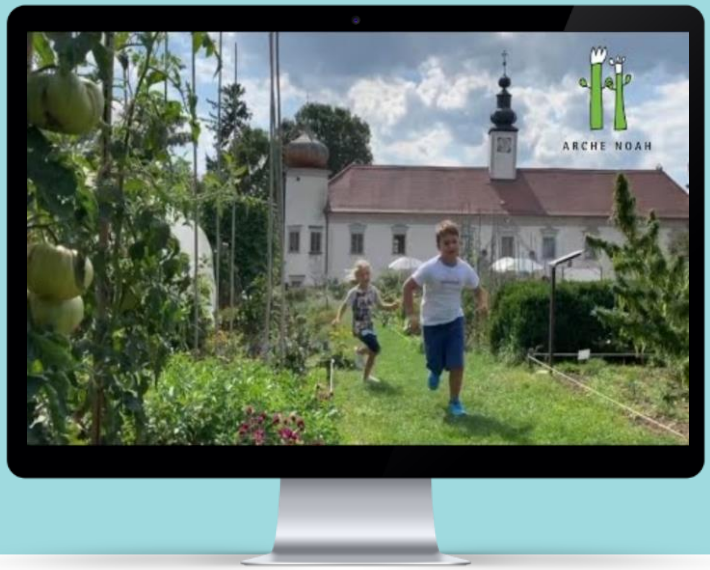
INTERVENTION:
The organisation Arche Noah has adopted a comprehensive intervention strategy. It engages in partnerships with farmers and gardeners to build a dynamic seed bank, thereby guaranteeing the conservation and proliferation of a wide range of plant cultivars. Moreover, they actively participate in educational endeavours aimed at enhancing awareness and understanding of the significance of seed biodiversity. In addition, Arche Noah exerts influence on policy-making processes at both national and international levels, to advocate for the implementation of legislation that promotes the protection of seed variety.

Arche Noah –
(Noah's Ark)

Continued…

COMPARISON:
This analysis focuses on contrasting the acts and initiatives undertaken by Arche Noah with a hypothetical situation in which no collective endeavour is undertaken to safeguard seed biodiversity. If the efforts of Arche Noah were not present, there would probably be a persistent decline in the diversity of plant genetics. This may potentially result in a decrease in the ability of agriculture to withstand challenges, an elevated susceptibility to pests and diseases, and a reduction in the range of available food options.

OUTCOME:
Arche Noah is dedicated to the preservation and expansion of seed biodiversity through the establishment and maintenance of a seed bank. This initiative is crucial for safeguarding the survival of a wide range of plant species and their diverse genetic variations.
Enhanced Awareness and Knowledge: Through educational efforts, the organisation aims to augment awareness and knowledge among farmers, gardeners, and the general public regarding the significance of seed biodiversity.
Their policy advocacy efforts are directed at exerting influence on both national and international policies that are conducive to the conservation of seeds and the promotion of sustainable agriculture. **The preservation of various seeds** contributes to the enhancement of agricultural resilience by reducing vulnerability to environmental changes and pests. Arche Noah's initiatives actively contribute to the promotion of biodiversity through the preservation and protection of plant genetic resources.



ARCHE NOAH - Unsere bunte Vielfalt (youtube.com)

follow their journey

Via Campesina

Vienna, AUSTRIA

ABOUT:

Via Campesina is an international organisation whose goal is to assist underprivileged rural communities via sustainable agriculture and food sovereignty. The Austrian setting mostly focuses on small and family farm support and awareness through the ÖBV (Austrian Small and Mountain Farmer Association), occasionally addressing certain special interest concerns such as milk pricing. The degrees of education, politics, and technology are demonstrated through Via Campesina. It was chosen as a case study for agroecological innovation because it exemplifies all three of these levels and because it demonstrates how agroecology functions as a movement that combines these levels to work cooperatively toward small farmer support and food sovereignty in Austria through collective action, policy work, and education.

