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AGRICULTURE & INNOVATION

EIP-AGRI Workshop
Conversion to organic farming: Innovative approaches and challenges

FINAL REPORT

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Summary

The European Farm-to-Fork strategy considers organic farming as a core element for improving agricultural sustainability, due to manifold best practice examples for sustainable farm management. Conversion to organic farming requires comprehensive knowledge about organic production practices, and good understanding of the conversion process itself and the related rules and regulations. Encounters between farmers, researchers, advisors, and other key actors who work on organic or conversion to organic, provide opportunities to exchange and disseminate knowledge, best practice examples, and innovative ideas. These help meet farmers' needs in the process of conversion, and overall, contribute to building an innovative ecosystem that stimulates cross-fertilisation, co-creation, and scaling up organic farming.

Therefore, this EIP-AGRI Workshop "Conversion to organic farming: Innovative approaches and challenges" was designed to create conditions for exchanging knowledge, and for sharing innovative ideas and inspirational practices that support farmers in successful conversion to organic farming. The workshop made an important contribution to strengthening the European Agricultural Knowledge and Innovation System (AKIS), by building and exchanging knowledge on the conversion process.

The workshop was designed as a multi-stakeholder event. Participation was based on an open call, and 74 participants from 21 European countries attended the event. The Tuscany region was chosen to host the workshop because of its suitability to demonstrate practical experiences about a biodistrict initiative. The Fiesole biodistrict, in the north of Florence, provided best practice examples of cooperation among farmers. It also offered the opportunity to gain insights into networking activities among various stakeholders along the organic value chain.

At the beginning of the plenary session, presentations about the organic policy context, the aspirations of the sector, support measures and EU support for research in organic farming helped to frame the context of the event. Then, five inspiring best practice examples were presented in the plenary, and participants were invited to start an in-depth face-to-face discussion.

Field visits were focused on territorial aspects of a biodistrict, on district value chains, and on organic farming beyond regulations. During the second day, participants concentrated on production, processing, marketing, and distribution along organic value chains. For each theme, challenges, innovative solutions, barriers for uptake, and research and support needs were identified and discussed among the participants.

The challenges that were identified were related to high investment costs in specialised farm machinery, necessary for starting with organic production. Participants also discussed agronomic challenges like the yield gap between organic and conventional production. Further, the compliance with regulations, high bureaucracy, the separation of organic and conventional product lines, the absence of local processors, and lacking consumer trust were mentioned. To overcome challenges, solutions were mostly identified for advisory, education, and networking. A promising solution is to enhance cooperation among farmers, and cooperation among farmers and processors to commonly use expensive machinery and infrastructure. Other proposed solutions include the development of appropriate communication strategies like storytelling, investments in short food supply chains, improving school education on organic consumption, and advanced training for farmers. Among the barriers for taking up innovative solutions are lacking advocacy, financial and advisory support, as well as high bureaucracy. More research and advisory support were demanded for true cost accounting, networking activities, using organic by-products from processing, and energy reduction.

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To sum up, regional innovation networks should be established to help farmers exchange ideas and practical examples on sustainable solutions for the challenges that are associated with organic farming. Further, innovations on sustainable solutions should be mainstreamed using appropriate communication strategies to address the target audience. Investments in building consumer awareness about the benefits of organic farming and food systems should be favoured, to increase consumer trust and reduce scepticism. This will help to increase the demand for organic products. To further improve sustainability of organic production and hold the lighthouse position, synergies with other sustainable farming approaches should be used by facilitating knowledge exchange about sustainable farming techniques that are applied e.g., in agroecology or permaculture. Finally, research and advisory systems should expand participatory approaches to facilitate mutual learning.

Key messages of the workshop

• **Supporting regional farmer innovation networks**
Strengthening regional innovation networks provides opportunities to exchange best practice approaches and ideas for overcoming emerging farming challenges. Connecting farmers on regional level further contributes to increasing the adaptability of farmers to unforeseen changes and thereby increases farm resilience.

• **Increasing farmers' innovative capacity (FIC)**
Agricultural policies should focus on providing institutional arrangements that permit interactive knowledge exchange and mutual learning in order to facilitate cross-fertilisation and co-creation of innovations. Focusing on farmers' local knowledge and ideas to address site-specific challenges is a starting point for increasing the innovative capacity.

• **Mainstreaming farmers' innovation on sustainable solutions**
Multilingual open access databases for networking and knowledge exchange on farmers' innovations provide the opportunity for interested farmers to learn from other farmers' grass roots experiences. In addition, newsletters and social media can be used to disseminate farmers' innovations. In order to facilitate networking and knowledge exchange, conferences and innovation fairs can be organised. These events should provide forums for farmers, researchers, and advisors to present new ideas, concepts and products and should facilitate matchmaking among participants.

• **Focusing on consumer awareness building**
Awareness building, by investing in consumer education, plays a crucial role for the harmonisation of supply and demand. Thus, the motivation of consumers to purchase organic products should be stimulated by emphasising the environmental benefits of green consumerism and communicating ethical values and social benefits linked to sustainable consumption.

• **Using synergies**
In order to increase sustainability of organic farming, to expand organic production and to hold its lighthouse position, synergies with other sustainable farming approaches like agroecology or permaculture need to be enhanced.

• **Increase funding opportunities**
Financial support is essential to create incentives and to reduce financial risks associated with conversion to organic. Therefore, increasing financial support during the conversion period will help accelerate conversion rates.

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• **Focusing on youth as drivers of sustainable agricultural innovation (SAI)**
Young farmers hold great potential to find innovative solutions for occurring on-farm challenges. Education and training programmes should be tailored to meet the specific needs of young farmers.

• **Strengthen participatory approaches**
Increasing and strengthening farmers' participation in research and innovation development projects enhances stakeholder communication and adoption of innovations. Enhancing advisory and extension programmes that integrate farmers, advisors, and researchers can facilitate mutual learning by sharing experiences and knowledge.

• **Increasing green public procurement**
Using the purchasing power of public authorities increases the demand for organic products and contributes to closing the gap between supply and demand. This helps stabilise organic markets and to avoid overproduction by balancing supply and demand.

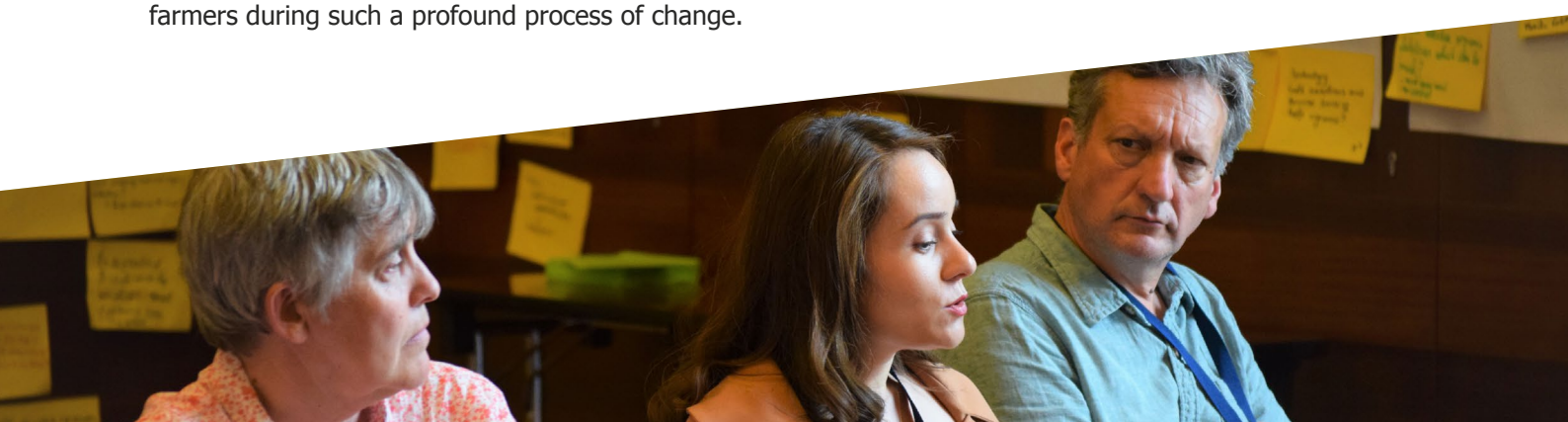
• **True cost accounting**
This is a powerful approach for the transformation of whole food systems towards sustainability. Integrating the "the polluter pays" principle into the price of conventional products can be used to reduce the environmental impact of food production by adding the public costs for unsustainable food productions to the product price. This leads to higher product prices for unsustainable products and thereby provides economic incentives to purchase organic products.

