

THE EUROPEAN INNOVATION PARTNERSHIP



OPPORTUNITIES FOR INNOVATION IN ORGANIC FARMING AND AGROECOLOGY

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**The European Innovation Partnership:
opportunities for innovation in organic
farming and agroecology
Brussels 2014**

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FOREWORD

Innovation is a driver for change and a way to turn challenges into opportunities and concrete improvements on the ground. This is also the case in the agricultural sector which is faced with a number of growing challenges – not only economic, but also environmental and social. We need to boost innovation throughout European agriculture and this is the reason why we launched a European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) last year.

The EIP-AGRI is fundamentally about bringing expertise from the worlds of farming and science together to learn from each other and develop ideas, knowledge and innovative actions together. It aims to build bridges between science and practice, in particular through practical innovation projects, bottom-up approaches, partnerships and networking activities. It is about growing an innovation culture in European farming that embraces the sector in all its diversity and which is not blind to the prospects that lie in traditional and practical knowledge.

By integrating a wide range of competencies from farmers, researchers, advisors, NGOs and other innovation actors, this new kind of partnership can help generate new insights and co-ownership. It mobilises scientific and practical knowledge to foster innovation, improves speed of uptake of solutions by practitioners and helps to better target the research agenda towards practice needs.

The organic sector is in many ways an agricultural frontrunner. Organic farming is a sector from which all farmers can learn, but it is certainly also in need of innovation and development.

I am very pleased with the strong support we have received for the development of the EIP-AGRI, including from IFOAM EU, ARC 2020 and TP Organics. We are pleased with the strong commitment taken by the representatives of IFOAM EU and ARC 2020 in the High Level Steering Board, as well as their involvement in the Focus Groups of the EIP-AGRI. I also welcome the recent recognition of TP Organics as one of the European Technology Platforms. The platform has an important role to play in bringing practitioners and researchers together and identifying innovation goals for organic. With funding coming on tap in 2014 for operational groups under Rural Development and for multi-actor projects and thematic networks under Horizon 2020, I hope that the organic sector will continue its strong involvement in the EIP-AGRI and help make it a success.



DACIAN CIOLOȘ
EU Commissioner
for Agriculture and
Rural Development

INTRODUCTION

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The European Innovation Partnership for Agricultural Productivity and Sustainability, or EIP-AGRI, is a new policy instrument for more stakeholder and demand-driven research & innovation in agriculture. It contains several elements that are supportive of organic farming and agroecological innovation. The organic sector, with its history of strong collaboration across disciplines and between researchers and producers, should take advantage of the opportunities the EIP-AGRI offers.

This dossier is there to help the organic sector and the agroecological community understand the implementation of the EIP-AGRI. After a general introduction to the EIP-AGRI in the first chapter, the concepts behind the new approach to innovation are explained. The third chapter addresses the EIP-AGRI activities at EU level. An important part of the work will have to be done, however, by the rural development programmes at the national or regional levels. This is explained in the fourth chapter. Whilst each Member State will take its own approach, the EIP-AGRI is all about learning from each other. Therefore, the fifth chapter describes a number of interesting initiatives in the Member States. The dossier ends with an overview of the wide range of innovations with which the organic sector can contribute to the EIP-AGRI.

1

THE EIP-AGRI IN A NUTSHELL

European Innovation Partnerships (EIPs) are a part of the Europe 2020 Strategy for smart, sustainable and inclusive growth. They represent a new approach to research and innovation, seeking answers to challenges while maintaining a dual focus on social benefits and the rapid modernisation of the economy. Addressing specific sectors, each EIP stimulates cooperation between the relevant research and innovation partners with the aim of improving their results.

In February 2012, the European Commission launched the EIP Agricultural Productivity and Sustainability – otherwise known as the EIP-AGRI. The main objective of this particular European Innovation Partnership is to bridge the gap between agricultural researchers and practitioners. It encourages those involved in different segments of the agri-food system (farmers, businesses, researchers and advisors) to share their ideas and experiences. Working together, they are expected to devise innovative responses to problems and to develop academic findings into practical applications, thereby “delivering solutions that are well adapted to circumstances and which are easier to implement.”¹ The EIP-AGRI gives equal weight to new findings and existing (sometimes tacit) knowledge. At the same time it tries to marry productivity and sustainability, contributing to a “steady supply of food, feed and biomaterials, developing its work in harmony with the essential natural resources on which farming depends.”²