PICO Analysis:

PROBLEM:

The issue at hand pertains to the difficulties encountered by socioeconomically disadvantaged rural communities in Austria, with a specific focus on the plight of small-scale and familial agricultural practitioners. The obstacles encompassed in this context are the constraints imposed by limited access to resources, economic pressures, and concerns about food sovereignty. Food sovereignty refers to the inherent entitlement of individuals to exercise autonomy in shaping their own food and agricultural strategies, frequently entailing opposition to the dominance exerted by corporate entities in the agricultural sector.

INTERVENTION:

The comprehensive intervention strategy has been started by Via Campesina and its allies in Austria, including the ÖBV. This approach encompasses the provision of educational resources, advocacy for laws that prioritise small and family farms, and participation in awareness campaigns, all aimed at helping the aforementioned agricultural enterprises. Furthermore, the government occasionally directs its attention towards addressing specific issues within the agricultural industry, such as the pricing of milk, in order to guarantee equitable remuneration for farmers.

Via Campesina

Continued…

COMPARISION:

The comparison can be drawn between the efforts and initiatives undertaken by Via Campesina and its Austrian partners and the hypothetical scenario where no concerted effort is made to support small and family farmers and promote food sovereignty. In the absence of these efforts, rural communities may continue to face economic hardships, loss of traditional farming practices, and challenges related to food security and independence.

OUTCOME:

Via Campesina is dedicated to the promotion and maintenance of small-scale and family-based farming practices in Austria. Its primary objective is to ensure the ongoing significance of these farms within the agricultural sector of the country. The objective is to promote the ideas of food sovereignty, thereby enabling rural communities to exert authority over their own food production and agricultural policies. The objective of Via Campesina's advocacy endeavours is to exert influence on agricultural policies in Austria to bolster small-scale farming and promote food sovereignty. Enhanced Awareness: Their efforts are focused on augmenting public and policymaker's understanding of the significance of small-scale agricultural operations and the concept of food sovereignty. The objective is to encourage the implementation of sustainable agricultural practices and technology that are appropriate for small-scale farming operations, hence facilitating technological adaptation in the agricultural sector.

follow their journey

BOKU-
Community Garden

Vienna, AUSTRIA

ABOUT:
Through the use of, organisation, and management of the BOKU-community garden, students can learn and practically apply agroecological principles. They deal with concerns like polyculture variety at the plot level, community space sharing, and (university) politics to maintain their access to the area. The educational, political, and technological levels are depicted in the BOKU-Community garden. It was selected as a case study for agroecological innovation because it exemplifies all three of these levels and because it demonstrates how agroecology functions as a movement that combines these levels in working cooperatively toward a hands-on combined environmental and agricultural understanding through individual and collective action and education.

PICO Analysis:
PROBLEM: The issue at hand pertains to the necessity for students to acquire practical experience and comprehension of agroecological concepts within the context of real-world obstacles associated with polyculture diversity, community area allocation, and university governance. Additionally, it encompasses the task of guaranteeing ongoing educational access to the garden.

INTERVENTION: The BOKU-Community garden functions as an instructional and hands-on platform wherein students acquire knowledge and implement agroecological principles. This intervention entails the strategic management and organisation of the garden area intending to foster polyculture, community engagement, and effectively navigating the complexities of university politics to ensure continued access. The students actively participate in the cultivation of a variety of crops, collaboratively managing the garden area, and pushing for its sustained accessibility.

BOKU-
Community Garden

Continued…

COMPARISON: A comparison can be made between the endeavours and initiatives pursued by the BOKU-Community garden and a hypothetical situation in which no such community garden or educational platform is present. The absence of a garden could potentially result in a deficiency of practical exposure for students regarding agroecological concepts. Furthermore, the issues pertaining to polyculture, community space sharing, and university politics may persist without being adequately tackled.