Introduction

Background

Agriculture and food systems exert high pressure on ecosystems, and they are major drivers for biodiversity loss. Thus, there is wide recognition that the sustainability of the agricultural and food sectors needs to increase comprehensively. Organic farming plays a major role in the transformation of agriculture and food systems towards more sustainable forms of production and consumption. The European Farm-to-Fork strategy calls for the need to boost sustainable practices such as organic farming, agroecology, and agroforestry, as a core element for improving agricultural sustainability. However, in many European countries organic farming is still a niche, and further dissemination of organic farming is challenging national policies. To develop the organic sector further, the European Commission has elaborated the Action Plan for the Development of Organic Production in the EU (COM, 2021/141) targeting to achieve "at least 25% of the EU´s agricultural land under organic farming by 2030".

Conversion to organic farming requires comprehensive knowledge about organic production practices, and good understanding of the conversion process itself and of the related rules and regulations. Farmers who are willing to convert need appropriate information and advisory support to successfully complete the conversion process. Therefore, training, peer-to-peer learning, and knowledge exchange are crucial elements to accompany farmers during such a profound process of change.



Objectives of the workshop

The workshop was designed to create conditions for exchanging knowledge, and for sharing innovative and inspirational practices that support farmers in successfully converting to organic farming. By building a solid foundation of knowledge, skills, and motivation for farmers on the path to conversion, the event contributed to the implementation of the Action Plan for the Development of Organic Production in the EU. The specific objectives of the workshop were:

- Exchanging knowledge on successful practices, opportunities, and tools that are relevant for the process of conversion, and specifically on:
  - Innovative approaches to conversion;
  - Successful business plans for conversion, including the compulsory conversion plan;
  - Labelling and marketing for the conversion period and beyond;
  - Practices to improve the position in the supply chain of farmers in a transition period; including solutions involving key actors such as consumers and processors.
- Identifying challenges and exploring potential solutions in the conversion process.
- Identifying needs from practice and possible knowledge gaps that may be filled by research.
- Promoting networking among EIP-AGRI Operational Groups and other innovative projects that deal with conversion to organic farming.

The workshop was a one-and-a-half-day event. Half a day was dedicated to field trips, followed by a networking dinner. The Tuscany region was chosen to host the workshop because of its suitability to demonstrate practical experiences, in particular about establishing a biodistrict initiative. This contributes to creating an enabling environment for scaling up the conversion to organic farming. In addition, the region demonstrates how a multi-actor approach was able to help farmers within and outside the district successfully convert to organic farming. The Fiesole biodistrict, in the north of Florence, provided best practice examples of cooperation among farmers and offered the opportunity to gain insights into networking activities among various stakeholders along the organic value chain.

[1] https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

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Workshop content

The workshop provided a platform for knowledge exchange and encounters between projects and initiatives, including EIP-AGRI Operational Groups and Horizon 2020 projects, and key actors working in organic farming or in conversion to organic. The workshop was designed to share experiences on:

- innovative approaches to scale up/out conversion;
- business plans for conversion;
- split holdings (conventional/conversion);
- labelling and marketing for in-conversion products;
- interaction and networking with all stakeholders along the value chain ("from farm to fork");
- certification and controls – challenges on the way;
- research, advisory support and training during the conversion period towards organic farming.

Exchanging inspirational ideas, local knowledge and innovations contributed to building an encouraging environment that helped to meet farmers' needs in the process of conversion to organic and beyond. During the event, stirring workshop facilitation helped create a knowledge exchange system for cross-fertilisation.

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Participants

The workshop was designed as a multi-stakeholder event, welcoming farmers who are planning to convert or who are in conversion, and organic farmers, advisors, scientists, other actors in the supply chain, farming associations and chambers, local authorities, and agri-press.

In total, 74 participants from 21 European countries participated in the workshop. The biggest group of participants (27) were farmers, farm managers or landowners. This was followed by experts from an association, network, group, or enterprise (20), by farm advisors (11) and researchers (11). Several participants belonged to more than one group.

Figure 1: Country distribution of participants

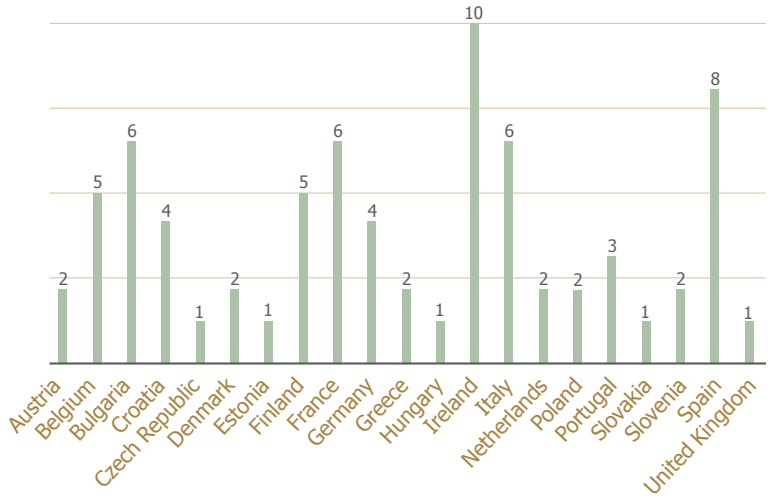
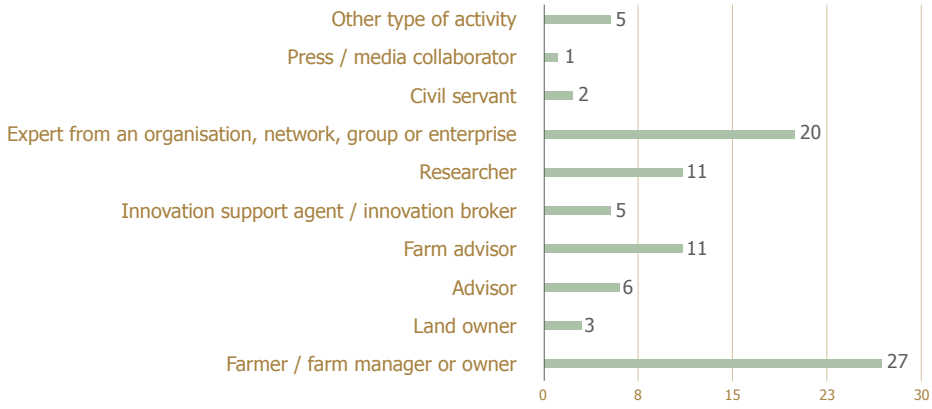


Figure 2: Participant backgrounds



Proceedings

Registration, welcome and setting the scene

The registration process was already part of the event. It provided the first opportunity for interactive knowledge exchange. Participants were asked to share challenges and/or solutions that they were bringing to the workshop.

Participants sharing challenges and innovative solutions during registration

After a general welcome from the main facilitator, welcome speeches were given by:

- **Roberto Scalacci** - Director for Agriculture and Rural Development at the Government of Tuscany Region.

- **Hugo Almeida** - Deputy Head of Unit, DG AGRI, D.1 Rural areas and networks, European Commission.

Then, presentations about the organic policy context, the aspirations of the sector, support measures and organic farming research helped to better understand the background and the context of the event.

- EU organics policy context – **Patrizia Pitton** – European Commission, DG AGRI, B.4 Organics.