A Strategic Implementation Plan³ exists to guide the EIP-AGRI, which was first adopted in July 2013 by the High Level Steering Board of the partnership. The Steering Board is co-chaired by Commissioners Ciolos (Agriculture & Rural Development) and Geoghegan-Quinn (Research & Innovation). It brings together a wide range of stakeholders, including IFOAM EU and ARC 2020. The Strategic Implementation Plan explicitly states that efforts to improve productivity must go hand-in-hand with sustainable consumption measures. The plan calls for innovations in the way public goods are delivered, as well as the sustainable use of genetic resources and the improvement of soil fertility. It broadens the concept of innovation from the purely technological to include social innovation. The plan manages fairly successfully to balance the interests of conventional agriculture against alternative approaches, such as organic farming or agroecology.

EU and national (or regional) authorities alike are required to take the Strategic Implementation Plan into consideration when they devise programmes under the EIP-AGRI. The EIP-AGRI can only succeed if it operates holistically, linking food production based on ecosystem services with responsible eating habits. To begin with, its implementation will take place through national or regional rural development programmes, as well as Horizon 2020 – the EU Framework Programme for Research and Innovation. Further support may become available through the European Regional Development Fund, as well as national or private funds. The EIP-AGRI brings together many different actors, authorities and institutions. To enhance communication and cooperation between these various stakeholders, the European Commission has set up the EIP-AGRI Service Point, one of whose main tasks is to organise focus groups that will meet to prioritise possible interventions.

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¹ European Commission (2013). Draft Guidelines on Programming for Innovation and the Implementation of the EIP for Agricultural Productivity and Sustainability, Brussels, 12 pp. http://ec.europa.eu/agriculture/eip/events/berlin-11-2013/eip-guidelines_en.pdf

² <http://ec.europa.eu/agriculture/eip/>

³ http://ec.europa.eu/agriculture/eip/pdf/strategic-implementation-plan_en.pdf

RURAL DEVELOPMENT

Under the rural development regulation, the main instrument for applying the EIP-AGRI are the operational groups. These provide the main forums for building bridges between researchers, farmers, rural communities, businesses, NGOs and advisory services. They are expected to tackle practical problems and not act merely as discussion groups.

The rural development regulation requires the EIP-AGRI to promote a resilient agricultural sector working towards agroecological production systems. This relates to two of the regulation's priorities – namely “restoring and preserving ecosystems” and “promoting resource efficiency and supporting the shift towards a low carbon economy”. The regulation lists organic farming and the establishment of agroforestry systems as measures that contribute to these two priorities. These factors therefore make the EIP-AGRI, with its operational groups, a key instrument for promoting organic farming and other agroecological approaches.

The rural development regulation includes support for the brokerage needed to create the operational groups and to prepare project proposals. Funds will also be available to cover the organisational and direct costs of the project itself. Investments in physical assets as part of the EIP-AGRI and involving an operational group will benefit from increased support. In particular, the EU promotes investments that contribute to environmental or climate change objectives, which includes organic farming.

The EU Member States and regions have a crucial role to play in supporting operational groups, a fact upheld by the Strategic Implementation Plan. The rural development regulation offers a catalogue of measures intended to help Member States and regional authorities set up their 2014-2020 rural development programmes. It is a matter for the national and/or regional authorities – and not the EU alone – to decide the content of the rural development programmes. Agroecological farming associations should take advantage of the opportunities on offer. They should convince their national or regional authorities to implement the EIP-AGRI and to set up operational groups with which to develop new organic and agroecological approaches.

HORIZON 2020 - THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

In Horizon 2020, it is the sub-programme Societal Challenges, in particular Societal Challenge 2,⁴ that funds agricultural research. There are two types of Horizon 2020 project that contribute to the EIP-AGRI: multi-actor projects and thematic networks. The multi-actor projects address the needs and problems of farmers and other practitioners. They should involve relevant stakeholders and, whenever possible, operational groups at every stage of their implementation, forming a consortium of actors that offer complementary knowledge (scientific, practical etc.). The thematic networks, on the other hand, should be used to map the existing scientific knowledge and best practices for specific topics. They should develop materials for the practitioners that facilitate the exchange of knowledge. Those materials must be easily accessible. As with the multi-actor projects, thematic networks should involve all the stakeholders concerned (researchers, farmers, advisors, enterprises, education actors, NGOs, administration, regulatory bodies, etc.). Calls for proposals are issued every two years. The first of these were published in December 2013.⁵ 14 calls were issued for multi-actor projects, several of which make explicit reference to organic farming, for example projects targeting soil quality and function, traditional genetic resources, biological contamination in the food chain, public policies for sustainable food chains, and sustainable use of agricultural waste. Many other projects also offer opportunities for the further development of organic farming, such as those intended to support sustainable livestock production, sustainable crop production, pest management, and the development of strategies for crop productivity, stability and quality. Organic farmers and businesses should organise themselves and build consortia with research partners. Consortia applying for Horizon 2020 projects should be composed of at least three partners from at least three countries.