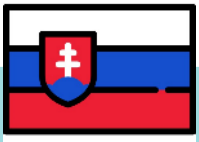
OUTCOME: The incorporation of hands-on learning in the educational setting enables students to acquire practical experience and develop a profound comprehension of agroecological principles by actively engaging in garden-related activities. The garden exemplifies the implementation of varied polyculture techniques, showcasing the advantages of cultivating multiple crop kinds in close proximity. The garden fosters community development among students and users by promoting shared management and active participation. The impact of the university policy on the garden is manifested by its presence and advocacy endeavours, which are directed towards influencing policies that ensure continued accessibility to the garden for educational objectives. Students develop a comprehensive comprehension of the interconnectedness between environmental and agricultural elements through their active engagement in the garden.

follow their journey

SLOVAKIA

Poľnohospodárska Spoločnosť

Slovakia



ABOUT:
Poľnohospodárska spoločnosť has been working in agriculture since 2015 and its farms are located in the regions of Lutila, Žiar nad Hronom, Slaská and Malý Slavkov. They currently manage 900 hectares of land and focus on the production of organic Aberdeen Angus beef and on the production of organic feed (bio hay, bio crops), where they sell surpluses over their actual consumption to farmers who do not have enough feed.

PICO Analysis:
PROBLEM/ CONTEXT: The quality of the soil has a significant impact on the quality of the future harvest - its pH, content of phosphorus, nitrogen, potassium, calcium, etc. For this reason, they took soil samples from the plots of land they farm and had soil analyses processed in the laboratories of the Slovak University of Agriculture in Nitra. It emerged that they needed to adjust the pH and supplement the missing elements (P, N, K, Ca) on cultivated soils.

INTERVENTION: As they had manure, a total volume of approx. 1500 tons after last winter, and the analysis showed that the recommended dose of manure should be approx. 20 tons per hectare, they decided to sow cereals on an area of approx. 75 ha. They also carried out Liming – (addition of finely ground ecological limestone to improve the pH of the soil), ploughing and the removal of stones after ploughing. Along with the addition of organic-grade bacteria and fungi, all these measures led to healthier soil.
In 2017, they built a modern ecological farm focused on the breeding of the Aberdeen Angus beef breed in the "green meadow" in the cadastral territory of Lutila in the "Golaňova Medza" location. After the approval of the farm in the spring of 2018, they started taking steps leading to the fulfillment of another of the goals - obtaining ecological status for everything they produce on the farm, i.e. for plant and animal production.
Since September 2018, their plant production has been organic, and thus they produce bio-hay and bio-crops. The status for organic animal production was granted to them in May 2020, as this step requires that the livestock consume organic plant food for at least a year.

Poľnohospodárska spoločnosť

Continued…

COMPARISION:

The basic breeding of lactating cows - a weaned calf - is realized in the following ways:

- production of pledge calves (200 to 300 kg), intended for sale to other breeders, who then fatten them up to a final weight of 500-800 kg
- production of calves for slaughter (baby beef) fattening on the farm by themselves up to a final weight of 500-800 kg
- production of calves with subsequent rearing of breeding animals

After consultations with several experts in organic plant production, they concluded that the following 3 basic crops will be rotated on the arable land:

- Clover-grass mixes - partly for preparing fodder for the animals, partly after ploughing as green fertilizer
- Spelt
- Cereals - partially used in feed mixtures for fattening their animals and they use straw for bedding

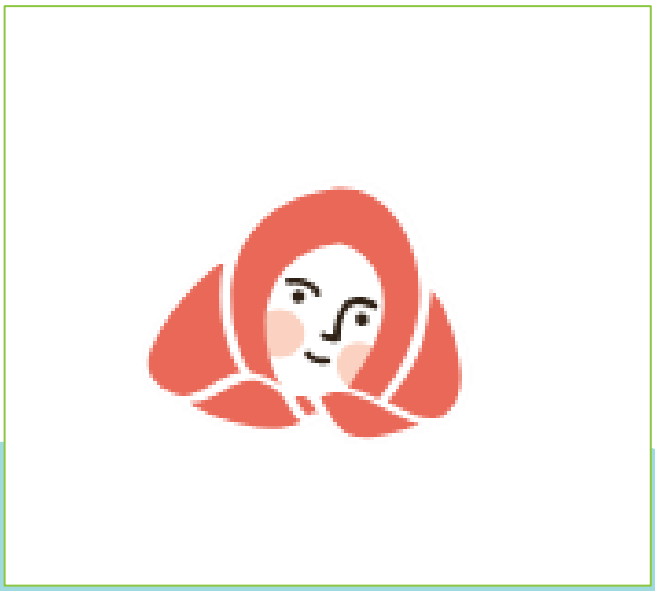
OUTCOME:

The Poľnohospodárska spoločnosť aims to produce exclusively organic fodder, animals and food on their farms. They follow strict rules set for organic agricultural production. Certificates proving their BIO quality have been issued by the relevant inspection authorities for all plant and animal products.

follow their journey

Ekofarma Važec

Slovakia



ABOUT:
Ekofarma Važec is a company focused on the management of ecological farms, including farms in the locations Važec. These farms are known for their commitment to organic farming and offer high-quality organic food. Within their portfolio, they focus on various aspects of agricultural production, including plant and animal production. Their goal is to provide consumers with honest and ecologically sustainable food, thereby contributing to a healthier lifestyle and environmental protection.

PICO Analysis:
PROBLEM/ CONTEXT: Važec Agricultural Cooperative was established in 1960. It is located in the north of Slovakia in a beautiful area between two national parks - Tatranský národní park (TANAP) and Nízke Tatry National Park (NAPANT). Parts of both protected areas are even distributed on the land of the cooperative. One of the important factors in ecological management is climate and altitude. The average altitude of the farmland is over 900 m.a.s.l. which ranks them among the highest eco-farms in Slovakia. In the spirit of organic farming, they take care of more than 1,000 cattle and more than 1,200 sheep.
On more than 2,000 hectares of agricultural land, which they cultivate ecologically, they grow enough fodder for their animals every year. Pasture areas, concentrated as close as possible to the cooperative, are mainly intended for dairy cows. They use the mountain pastures for grazing young cattle, and in the meadows, they make bulk fodder for the winter. BIO quality is maintained even in the in-house production of cheese, bryndza and other products from cow's and sheep's milk.

INTERVENTION: Following organic farming practices, one of the most important things is a balanced sowing procedure. This means an annual rotation of different crops. Therefore, here they use the approach of alternating the cultivation of cereals with legumes, one-year fodder, root crops and especially multi-year cultivation of fodder on arable land. In this way, they ensure a balanced cycle of nutrients and organic matter in the soil, as well as a reasonable regulation of soil weediness. Manure is used especially farmyard manure within the permitted range.

Ekofarma Važec

Continued…

They only use chopped straw for bedding. To replenish nitrogen in the soil, they expanded the cultivation of clover on arable land together with the application and use of bacteria in the soil. On 470 hectares of arable land, the cooperative grows organic cereals and legumes, mainly oats, barley, spring wheat, triticale, beans, lupins, peas and potatoes, which serve as core feed for their animals.

COMPARISION: Part of their activities is the internationally recognized breeding of sheep. The cooperative has a closed turnover of herds, from calves, heifers, cows to bulls. Young cattle and lactating cows graze in electric pens from May to October. Dairy cows graze seasonally outside, they are brought to the barns at night. This is also necessary for the production of farmyard manure, but especially so that they can milk them and thus obtain milk, which they further process following the demanding requirements for ecological processing and production of BIO food.

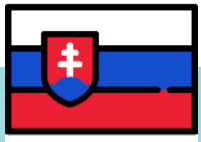
OUTCOME: Ecological farming or nature-friendly farming is important to all involved, and for these reasons, Ekofarma Važec has been a certified ECO farm since 2005. Every year the farm goes through a new certification and meets strict ecological management criteria to use the BIO label for their products:

Certificate of organic agricultural production 2023
Biokont 2023 certificate
Biokont 2022 certificate
Biokont 2021 certificate

follow their journey

Turová Farm

Slovakia



ABOUT:
The Turová Farm has been breeding meat breeds of cattle since 2006. Since 2008, the entire farm has been registered in the organic farming system, where it is necessary to comply with strict established rules, regulated by laws and controlled by inspection bodies. The farm manages more than 235 hectares of agricultural land, which serves as a fodder base for the animals they raise.