- EU-funded organic farming research – **Susana Gaona** – European Commission, DG AGRI, F.2 Research and innovation,

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Inspiring presentations

The first interactive session was designed to highlight best practice examples. These had been selected from a pool of almost 200 projects related to sustainable and organic farming in the European Union. To facilitate knowledge exchange, five different discussions were prepared on the following themes:

1.- Converting production systems.
2.- Cooperation and new ways of organising.
3.- Experimenting with new processes and technologies including digitalisation.
4.- Developing position in the supply chain, labelling and marketing.
5.- Achieving certification and complying with the regulatory system.

For each theme, a best practice example was selected, and a representative was invited to hold a short inspiring presentation. Afterwards, participants were invited to explore the selected topic in depth, and discuss strategies on how to implement innovative solutions, related to the project, in another context directly with the presenter.

Converting production systems

For this theme, EIP-AGRI Operational Group ECOPIONET from Spain was selected to present their experiences with an innovative method for knowledge exchange. Vidal Sánchez Vicente (Spain) gave a short presentation, followed by a face-to-face discussion. ECOPIONET aims to facilitate knowledge exchange networks, using a multi-stakeholder approach including, among others, farmers, scientists, and advisors. The outcomes of the project contribute to establishing producer groups to jointly meet current market demands. Such networks consist of different key actors:

- Experts: professionals with large experience and broad knowledge about organic production and commercialisation.
- Technical assessors: technical personnel and agronomists affiliated with professional agricultural organisations.
- Tutors: experienced organic farmers, willing to share their knowledge and experience with others.
- Pioneers: farmers willing to convert to organic.
- Neighbours: interested farmers who are still hesitating to convert to organic.

The project uses a training and advisory itinerary to facilitate successful conversion to organic farming. During the discussion, Vidal explained that farmers are willing to learn about new practices and methods that help them improve productivity and that contribute to guarantee long-term farm income. Such a knowledge exchange network, based on farmer-to-farmer extension works for all farmers because encounters are usually based on mutual understanding and similar experiences in the field. Thus, farmers trust other farmers when they talk about their experiences. That is the foundation for fruitful cooperation and mutual learning. Agricultural experts and farm advisors support farmers and provide technical information for specific challenges and situations.

Discussing the ECOPIONET project

Cooperation and new ways of organising

Sara Kuschnereit (Germany) presented the FINKA project (Promotion of Insects in Arable Crops) which involves farmers, scientists, and consultants in equal measure. The project, which is part of the German Federal Programme for Biological Diversity, aims to increase biodiversity on arable land and initiate a broad discussion in agriculture.

Within the framework of the project, 30 conventional farmers refrain from using plant protection products (PPPs) to combat insects and weeds on a trial area. They are advised by organic farmers from their region who cultivate similar fields and crops. These colleagues provide specific tools, such as a harrow, to help control the weeds. Together, they engage in a technical exchange on how the abandonment of these PPPs can be implemented in terms of farm and labour management. The 30 farm pairs will work closely together until the end of 2025.

In reply to the questions posed by the participants, Sara explained that the cooperation between farm pairs is generally based on respect and mutual understanding. The project builds upon a big network of about 100 interested farmers, and a farmers' association supports the project with communication and networking.

Conventional farmers experiment with organic practices on 2-3 ha plots of their entire farm. The whole project lasts for five years. Participating conventional farmers have already realised that they have to reduce pesticide input and have started to search for solutions, e.g., crop rotation or using different varieties.

To strengthen the cooperation between organic and conventional farmers, field days are organised on a regular basis. Once a year a bigger event is organised to facilitate networking and knowledge exchange. Organic production is independent from the farm size, and also large arable areas above 500 ha can be managed organically. Limiting factors are labour availability and a lack of knowledge on organic practices.

To present insights to the public, best practice examples from the cooperation are disseminated by networking events for knowledge exchange, interviews with print media, or videos. Participating farmers receive financial compensation for yield losses, networking activities, and presentations. The project is closely connected to the concept of living labs. FINKA reduces barriers for conventional farmers to try organic practices, and is therefore a first step in the whole conversion process. The project could be a role model for extending the approach to the entire farming sector.

Experimenting with new processes and technologies including digitalisation

Maria Gernert (Belgium) presented the mission of the "European Technology Platform for organic food and farming" TP Organics, which aims to strengthen research and innovation for organic and agroecological approaches that contribute to sustainable food and farming systems. Furthermore, TP Organics promotes research participation and knowledge exchange between organic actors along the value chain. The platform wants to unite large companies, small and medium enterprises, researchers, farmers, consumers, and civil society organisations from input supply, production, food processing, marketing, and consumption.

One of the strategic objectives of TP Organics is to improve resilience of agri-food systems, to reduce labour intensity (e.g., weeding robots), to support farmers in their decision making, and to improve traceability for increasing consumer trust in organic production.

According to Maria Gernert, TP Organics contributes to developing sustainable business models by fostering innovation and support in the agricultural and food sectors. Research programmes, proposed by TP Organics, should focus on natural biological solutions rather than putting technological and digital solutions first. Other research priorities identified during the discussion were animal breeding for organic production, animal health tracking, and assessing and increasing the efficiency of organic production.

Developing positions in the supply chain, labelling and marketing

The REKO system from Finland is an open retail and distribution model, similar to a consumer-producer cooperative. It uses Facebook as platform for bringing together orders and deliveries. This way, consumers can order directly from producers, without the need for middlemen. The Facebook groups are run by volunteers without financial interests. Thomas Snellman (Finland) initiated the network in 2012, and today there are over 600 REKO rings all over the world with more than 2,5 million members in 20 countries. REKO contributes to a better supply of locally produced food and contributes to diversifying food distribution channels. Thus, REKO rings are increasingly becoming a promising alternative to supermarkets and the food industry.

During the discussions, Thomas Snellman explained that the whole REKO system is based on volunteers for managing the closed Facebook groups. For creating and starting up a new Facebook group, other volunteers provide support. Participating farmers are usually small-scale and produce on their own. However, farmer co-operation and joint selling is also possible. The advantage for farmers is that they know in advance what they will sell. Product quality is usually high and trade relations in a REKO ring are based on trust. It is a time-efficient manner to commercialise local organic products and it is possible to combine the system with other marketing strategies like Community Supported Agriculture (CSA) or farmers' markets. There are no general rules or limitations for the number of participants. Every REKO ring decides independently how many members are meaningful for the specific region.

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Achieving certification and complying with the regulatory system

The ROZINO organic farm was established in 2014 with a total area of 180 ha. The farm was founded by Albina Yasinskaya (Bulgaria) and is located in a protected area of the Rose Valley. Before conversion to organic, the farmland was polluted and had to be cleaned, and the infrastructure on the farm was in miserable conditions. The objective was to become a modern organic-certified farm, focusing on closed energy and nutrient cycles, nature restoration, conservation of biodiversity, raising cattle, fruit production and agro-tourism. Dairy products, meat and ice cream are the main products for commercialisation. Trainings and seminars enrich the range of activities and contribute to sharing the business model and the philosophy of Rozino.

Albina explained that high quality and organic products are hard to find in Bulgaria and that was the motivation to buy the land and to start with dairy cows to produce high quality organic products. Most neighbouring farmers are using agrochemicals, so the farm has an ecological buffer zone at the edges to protect it against contamination from outside.

Organic certification of dairy and beef helps maintain and communicate high product quality. Apart from agricultural production, the farm is involved in agro-tourism activities – for individuals and groups. Social media, short videos for the webpage and inviting people to the farm form part of the communication strategy to raise awareness and reduce scepticism about organic farming, the farm's sustainability aspects, and high product quality. However, Bulgarian consumers are very price sensitive. Therefore, demand is assessed on a weekly basis and communication is an important element for attracting new consumers.

Farm innovations, like new products, contribute to maintaining attraction and high added value. The farm infrastructure includes an agro-tourism hotel, a farm shop and seminar rooms. In total, ROZINO farm runs five shops, three of them in Sophia. In total, 15 employees are working on the farm, among them are professionals with expert knowledge. If needed, other experts are consulted as well. Specialist advice has been a key factor for establishing and running the farm. Success factors include the business model and regular assessment of market trends.