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⁴ The full name of Societal Challenge 2 is: Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy

⁵ Call texts are available at: <http://ec.europa.eu/programmes/horizon2020/>

2

A NEW APPROACH TO INNOVATION IN AGRICULTURE



EUROPE'S AGRICULTURAL KNOWLEDGE AND INNOVATION SYSTEMS

The need for innovation is an important challenge for European agriculture, but little is known about the performance of agricultural knowledge and innovation systems (AKIS) – the networks of research institutes, advisory services, agricultural schools and related organisations that support farmers in innovating their farm activities and solving new challenges. The European Union's Standing Committee on Agricultural Research (SCAR) has therefore set up a working group involving participants from the European Commission and the Member States to reflect on the work these systems do.

Based on the experiences of different countries and regions, the first reflection paper published by the AKIS working group⁶ concludes that these systems vary widely between European countries, regions and sectors. Although the AKIS are changing, and while diversity itself is a useful attribute for innovation and transition processes, there is no evidence to suggest they are fit to answer the challenges posed by the need to increase productivity and sustainability in agriculture and food production.

In a new orientation paper, the working group states that, for an effective and efficient response to the innovation challenges, the AKIS need to innovate themselves and adopt new ways of working. Suitable approaches might include interactive innovation and developing the science of innovation. The experiences collected in different countries and regions for this report should prove useful during the implementation of the EIP-AGRI under Horizon 2020.

National and regional governments can stimulate innovation by supporting multi-actor operational groups working in a participatory manner to implement the EIP-AGRI. This support should manifest itself as a portfolio of instruments with the following objectives:

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⁶ http://ec.europa.eu/research/agriculture/scar/pdf/akis_web.pdf

- Establish incentives for research, development and innovation
- Stimulate knowledge exchange, the adoption of innovation and the use of technology in the production process
- Support the activities of facilitators, innovation brokers and training measures for farmers to implement innovations
- Value the input and knowledge of farmers
- Develop cross-border interactions
- Invest in AKIS sub-systems that have so far remained underdeveloped in specific national or regional situations

Special efforts should be made to encourage the responsiveness of research to the needs of the innovation processes. The recommendations include a number of potential changes that could be made at the research policy level. Firstly, to stimulate interdisciplinary and interactive research, appropriate evaluation criteria should be applied to research proposals and research institutes. Practitioners should also be included in the funding and evaluation processes for research. Support should be made available to enable researchers to undertake sabbaticals and short-term visits, thereby stimulating practical exchanges with stakeholders. At the same time, sources of funding should be channelled to projects that specifically involve science and practice on an equal footing. Lastly, an easily accessible database should be established, containing high quality non-academic publications and articles.

Other recommendations were made with regard to research institutions. The actual relevance of these recommendations will depend on the national or regional AKIS themselves. In some countries researchers are already quite responsive to farmers' needs, while in others, research programming seems to be based solely on criteria of scientific excellence, without taking innovation challenges into account. For some of the Horizon 2020 project calls, as well as for nationally funded research, it would be possible to put in place better incentives to link innovators and academics.

Multi-actor innovation might benefit from modern ICT inputs similar to those that are changing working processes and collaboration in other areas of everyday life (especially the worldwide web and social media over the last 10 years, enhanced by smart phones).



FROM TOP-DOWN TO BOTTOM-UP: NEW APPROACHES TO INNOVATION

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The traditional view of innovation in agriculture has been that it is linear, with agricultural research and development generating technologies that are transferred by extension services to agricultural producers for subsequent adoption. In this view, officially supported science is seen as the only legitimate source of knowledge, while the needs, experience and knowledge of the end-users of innovation (often farmers) do not need to be taken into consideration. This perspective on innovation is well suited to the productivist paradigm, with its narrow focus on increasing the productivity of agriculture.