PICO Analysis:
PROBLEM/ CONTEXT: From the beginning, the main product of the farm was beef cattle and, to a lesser extent, organic hay. Due to the lack of a slaughterhouse capable of slaughtering organic beef, all their animals ended up mixed with non-organic animals in one truck that took them to be slaughtered or further fattened abroad. The mentioned gap in the market inspired them to build an ecological slaughterhouse for the slaughter of cattle.

INTERVENTION: Raising an animal, handling it, and even slaughtering it can be very stressful for the animal. The processes before, during, and after slaughter have a fundamental influence on the final quality of the meat. Meat from a stressed and exhausted animal cannot be matured and thus cannot achieve maximum culinary quality. The degree of "stress" is measured by the pH level in the meat 24 hours after slaughter. In the case of a "stress-free" animal, the pH value should fall below 5.80. The animals on the Turova farm live freely, on pasture, they are not transported to the slaughterhouse using transport, before slaughter they are placed in an outdoor waiting enclosure, which is only 20 meters from the pasture where the animals live, and the actual stunning of the animals takes place outside.
Cattle breeding and meat processing are carried out under permanent state veterinary supervision. The entire slaughtering process is controlled by the State Veterinary Administration, and each slaughtered animal is physically inspected by a state veterinarian. According to current legislation, it is necessary to take samples from slaughtered animals once a week. Since they slaughter at the slaughterhouse only once a week, every slaughtered animal is subjected to laboratory tests for Enterobacteriacea (E – coli) and salmonella, so maximum health safety of the meat is ensured. All their animals have this "privilege", in large-capacity slaughterhouses it happens to only one out of a hundred.

Turová Farm

Continued…

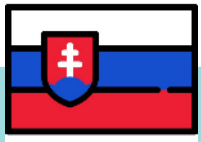
COMPARISION: Meat from the Turova farm is only sold unpackaged (wrapped in paper) or vacuum-packed. This kind of packaging best protects the meat from negative processes and increases its culinary value. At first glance, meat in vacuum packaging has a slightly darker color than meat packaged in a protective atmosphere. However, after opening, the meat regains its natural color in contact with atmospheric oxygen.

OUTCOME: For a farm to use the "organic" label, it must go through a relatively long inspection and approval process. When a "non-organic" farmer wants to start organic farming, he must fully comply with the rules of organic farming prescribed by law (for example, the ban on using industrial nitrogen fertilizers, pesticides, antibiotics for preventive treatment, etc.), but during the first two to three years he is not allowed to use label "ecological" but temporary label "conversion". This term refers to the period during which the soil and animals should be "cleansed" of substances used on the given land in the past and which are prohibited in organic agriculture. The second aspect of an organic farm is that it should be included in the organic farming regime with its entire area and all its activities, so that even a theoretical confusion of organic raw materials with non-organic ones cannot occur (for example, it is not possible to have hay produced in organic agriculture in one farm or building and hay produced in conventional = non-organic farming, as it would be impossible to distinguish them and prevent their confusion, whether intentional or accidental). Of course, the Turova farm underwent this entire described process, and all their land and animals are included in the organic farming system and permanently controlled by the Naturalis SK inspection organization. You can find Farma Turova on their website naturalis.sk in the list of controlled entities under registration number SK-2008/591.

follow their journey

Beckov farm

Slovakia



ABOUT:

The Beckov farm was created by the division of the agricultural cooperative Kálnica - Beckov on January 8, 1993. In July 2013, many years of pig breeding was ended and the cooperative gradually focused on ecological breeding of beef cattle - Charolais.