Innovation questions

The second interactive session was designed as a "speed dating" activity. Therefore, participants were invited to elaborate different questions to have a basis for discussion. The tables below compile the most relevant questions that the participants shared during the session. They give an idea of concerns, doubts or challenges posed by the conversion process to organic farming. Many of these questions were further debated during the second day of the workshop.

Supply chain questions
How to improve farmer-to-farmer trading hubs?
How to close the gap between organic and conventional business lines?
Is organic farming a real solution for a majority of farmers when the market is satisfied?
How to balance supply and demand in order to further expand organic production?
How to make organic products affordable?
How to attract processors and food industry?
How can organic farms survive in future without depending on subsidies and funding?

Conversion questions
How to overcome short-term economic motives for conversion?
How to incentivise big farms to convert to organic
What is the first step to set up a REKO ring?
How to connect with others who are willing to set up a biodistrict and search for collaboration?
What are the practical steps for establishing a biodistrict?
How to identify the relevant stakeholders for a biodistrict initiative?
How to balance supply and demand?
How to attract processors and food industry?
How to convince conventional farmers that organic farming does not mean lower yields in the long term?
How do farmers need to be incentivised to convert to organic?

Certification questions
How to maintain organic principles along the supply chains during a recession?
How do organic farmers deal with farm and document management?
What are alternative strategies to guarantee traceability and transparency in organic farming?
How to communicate with the public that organic farming is not a scam?

Technical questions
How can organic farmers successfully deal with weed management?
How to reduce tillage in organic farming?
How to support small-scale organic farmers efficiently?
How to improve soil fertility of organic farming?
How to increase yields in arable farming without animal manure?
How to increase organic seed production?
How to guarantee food safety in direct marketing of organic products?
How to guarantee pasture efficiency in organic dairy sheep farming?
What are the key factors for successful organic vegetable farms?

Advisory questions
What are the key factors for successful organic vegetable farms?
How to increase and improve advice for farmers?

Networking questions
How to support peer-to-peer learning after conversion?
How to build transregional and transnational cooperation networks?
How to prevent black/white thinking and polarisation between organic and conventional farmers?
How to use social media effectively for knowledge exchange and networking?
Which communication strategies are necessary to boost organic supply and demand?
How to incentivise farmers to actively participate in knowledge exchange encounters?

Field visits

The aim of the field visits was to closely experience innovative approaches to scale up conversion to organic farming. In addition, the field visits allowed participants to see best practice examples and initiatives that are dealing with conversion and organic farming, and to learn from challenges these initiatives face in driving their businesses forward. The hosts provided deep insights and background information about their approach to improve the position of farmers in the supply chain during and after the conversion period, including solutions that involve key actors, from farmers to consumers.

The field visits started with an introduction in plenary at the workshop venue, describing the Fiesole biodistrict. Two experts from the Tuscany Region explained how the biodistrict was set up and implemented, and how it works.

- How to apply biodistricts as an innovative tool – **Gianluca Barbieri** – Executive manager for Agriculture and Rural Development at the Government of Tuscany Region.

- The organic district of Fiesole – **Iacopo Zetti** – University of Florence, Department of Architecture – Municipal Administration of Fiesole.

After the presentations, participants split up into three groups. Each group visited farms or projects that showed practical aspects of a biodistrict, organic farming and conversion. See overview for more information.

Field visit 1: Territorial aspects of a biodistrict

In field visit one, two farms were visited. This field visit demonstrated how farms that have just converted to organic farming are dealing with challenges in a newly set-up biodistrict, in an area dedicated to tourism, olive orchards, vineyards and other types of niche production.

The first farm visit was at Fattoria Montereggi, a wine and oil producing family business, established in 1926. The farm has 44 ha of olive groves and 18 ha of vineyards and is certified organic since 2021. Sales channels include mainly local markets, restaurants, and a small farm shop. A major challenge is the climate crisis which is already affecting production. Weather conditions are becoming more unpredictable and require farmers' adaptation strategies.

The second farm was Azienda Agricola Buonamici. The family business was founded in 1991, following the long tradition of olive oil production. The business has 20 000 olive trees on around 250 ha. The farm is certified organic since 1995. They are participating in the supply chain project 'FIESOIL', funded by the Rural Development Programme for Tuscany 2014-2020, to enhance extra virgin olive oil, involving the use of an oil mill and bottling. They are building a new processing facility plant because of space limitations, integrating new and advanced technology. They use a biomass plant, powered with olive kernels. They are cooling or heating the olives before pressing according to outside temperature to guarantee high product quality. Another project that uses by-products from olive production is the cosmetic line of the enterprise. For this project, the company is researching a method to increase the content of polyphenols in the oil.

Field visit to Azienda Agricola Buonamici

Field visit 2: District value chains

This field visit was focused on the value chain that has been set up by the BIOMU project. In addition, the visits also explored the challenges that come with the transition from an agro-district with livestock and cereal farms towards a biodistrict.

The farm that was visited was the "Azienda Agricola Valdastra". It is one of the oldest organic farms of the area. This farm is part of a rural district that is making efforts to turn the rural district into a biodistrict – like the Fiesole biodistrict. The farm has 300 ha of arable land and pasture. They are certified organic since 1998. They keep 500 limousin cattle for meat production. Animals are born, fattened, slaughtered, and meat is packaged on the farm. All fodder is also produced on the farm.

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Another farmer and neighbour of the "Azienda Agricola Valdastra" provided insight in his Holstein cattle dairy production. The farmer is organic since the 1990s because of economic but also "cultural" reasons. Even if organic milk is paid a higher price, the market situation is difficult. About 6-7 years ago the farmer and his neighbour, together with other organic farmers in the region, initiated BIOMU. It is formed by a group of around 20 organic farmers, commercialising their products together. They sell their products in small organic shops but also supermarket chains. A major challenge is to maintain farmers' cooperation in the long term. They are searching for new members and are aiming to become a biodistrict.

Field visit 3: Beyond organic

On field visit 3, a new agronomical approach called Ortobioattivo was presented. This practice focuses on soil quality and soil microbiological biodiversity as a basis for growing healthy plants that are resilient to pathogens and that are naturally rich in nutrients, with a positive impact on human health (nutraceutical and bio-active elements).

The farm is an example of a CSA (Community-Supported Agriculture) in the peri-urban area of the city of Florence. It has an important role in training and educating citizens regarding food quality and security. The total farm area is about 4 hectares, but only one hectare is cultivated intensively. About 100 families are members of the CSA. They pay for a share of the harvest and not for single products. Cultivating and harvesting takes place almost the whole year round. On the farm, they try to work as much as possible with nature-based solutions to cultivate the land. They participated in a research project together with medical institutions, especially to have a better understanding of the mineral content of their products. The results of the research indicate that consumers of their vegetables are significantly healthier (less fat, better functioning of gastro-intestinal system, better wellbeing...).

Challenges and solutions along the organic value chain

The second day started by a short recap, and participants were invited to share some highlights from the previous day of the workshop. This was followed by a presentation by the European Commission, introducing some of the initiatives that support innovation in agriculture.

- European Innovation Partnership and Operational Groups – **Klavdija Ramsak-Noemi**, DG AGRI, D.1 Rural areas and networks, European Commission.

The interactive session on the second workshop day was themed along the value chain:

1.- Production.
2.- Processing.
3.- Marketing.
4.- Distribution.

Participants were asked to split into these four thematic groups. For each topic, they identified challenges and then worked around these challenges in alternating groups to find solutions and explore barriers for uptake. Finally, the participants identified research needs or advisory support to overcome the identified challenges. Similar statements during the discussion have been summarised and are explicitly mentioned in this report.

Production

Challenges

Challenges identified for production can be roughly clustered into economic, social, administrative, informative, and agronomic challenges. Economic challenges were related to predominant market structures, which hardly contribute to facilitating the commercialisation of organic products. Financial support during the conversion period and beyond were highlighted for buffering the risks involved in the conversion period and beyond. However, participants claimed that financial support is insufficient. Furthermore, the consumer's willingness to pay premium prices is low, and awareness of the benefits of organic products can still be upgraded. A severe challenge for novice organic farmers is high investment costs in specialised farm machinery for starting with organic production. Social challenges that were identified during the discussion concerned the relationship between farmers and consumers. Anonymity in current supply chains causes skepticism about organic products. Other challenges referred to a prevailing conventional mindset after the conversion, and lacking focus on young farmers for conversion. Informative challenges included for example a lack of knowledge and advice.