However, it is no longer capable of addressing the multiple current goals of the agricultural sector. Today's agriculture faces complex challenges, such as climate change and the need for sustainable development in rural areas, which exceed the management objectives of a single farm.

Such complex challenges require a non-linear approach to innovation, with farmers included as relevant sources of knowledge rather than just consumers of research-based knowledge. In this multi-actor model of innovation, knowledge is no longer transferred linearly from scientists to farmers via advisors. Instead it is created together in a process of knowledge sharing and co-production involving the different actors.

The EIP-AGRI reflects this new interactive understanding of innovation by including operational groups that bring together farmers, advisors, researchers, business and other actors for concrete innovation projects.

The SOLINSA project⁷ has investigated the mechanisms through which these different actors share their knowledge and collaborate to bring about innovation. By analysing the processes involved in learning and innovation networks of sustainable agriculture (LINSAs), it has developed a better understanding of the changes necessary in terms of self-awareness and activities on the part of researchers, advisors and farmers. Researchers need to stop seeing themselves as the only legitimate source of knowledge, and instead become facilitators of innovation processes, and advisors must learn to act as innovation brokers. Meanwhile, support should be given to farmers to help them become active partners in multi-actor innovation processes, rather than passive recipients waiting for knowledge – a situation encouraged for a long time by the traditional top-down approach to innovation.

Organic farming – at least in part – offers a good basis for engagement in such interactive innovation processes. Traditionally, organic farmers have actively had to seek new ways of innovating, because the traditional (mainstream) system of agricultural research and advice did not cover the needs of the organic sector. This encouraged close collaboration between farmers and scientists in participatory research. However, as acceptance for it has widened, organic farming has become increasingly integrated into the mainstream system of knowledge and innovation. Now, with the new approach of the EIP-AGRI, organic farmers have a chance to revive the old traditions of their sector and become active partners for sustainable innovation in rural areas.

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⁷ www.solinsa.net

3

THE EIP-AGRI AT EU LEVEL



3.1

THE EIP-AGRI SERVICE POINT

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The EIP-AGRI is a new approach to boosting innovation in European agriculture and forestry. It is based on existing policies, above all the Rural Development Policy and the EU Framework Programme for Research and Innovation, Horizon 2020. It aims to build bridges between science and practice, in particular through practical projects carried out by operational groups and through networking activities.

The EIP-AGRI will act as a catalyst to boost the flow of information and foster exchanges of knowledge and experience across projects, sectors and borders. It will link up innovation actors, including farmers, advisors, agri-businesses, researchers and civil society, to form a network – the EIP Network.

The European Commission established the EIP-AGRI Service Point in April 2013 to carry out the practical work of connecting people and facilitating innovation and knowledge exchange in agriculture. Its work is organised in three areas.

SHARING KNOWLEDGE

The EIP-AGRI Service Point provides a platform on which the relevant actors can share their knowledge, and where the needs of practitioners can be submitted for further research. It also collects and shares information on innovation-related policy measures and initiatives, relevant research activities and results, funding opportunities, and the lessons learned from practice-oriented projects.

The EIP-AGRI Service Point interacts with different groups, players, platforms and networks, using diverse communication channels such as seminars, workshops, publications, website and social media.

TACKLING CHALLENGES

The EIP-AGRI Service Point collects and gives feedback regarding research needs from practice. It promotes the sharing of knowledge and facilitates the search for innovative solutions to key challenges.

One of the main tools it uses to fulfil this purpose is support for focus groups⁸ that bring together researchers and practitioners. The focus groups involve experts willing to share their knowledge and promote the practical application of the innovative solutions within a specific area.

CONNECTING PEOPLE

Innovation starts when people come together and get inspired. To trigger that process, the EIP-AGRI Service Point has been tasked with organising face-to-face meetings in focus groups, workshops and seminars. It also provides web-based exchanges and information, and it uses social media and other means of communication for all the key players in the field of agricultural innovation.

EIP-AGRI FOCUS GROUP ON YIELD GAPS IN ORGANIC ARABLE FARMING

One of the first EIP-AGRI focus groups was created to tackle the challenge of optimising yields in organic arable farming. Its first meeting, held in September 2013, aimed to identify the main causes of yield gaps (i.e. why, under similar conditions, some organic farmers produce lower yields than others). Two other focus groups held their first meetings in autumn 2013, one looking at the reduction of antibiotics use in pig farming, the other addressing the situation of protein crops. Three more focus groups will start working in the first half of 2014. These will look at cooperation models in the field of genetic resources, soil organic matter content in Mediterranean soils, and Integrated Pest Management in Brassica plants.