PICO Analysis:

PROBLEM: The Beckov farm's transition to 100% ecological farming presents multiple challenges, including significantly reducing chemical use and adopting new management and technology for sustainable agriculture. Situated in a biodiversity-rich area, it aims to support local ecosystems while maintaining economic viability, requiring environmentally friendly practices. The farm blends modern and traditional methods, like rotational grazing, to ensure ecological livestock farming and soil protection, necessitating ongoing innovation and education in organic practices. Economic sustainability is another challenge, addressed through product diversification and building a strong organic brand. Additionally, the farm faces the need for effective community engagement and collaboration with conservation efforts. Climate change introduces further obstacles, such as adapting to extreme weather and changing precipitation patterns, emphasizing the farm's commitment to environmental stewardship amid complex challenges.

INTERVENTION:

In the years 2012 - 2014, the space of the cooperative was completely used for planting fruit trees. The assembly of fruit orchards is primarily intended to produce Ovocňák fruit ciders.

In 2020, they decided to switch the entire farm (animal production, plant production and orchards) to the system of an ecologically managed enterprise, and since September 2022 they have produced everything with the BIO brand.

In 2022:

- started their own processing of beef and pork and sale from the yard.
- restoration of pig breeding at Beckova

The Beckov centre also became home to a newly established orchard with an area of 12 ha (a total of more than 8,000 trees and bushes). In addition to classic plums, pears, apricots and sour cherries, you can also find less common fruit bushes, such as chokeberry or sea buckthorn. The entire fruit production is used to produce mixed ciders and purees under the Ovocňák brand (their basis is apple juice, the share of which is usually 80%), which are processed at the headquarters of the parent company TOKO AGRI in Rudice, 40 km away.

Beckov farm

Continued...

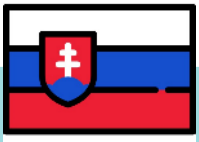
COMPARISION: Plans to obtain the status of a breeding farm are a logical outcome of the efforts of the local management. It was decided already at the founding of the husbandry that the herd would be a producer of quality breeding material. After meeting all the conditions, the Association of Meat Cattle Breeders in Slovakia granted this status on 16 November 2016. It took a little over 5 years to build the herd from the import of the first heifers to the granting of the status.

OUTCOME: For cattle, they maintain a pasture area of 120 ha. All the animals are outside all year round - on the individual pastures, they have drinking fountains, a feeding area and shelters where they can hide if necessary. After saving, all pastures are mulched, which removes scum and weeds and at the same time spreads the manure, which is the basis for the humus content of the soil. Each mulching and aeration is followed by an infusion of grasses and herbs.
To ensure high-quality cattle nutrition, they restored 40 ha of so-called pastures. by "dormant sowing" late in autumn, which will germinate only in spring.
The effort is to cover the soil all year round, so that after the main crop, or before it, various intermediate crops and mixtures are sown, not only from the point of view of increasing the organic component in the soil, but also for phytosanitary effects, by fixing atmospheric nitrogen, etc. certain crops. In addition, thanks to strong animal production, they have agricultural fertilizers.

follow their journey

Ekofarm, s.r.o.

Slovakia



ABOUT:
Ekofarm, s.r.o. is a small family farm dealing with the breeding of bees, horses and cattle, as well as the cultivation and collection of medicinal plants, the production of honey and organic teas, while simultaneously focusing on quality and acknowledging well-being. Ekofarm s.r.o. represents a small family-type company. It was established in 2000 and employs 5 workers. It manages 160 ha of agricultural land ecologically. It is dedicated to plant and animal production and has recently begun to focus on agrotourism.

PICO Analysis:
PROBLEM/ CONTEXT: Ekofarma s.r.o., faces several challenges in its commitment to economic success and sustainable farming. Expanding market reach for its organic herbal teas remains difficult, necessitating enhanced marketing and new distribution channels. Maintaining ecological standards and meeting strict EU organic certification requirements demand regular inspections and compliance. The farm seeks to expand animal breeding and explore natural cosmetics using herbs, alongside developing agritourism, which requires suitable infrastructure, services, and effective marketing to attract visitors. Additionally, dedication to ecological farming compels continuous innovation, efficient resource use, biodiversity protection, and minimizing environmental impacts.