Inadequate communication strategies and lack of adequate educational programmes for farmers and consumers were also mentioned. Increasing bureaucratic efforts and complexity of organic regulatory systems can be clustered to administrative challenges. Participants also discussed agronomic challenges like the yield gap between organic and conventional production or uneven production conditions within the European Union. Increasing production risks due to climate change were also discussed.

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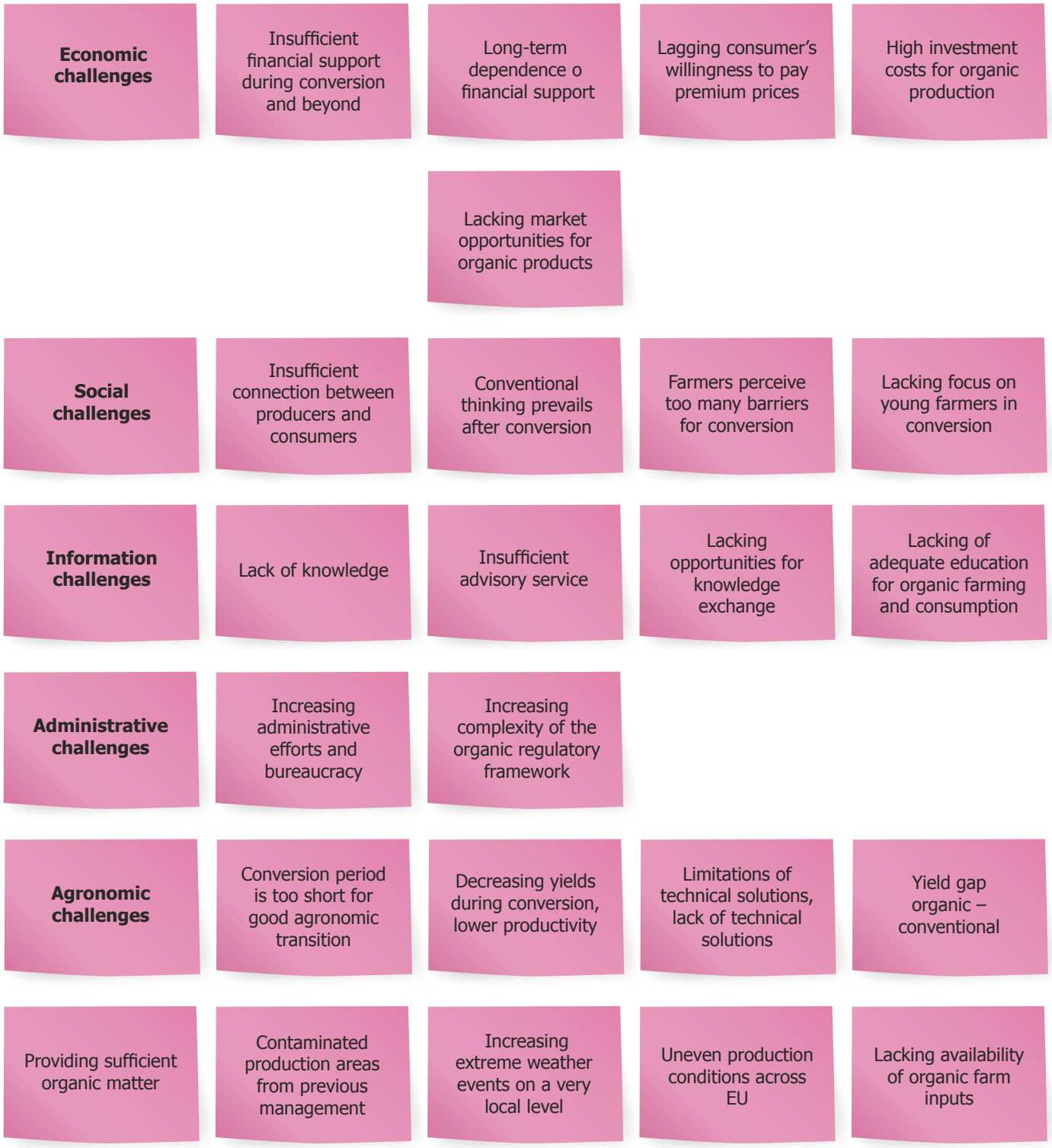

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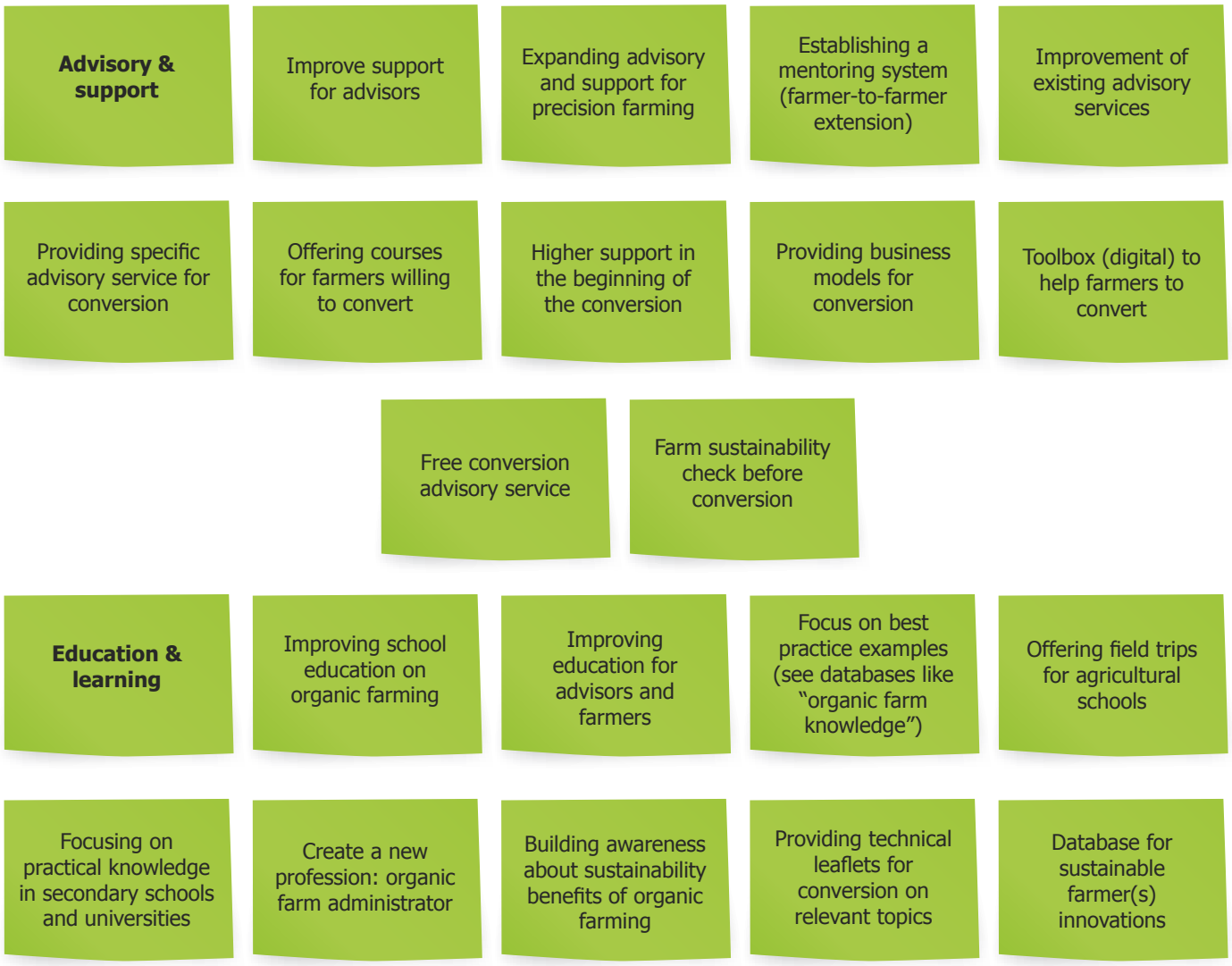
Innovative solutions