GETTING FARMERS ON BOARD

The involvement of farmers is crucial to the success of the EIP-AGRI. Not only are they one of the main sources for questions that can be translated into research needs, it is also they who hold specific and relevant knowledge that is fundamental for innovation. After all, if farmers do not innovate – if they do not adopt or adapt new innovative practices – these innovations will make little difference in reality.

It is very important that farmers are informed about the activities in the EIP-AGRI Network. The EIP-AGRI Service Point is the primary source of such information, either directly, or through farmers' networks and other intermediaries. This will enable farmers to participate in the focus groups, seminars and workshops, and in the online debating forums. It is important that the information provided through the website and other publications of the EIP-AGRI Network, including newsletters and fact sheets, reach the farmers, as it is they who must apply good, innovative practices and who are the key players in dissemination. They therefore need to be informed, and they should be encouraged to set up and participate in operational groups.

The website of the EIP-AGRI Service Point is available at:

http://ec.europa.eu/agriculture/eip/index_en.htm

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⁸ http://ec.europa.eu/agriculture/eip/focus-groups/index_en.htm



3.2

FOCUS GROUP ON ORGANIC FARMING

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One of the first steps in implementing the EIP-AGRI has been the creation of thematic focus groups to identify innovative solutions to specific problems. The work of these groups is expected to contribute to the EIP-AGRI in several ways. For one thing, they will help to map challenges and opportunities which require innovative approaches, including details of the key issues, the required partners and possible bottlenecks. They will also collect existing knowledge (in scientific reports and projects, as well as practical experience) that can contribute to innovative solutions, while also identifying specific areas in which new research is needed and the kind of research that is most likely to meet the needs. The focus groups can also propose the topics for, and characteristics of the operational groups to be formed, and can suggest tools and methods for knowledge sharing. While feeding into the EIP-AGRI process, the outcomes of the focus groups can also contribute to activities at national and regional levels in support of the local implementation of the innovation strategy.

The focus group on organic farming was launched in summer 2013, as one of the first three focus groups. It consists of 20 experts with different competences and professional backgrounds (farmers, advisors and researchers) from different regions of the EU. These were selected jointly by the EIP-AGRI Service Point and the European Commission (DG Agriculture and Rural Development). They all have extensive scientific and/or practical experience of organic farming, and are willing to share their knowledge with the other members in order to explore practical and innovative solutions to the problems identified.

TOPICS OF THE FOCUS GROUP

The main task of the focus group is to find ways of optimising organic arable yields – i.e. cereals, pulses, fodder crops and vegetables, but excluding specialised vegetable production systems and greenhouses. This is less a problem of the differences in productivity between organic and conventional farms, than a question of raising the yields of less productive organic farms to match the levels of the best organic producers using similar farming systems in similar areas.

The first meeting of the group was held in September 2013. The participants worked to identify barriers to productivity. Their findings can be divided into five major areas:⁹

⁹ Discussion paper available at:
http://ec.europa.eu/agriculture/eip/focus-groups/organic-farming/201309_en.pdf

- **Inadequate supply of nutrients** – This usually refers to nitrogen deficiencies but also includes other nutrients (P, K and meso-nutrients). The issue is that fertiliser use in organic farming involves long-term management practices, with crop rotation, the incorporation of crop residues, use of compost etc. The effects of this only become evident after a number of years when the soil reaches an equilibrium. However, it requires an initial “investment” that not all farmers are able to make.
- **Poor management of soil fertility** – This is closely related to the previous point, but as well as the availability of nutrients it also influences the overall capacity of the soil to host plants and affects their resilience to stress (too much or too little water, low or high temperature etc.). Here again, the solution requires long-term planning (rotations, use of organic matter and crop residues, tillage patterns, irrigation etc.) and also takes time. That is why new organic farmers usually have poorer soils. On the other hand, market pressure often clashes with rotation needs and planning requirements, and makes it more difficult for farmers to achieve positive economic performance in the long run.
- **Insufficient weed management** – This is a major obstacle, especially for spring-sown crops and crops with slow early development. It is a more serious problem in newly converted farms because appropriate crop rotation slowly but efficiently reduces the quantity of weed seed in the soil in the long run. Nevertheless the need to specialise in a few crops (market pressure) often negatively affects the rotation, and with it also the agronomic weed management.
- **Insufficient management of pests and diseases** – Although pests and diseases usually attack organic crops less severely due to the diversification practices of the farms, they can still cause huge losses in years affected by extreme conditions. This is because organic farms use non-treated seeds and deploy plant protection products that only have a preventive effect – and this effect is limited if pests or diseases are already attacking the plants.
- **Choice of varieties** – In general, the genetic material used by organic farmers is selected for conventional systems, and there is a lack of appropriately adapted genetic materials. In other words, there is a shortage of varieties that are resistant to major pests and diseases or which, more importantly, are adapted to the local climate and soil and to organic cropping systems. Available varieties also often lack the quality demanded by the organic market or organic processors.