INTERVENTION: Plant production here focuses on the production of medicinal plants and the production of hay and fodder for animal production. Currently, the company grows 20 types of medicinal plants and collects 10 types from the wild. Harvesting is done by hand. The plants are dried, processed, and made into 37 types of organic herbal teas. They sell their products in their own store and distribute them to tea shops and health food stores in several regions of Slovakia.
In the area of animal production, they are engaged in beekeeping, riding horses and Aberdeen Angus beef cattle.
Organic agriculture works in harmony with nature without chemical interventions, with the natural rhythms of the Earth. Their herb field enlivens the surroundings, attracts bees and other insects and contributes to the harmony of the landscape. Together with the mountain pastures on which cattle roam, it completes the character of the local landscape.

Ekofarm, s.r.o.

Continued…

COMPARISION: Compared to other farms and practices in the country, Ekofarm practices organic farming that works in harmony with nature without chemical interventions, with the natural rhythms of the Earth. They are aware of the interconnectedness of everything around them. Their herb field enlivens the surroundings, attracts bees and other insects, and contributes to the harmony of the countryside. Together with the mountain pastures on which the animals graze, it is all very aligned with the fact that a dominant feature of the territory is represented by the beautiful Podskalský Roháč natural formation, which was declared a National nature reserve in 1993.

In the future, they would like to expand animal husbandry to include other animals such as ducks, rabbits, sheep, to increase the biodiversity of the farm. They also have plans to use herbs in natural cosmetics, focus more on agritourism and introduce the region to a wider range of people.

OUTCOME: The landscape around them is a mirror of their work. The picture as it looks today was created for millennia. It is like a history book written by ancestors, and they continue to write in it. With a little attention, one can read it - distinguish between places where people live in harmony with nature and, through wise management, leave behind a healthy and rich landscape. Organic agriculture was created by combining the centuries-old experience of ancestors and the latest modern scientific knowledge.

Cultivation and harvesting of plants is carried out ecologically following the Commission Regulation (EU) no. 271/2010 on organic production and labeling of organic products. Control activity over the cultivation and processing of medicinal plants is carried out by the inspection organization NATURALIS SK s. r.o.

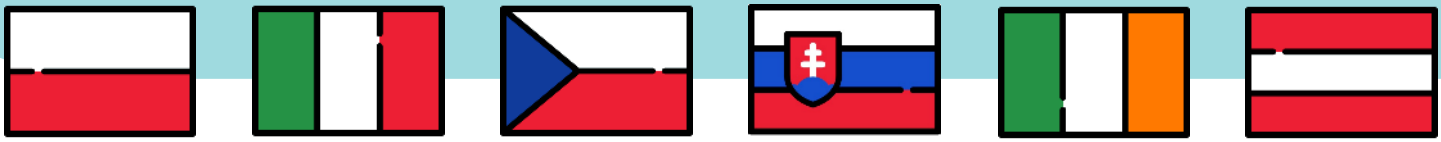
follow their journey

05

OUR TEAM

The EU Dare Consortium

EU Dare brings together seven partners from various sectors across six European countries, aiming to establish an interdisciplinary team and foster cooperative pathways for addressing limitations within each sector, such as market access, innovation speed, technology adaptation, and local market communication. By creating inter-institutional cooperation, the partnership seeks to bridge gaps, overcome geographical barriers, and standardise approaches to agroecology across Europe. Through the creation of useful resources, starting with this compendium, we strive to emphasise the exchange of experiences to innovate in sustainable agriculture, improve training and education in agroecology, and develop better methodologies, achieving these goals more efficiently through collective effort. The project promises added value at a European level, with long-term benefits anticipated, especially for Europe's peripheral regions.



Wrocław University of Environmental and Life Sciences

Stowarzyszenie ARID

GAL MERIDAUNIA

Asociace soukromého zemědělství ČR
Rodinná farma - tradice a budoucnost

SPU
Slovenská poľnohospodárska univerzita v Nitre

momentum
[educate + innovate]

VABCKJS–EU
Verein der Akademie für Bildung, Culture, Kunst, Jugend und Sport der Europäischen Union

www.**eu-dare**.com

follow our journey

Co-funded by
the European Union