Unlike the challenges, solutions were mostly identified for advisory, education, and networking. Advisory services play a crucial role for farmers' decision-making processes. The quality of advisory services differs from one EU Member State to the other. Therefore, such services require improvement to better address farmers' concerns under the respective regional conditions. Especially, customised advisory services during the conversion period were seen as fundamental to ease the transition to organic farming. Closely linked to advisory services are educational issues. Participants also stressed the importance of best practice examples for further expansion of organic farming. Providing learning opportunities such as digital knowledge platforms or databases for sustainable innovations helps farmers to find solutions for specific farming challenges. School education on organic farming and food systems, and advanced training for organic farmers needs scaling up in most EU countries. Farmer-to-farmer extension and the importance of networking were highlighted for knowledge exchange and peer-to-peer learning. Agronomic solutions and financial support were perceived less important. Participatory research integrating farmers and other stakeholders was mentioned as a promising approach to increase the impact of research projects for society.



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Barriers for the uptake of innovative solutions concentrate on administrative and economic obstacles. Among these barriers, participants mentioned lacking support from local authorities, inappropriate CAP measures, high bureaucracy, and lacking financial and advisory support for new entrants and young farmers. Economic barriers included e.g., underdeveloped markets, high sales risk, high input costs and high investment costs. Labour shortage and lack of knowledge and skills were also discussed.

Administrative barriers	Lacking support and goodwill from local governments	Inappropriate CAP subsidies for targeting organic farming	High bureaucracy	Insufficient support for new entrants to farming and for young farmers
Economic barriers	Underdeveloped organic market access	High sale risk	High input costs	High investment costs
	High financial risk related to conversion	Lacking of comparative advantage	High land prices in some EU MS (e.g. Netherlands)	
Other barriers	Labour shortage	Insufficient focus on best practice examples	Lack of knowledge about methods and approaches in organic farming	




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Research and support needs were identified for socio-economic aspects and for technical aspects. Especially the conversion period requires research attention. Socio-economic research includes for instance the identification and development of appropriate communication strategies. According to the participants, research should further focus on the benefits of organic farming for society, resilience research feasibility of biodistricts, cooperative business models. Technical research needs to focus on the evaluation of local varieties and breeds, solutions for weed and pest management, and climate change adaptations. Further, participants identified support needs for networking and knowledge exchange among farmers and between farmers and consumers.

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Digital solutions for dealing with bureaucracy

Advisory needs

Support agroforestry approaches

Building a network of living labs and demonstration farms

Focus on consumer awareness and information

Soil analysis

Provide opportunities for discussing production issues

Building cooperation and partnerships

Assessment of farm productivity

Brokerage for developing ideas

Processing

Challenges

Participants identified the compliance with regulations and high bureaucracy the most relevant challenges for processing organic products. Furthermore, participants pointed to high investment costs for specialised infrastructure, machinery, and equipment. The lack of market opportunities for products in conversion and the separation of organic and conventional product lines were also mentioned as challenges to organic farmers and processors. The absence of local processors for organic products means higher efforts for farmers to deliver raw materials to adequate processing facilities. Other challenges were:

Lack of cooperation

Fragmented small-scale production

Logistics

Problems with food additives

Infrastructure planning

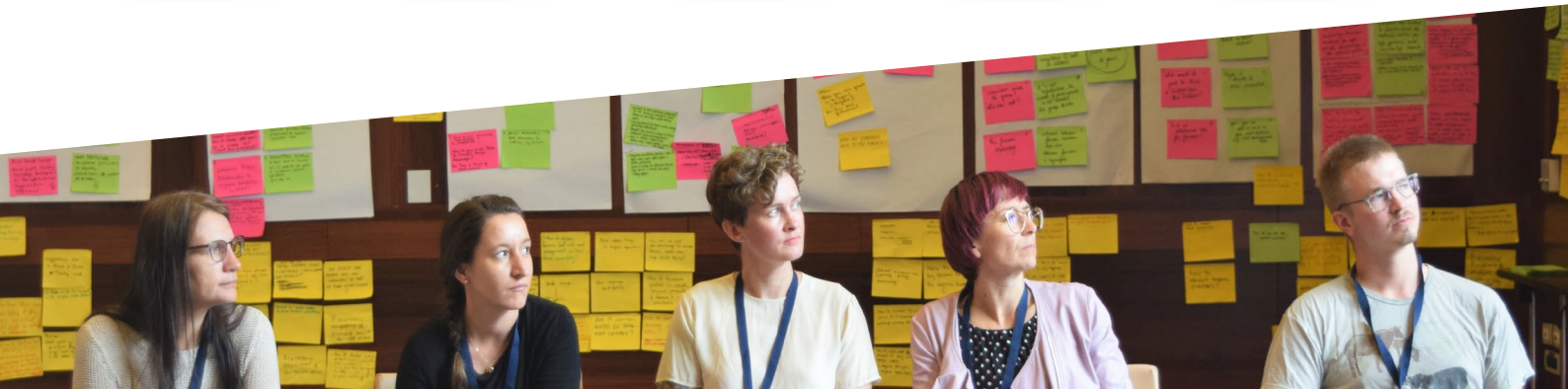
No markets for products in conversion

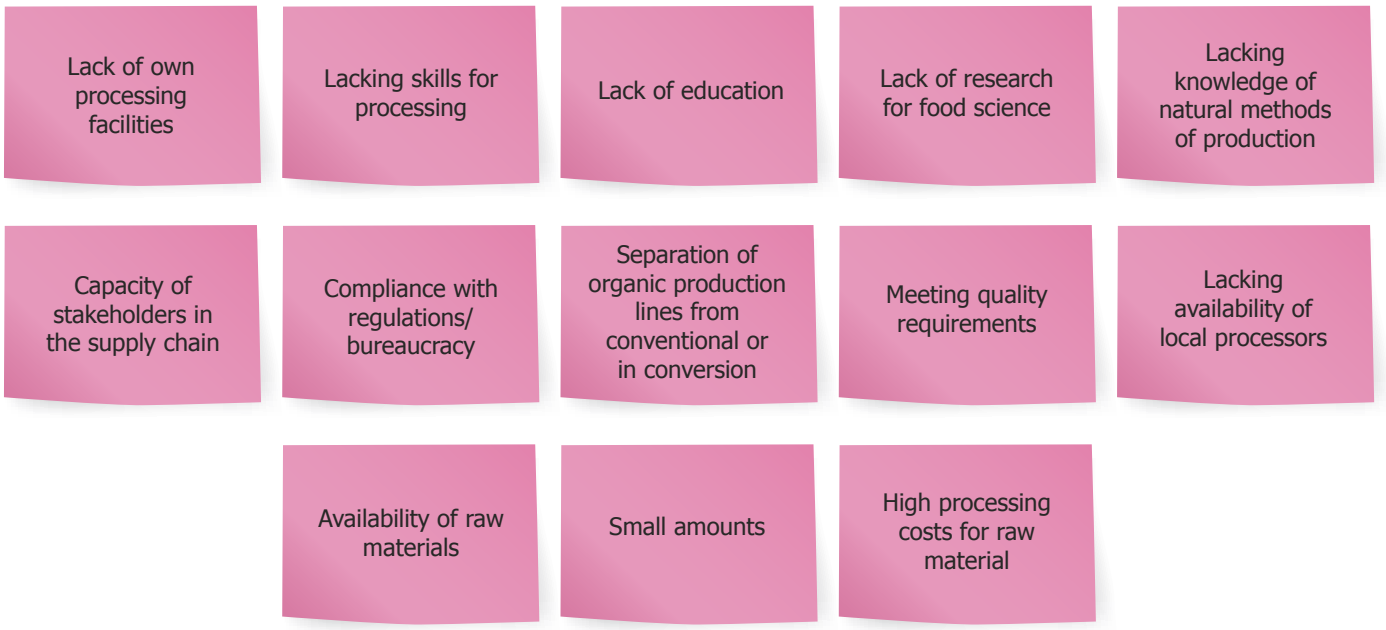
Sustainable packaging

Labour availability

Business plan development

Need for investments in specialised infrastructure or machinery





Innovative solutions

Strengthening the relationships and building consumer awareness through direct marketing and improving consumer contact were seen as promising approaches to overcome challenges. A promising solution suggested by participants was cooperation among farmers and processors to use shared infrastructure. To overcome high investment costs, alternative funding sources like crowdfunding were proposed. Other innovative solutions were:

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Barriers for uptake

Small farmers and processors face regulations that are primarily tailored for big enterprises. Compliance with that regulatory framework was mentioned as a discouragement to farmers and processors for investing in processing facilities. Participants discussed the following barriers for uptake of innovative solutions:

- Traceability of organic products
- Lacking willingness to try new things
- Legislation not focused on small farms
- Lacking balance between supply and demand
- Have products in all seasons?
- Lonesome processing without other actors
- High costs for support
- Need for collaboration can be a barrier
- Accessibility to research results

Research needs and support needs

To overcome the identified barriers, improving advice for processing and providing advice for dealing with regulations were stressed. Sustainable packaging material, the use of organic by-products from processing, and reducing energy consumption for processing need further research attention. The research and support needs participants identified were:

- Advice for processing and regulations
- Sustainable packaging material
- Maintaining high quality during processing
- Success factors for collaboration
- Competence centres
- Use of by-products
- Reducing energy consumption
- Support for local farmers and big processors

Marketing

Challenges

Challenges for marketing are diverse. Although cooperation was seen as a promising approach to overcome e.g., high investment costs, it requires willingness to accept social dynamics and interactions. Lacking consumer trust in organic products challenges market entrance and complicates the search for new markets. Consumer trust is threatened by greenwashing marketing strategies of large-scale food enterprises. Lacking knowledge about communication strategies and target markets makes it difficult to develop appropriate marketing approaches. The gap between supply and demand was also mentioned as a challenge for marketing organic products. Furthermore, farmers in conversion do not have access to premium prices. Marketing challenges identified during the discussion were:

- Greenwashing in marketing
- Finding new markets
- Balance supply and demand
- No added value from consumer perspective
- Identifying appropriate product range
- To know your customer / shops / markets / industries
- Effective communication of the "story"
- How to keep up with level and speed of marketing conventional products
- Lacking consumer trust
- Identifying unique selling point for own products
- Cooperation is not easy
- Promoting organic without harming conventional
- Lack of funding for conversion
- No premium prices during conversion
- Differentiation of organic products and products in conversion
- Lacking awareness of consumers for products in conversion
- Higher costs and lower revenue during conversion

Innovative solutions

Identifying the unique selling point and marketing strategies based on storytelling were identified to potentially overcome the challenges. Participants further mentioned investments in short food supply chains and direct marketing as promising solutions. Promoting consumer-producer cooperatives, like REKO, builds trust and contributes to consumer awareness building. Storytelling was mentioned to communicate the unique selling point (USP). Collective marketing initiatives can reduce involved costs and furthermore provide cost-effective and specific support. Certification and labelling were seen as useful instruments to communicate the advantages of organic products. Participants suggested to promote participatory guarantee systems as alternative to EU-regulations. The knowledge gap about the benefits of organic farming could be reduced by integrating organic farming aspects into educational systems. All solutions mentioned were:

- Publication of high quality research of health and environmental benefits
- Labelling local and organic for improving short food supply chains
- Count on influencers to communicate benefits of organic products
- Providing strategic marketing plans for farmers
- Education to understand the difference between organic and non-organic
- Investments in online marketing
- Establishing consumer groups – see best practice REKO
- Additional certification for holistic sustainability including ethics
- Collective marketing can provide support
- Conversion products can be labelled and "in conversion"
- Participatory guarantee systems as alternative to EU-regulations
- Tell your story: unique selling point
- Tailored messages for different target groups and markets
- Stimulating and expanding direct marketing of primary products
- Promoting long-term contracts with retailers
- Promoting open farm days and incubator farms
- Reclaiming policy commitment to green public procurement
- EU projects to promote organic product marketing

Barriers for uptake

Barriers for the uptake of innovative solutions were identified on policy and market level. Decoupled supply and demand results in lacking sales opportunities and makes marketing efforts higher. Lacking funds for organic products and consumer education hampers marketing efforts. Other barriers identified were:

- Lacking visibility of success stories
- Consumers do not watch television and do not read newspapers anymore
- High costs for good marketing
- Consumers hardly meet and interact with farmers
- Lack of funds for organic campaigns
- Time demand and costs for marketing
- Direct marketing often means personal challenge for the farmer
- Developing supply and demand is not synchronised
- Only few buyers from retail chains are free to choose organic products
- Lacking new target groups
- Consumers' willingness to buy organic products is also affected by othercrises, e.g. Covid, inflation,...
- No marketing structures for in-conversion products
- Over-information requires filtering
- Ignorance of consumers about the real price of food

Research needs and support needs

Rather than marketing research, support needs were identified to facilitate further development of organic marketing structures. Participants stressed the needs for advisory support on e.g., digitalisation issues, cooperation, innovative marketing initiatives like guerrilla marketing, price building or labelling. Research should be primarily focused on communication strategies and true cost accounting.

Support needs	Digitalisation	How to reduce costs for certification	Better client oriented audits	Professional approach to marketing for farmers
Price building process	Municipal slots for local organic farmers	Guerrilla marketing	Connecting within local initiatives	Toolbox for labelling
Course about "how to run a successful farm"	Workshops on different themes incl. specialists, farmers, researchers	Cooperatives to get lower sales risk	Personal growth training	Supporting clubs for advertisements
		Direct support for farmers and cooperatives and less support for big companies		
Research needs	How to keep the message simple	Marketing studies on the most effective approach	Research on local solution and translation to other locations	"Polluter pays" principle

Distribution

Challenges

Participants identified challenges for distribution on market level, including price building policies, logistic costs, and challenges for small-scale production. An important topic was cross-contamination during storage and transport. Participants discussed the following challenges:

- How to identify the potential market
- Synchronise growth of supply and demand
- Participation in association for distribution
- Establishing new distribution channels
- In-conversion product prices
- Fair share o prices along the value chain
- High time requirements for packing
- High costs for packing
- Costs of logistics
- Networking
- Different storage requirements for different products
- Cross-contamination storage and transport
- Transport logistics
- Traceability of product origins and processing
- Fraud with false declaration
- Increasing organic without lowering the quality
- Small quantitie do not allow economies of scale
- Small and medium sized retailers

Innovative solutions

Innovative solutions were identified for the fields of logistics, market levels, educational approaches, administration, best practice, and networking initiatives. In summary, local supply initiatives like Community Supported Agriculture (CSA) and short food supply chains were highlighted in the discussion. Participants identified the following solutions:

- Customer collects product
- Promoting organic hubs
- App to coordinate logistics
- CO2 pricing of transport to foster regional/local supply
- Local organic markets