The focus group will continue working to identify barriers and underlying factors. More importantly, it will also propose tools for solving the problems it reveals. The proposals will build on the pooled experience of all the members, applying empirical and scientific knowledge for pragmatic solutions.



3.3

FOCUS GROUP ON PROTEIN CROPS

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The purpose of the focus group on protein crops is to identify science and technology-based ways to increase the supply of plant protein in the European Union by making the home-grown protein crop materials more competitive.

The first meeting in September was hosted by Agrifirm, which is a large cooperative compound feed producer in the Netherlands¹⁰. The group started with the proposition that the driver behind the strong competitive position of soy is the price of lysine. Protein (particularly lysine) concentration is critical to the per-tonne value of protein-rich grain, because the non-protein components are priced against the cheapest starch or fat sources available from other sources. This means the starch in peas and the oil in lupine are valued against the cheapest sources of starch and oil respectively. European protein crops are high yielding but they compete for land where cereals grow exceptionally well by world standards. This has focused the group strongly on the challenge of raising the economic competitiveness of a range of protein crops across a very diverse set of agro-ecological conditions. The group identified eight topics for its discussions:

1. Building and protecting yields
2. Breeding
3. Diverse cropping
4. Diverse animal production
5. Using diverse protein crop supplies
6. Sustainability
7. Building transitional supply chains
8. Extension and advice

The first topic includes yield generation, crop physiology and crop protection. Breeding is also a major theme. Building transitional supply chains addresses economic risks and the building of new supply chains, including novel local and alternative supply chains.

¹⁰ Discussion paper available at
[http://ec.europa.eu/agriculture/eip/
focus-groups/protein-crops/201307_en.pdf](http://ec.europa.eu/agriculture/eip/focus-groups/protein-crops/201307_en.pdf)



3.4 FOCUS GROUP ON THE REDUCTION OF ANTIBIOTICS IN THE PIG SECTOR

The purpose of this focus group is to explore and develop integrated strategies to reduce the use of antibiotics in the pig sector.¹¹ It aims to list good practices, look at alternative treatments (e.g. adapted housing systems, feeding, use of herbs), analyse economic and veterinary factors, and assess the role of genetics. The work of the group takes in three main areas.

1. Alternatives to antibiotics, including vaccination and breeding (measures to improve immunity and general constitution, feed additives and supplements, immuno modulators, new vaccines and means of application)
2. Management and husbandry (design of stables, housing, biosecurity, euthanasia, early diagnostic detection and training of personnel, veterinarians and advisors)
3. Behavioural change amongst farmers and veterinarians; economic factors and cost-benefit at farm level.

In each of these areas, the members of the focus group will identify information gaps where further dissemination activities are needed, and they will highlight some areas where there is still a need for additional research and innovation.

¹¹ Discussion paper available at http://ec.europa.eu/agriculture/eip/focus-groups/animal-husbandry/starting_paper_en.pdf

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IMPLEMENTING THE EIP-AGRI IN RURAL DEVELOPMENT PROGRAMMES

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The new rural development regulation provides a catalogue of measures to help Member States and regional authorities set up their 2014-20 rural development programmes. It is for authorities at the national and/or regional levels, not the EU alone, to decide the objectives and content of the rural development programmes for their regions. Member States must nevertheless take into account the priorities and objectives of the rural development regulation. Article 5 includes innovation in its list of priorities, as well as in the list of crosscutting objectives to which all rural development priorities must contribute. This means it is almost a fundamental requirement to address innovation. The EIP-AGRI and its operational groups are the preferred instruments for doing so.