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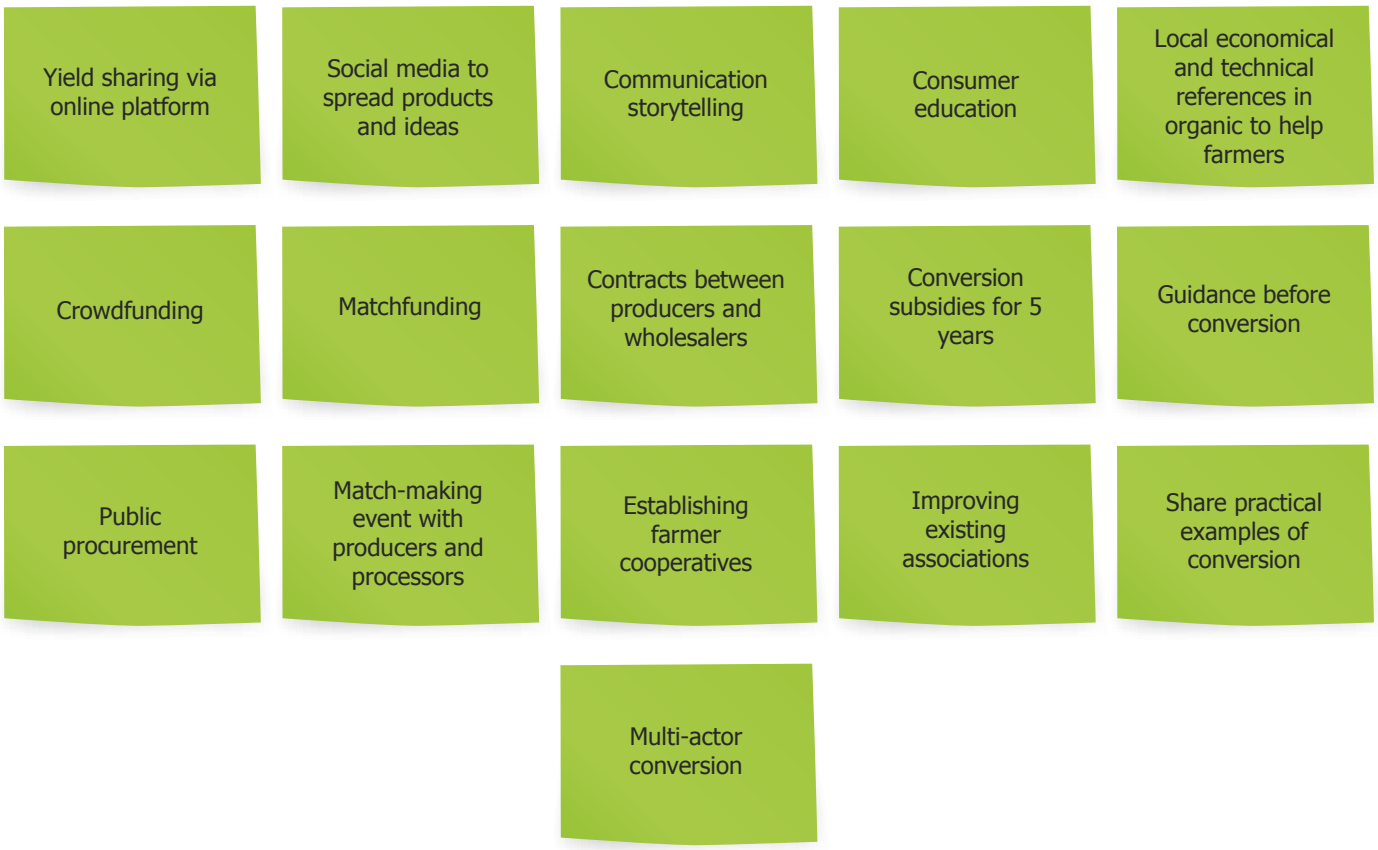

Barriers for uptake

Barriers for the uptake of innovative solutions include limitations or even a lack of local markets, dealing with rules and regulations and fragmented organic value chains. Participants mentioned the following barriers:

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Research needs

Identified research needs for distributions highlighted the success factors for cooperation, market surveys, traceability in short supply chains. The following research needs were mentioned:

- Success factors of cooperation
- Market surveys for price levels
- Research on regional market situation
- Improving traceability while keeping short supply chains
- Central online tool for information and support

Conclusion

Closing words were given by **Hugo Almeida** and **Pacôme Elouna Eyenga** who summarised the event and highlighted the main outcomes. The workshop was designed as a multi-stakeholder networking and knowledge exchange event. The expectations were largely met. Most participants got inspired by learning about new and innovative approaches, and benefited from intense discussions with other farmers, advisors, or researchers. Hugo Almeida concluded that cooperation, transparency and trustful relationships between producers and consumers are crucial aspects for future development of the organic farming sector within the European Union. Being an organic farmer requires passion for providing sustainable, healthy food, even under challenging conditions.

The workshop made an important contribution to strengthening the European Agricultural Knowledge and Innovation System (AKIS) by building and exchanging knowledge on the conversion process from conventional to organic farming and beyond. Peer-to-peer knowledge exchange during multi-stakeholder encounters contributed to mutual learning. In order to incentivise farmers to convert to organic, investments in knowledge exchange, education, and training and are crucial.

In summary, challenges identified for production were related to predominant market structures, which hardly contribute to facilitate the commercialisation of organic products. A severe challenge for novice organic farmers is high investment costs in specialised farm machinery, needed for starting with organic production. Farmers also complained about lacking financial support during the conversion period and beyond. Satisfaction with economic incentives is particularly important to stimulate higher conversion rates. Participants also discussed agronomic challenges like the yield gap between organic and conventional production. Even if the concerns about yield decrease during conversion and beyond are great, profitability of production actually counts more than high yields.

To overcome challenges, solutions were mostly identified for advisory, education, and networking. Advisory services play a crucial role for farmers' decision-making processes. Especially, customised advisory during the conversion period was seen as fundamental to ease the transition to organic farming. School education on organic farming and food systems, and advanced training for organic farmers needs scaling up in most EU countries. Farm cooperation and cooperatives show benefits because investment risks are spread among cooperative members. Among the barriers for taking up innovative solutions, participants mentioned lacking support from local authorities, inappropriate CAP measures, high bureaucracy, and lacking financial and advisory support for new entrants and young farmers. Further, participants identified support needs for networking and knowledge exchange among farmers and between farmers and consumers. Below, further details are provided regarding the discussions in each session.

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For processing, participants identified the compliance with regulations and high bureaucracy as most relevant challenges for processing organic products. The lack of market opportunities for products in conversion and the separation of organic and conventional product lines were also mentioned as challenges to organic farmers and processors. The absence of local processors for organic products means higher efforts for farmers to deliver raw materials to adequate processing facilities. A promising solution that was suggested by participants was cooperation among farmers and processors to use shared infrastructure. Sustainable packaging material, the use of organic by-products from processing, and reducing energy consumption for processing need further research attention.

For marketing, lacking consumer trust in organic products was discussed as an important challenge that complicates market entrance. Developing appropriate communication strategies like storytelling, and investments in short food supply chains were discussed. Participants stressed needs for advisory support on e.g., digitalisation issues, cooperation, innovative marketing initiatives like guerrilla marketing, price building or labelling. Research should be primarily focused in communication strategies and true cost accounting.

Challenges for distribution of organic products include the separation of organic and non-organic products, logistic and packaging costs. Consolidating fragmented alternative and short food supply chains contributes to harmonising supply and demand, helps to build trustful relationships, and should therefore be enhanced. Improving digital solutions was seen as a promising approach to overcome the challenges. Research and support needs mainly concerned aspects of cooperation, market situations and traceability in short supply chains.

All presentations and background documents are available on the EIP-AGRI website:
https://ec.europa.eu/eip/agriculture/en/event/eip-agri-workshop-conversion-organic-farming

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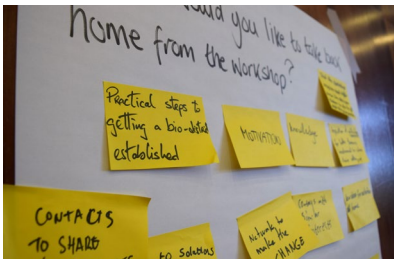

The European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-AGRI) is one of five EIPs launched by the European Commission in a bid to promote rapid modernisation by stepping up innovation efforts.

The **EIP-AGRI** aims to catalyse the innovation process in the **agricultural and forestry sectors** by bringing **research and practice closer together** – in research and innovation projects as well as through the EIP-AGRI network.

EIPs aim to streamline, simplify and better coordinate existing instruments and initiatives and complement them with actions where necessary. Two specific funding sources are particularly important for the EIP-AGRI:

- the EU Research and Innovation framework, Horizon 2020 and Horizon Europe,
- the EU Rural Development Policy under the CAP.

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