The rural development regulation specifies that the EIP-AGRI shall promote a resilient agricultural sector working towards agroecological production systems. In addition, innovation efforts should contribute to restoring and preserving ecosystems, while also promoting resource efficiency and the shift towards a low carbon economy. These are all priorities listed in article 5 of the rural development regulation. Organic farming and the establishment of agroforestry systems are cited as measures that contribute to these priorities. In May 2013, Member States reiterated their recognition of the “innovative dynamism and potential of the organic sector” and underlined their commitment to support its development in the EIP-AGRI.¹² All these factors make the EIP-AGRI a key instrument for the promotion of agroecological innovations. However, as with any broad approach to sustainability in farming, a range of interpretations are possible, which could lead to the watering down of the original vision. Associations for agroecological farming should take advantage of the opportunities offered and convince their national or regional authorities to implement the EIP-AGRI and set-up operational groups fostering organic and agroecological solutions. This chapter aims to help in this regard by providing an overview of the relevant articles in the rural development regulation.

THE AIMS OF THE EIP-AGRI AND OPERATIONAL GROUPS

The aims of the EIP-AGRI and operational groups are specified in Articles 55 to 57. Operational groups should tackle practical problems and are not meant to be discussion groups. Article 55 mentions the use of the EIP-AGRI for promoting agroecological production systems, such as organic farming. NGOs are mentioned as one of the target groups.

¹² http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/agricult/137076.pdf (point 25)

Article	Title	Content
55(1)	Aims	The EIP for agricultural productivity and sustainability shall: (a) promote a resource efficient, economically viable, productive, competitive, low emission, climate friendly and resilient agricultural and forestry sector, working towards agro-ecological production systems and working in harmony with the essential natural resources on which farming and forestry depend; (b) help deliver a steady and sustainable supply of food, feed and biomaterials, both existing and new ones; (c) improve processes to preserve the environment, adapt to climate change and mitigate it; (d) build bridges between cutting-edge research knowledge and technology and farmers, forest managers, rural communities, businesses, NGOs and advisory services.
56 (1)	Operational groups	EIP operational groups shall form part of the EIP for agricultural productivity and sustainability. They shall be set up by interested actors such as farmers, researchers, advisors, and businesses involved in the agriculture and food sector, who are relevant for achieving the objectives of the EIP.
56 (3)		The Member States shall decide within the framework of their programmes to what extent they will support the operational groups.
57	Tasks of operational groups	EIP operational groups shall draw up a plan [for an] innovative project, [...] implement [it] through measures financed through the rural development programmes [...] and disseminate the results of their project.

MEASURES TO SUPPORT OPERATIONAL GROUPS

Article 35 (co-operation) plays a key role in the implementation of the EIP-AGRI. Support can be sought for both the creation and of the running of operational groups (Article 35(1)(c)).

Article	Title	Content	Comment
35	Co-operation	Support under this measure shall be granted in order to promote [...]:	Max. EU contribution (as % of total public contribution) to this article is 80%
1(c)		The establishment and operation of operational groups of the EIP [...]	
5(b)		The following costs [...] shall be eligible for support: animation [...] in order to make feasible a project to be carried out by an operational group of the EIP.	Under this article, the costs of innovation brokerage can be covered for the setting up of an operational group and preparing a project proposal (finding participants etc.).
6		Where a business plan or an environmental plan [...] or a development strategy is implemented, Member States may grant the aid either as a global amount covering the costs of co-operation and the costs of the projects implemented or cover only the costs of the cooperation and use funds from other measures or other Union Funds for project implementation. Where support is paid as a global amount and the project implemented is of a type covered under another measure of this regulation, the relevant maximum amount or rate of support shall apply.	This article means that funding can combine the organisational costs as well as the direct costs of the project itself. It can be combined with support under other measures. If a programming authority chooses to pay a single amount for combined projects, the maximum aid intensity of the respective measures should be respected.

Article 17 allows supporting investments in physical assets. Operations supported as part of the EIP-AGRI can benefit from increased support.

Article	Title	Content	Max. EU contribution (% of public contribution)	Comment
17	Investment in physical assets	1. Support under this measure shall cover [...] investments which: (a) improve the overall performance and sustainability of the agricultural holding; (b) concern the processing, marketing and/or development of agricultural products;	75% if contributing to environment or climate change objectives, including organic farming, else 53%	Max. investment support is 40%, but is increased by 20% for operations supported as part of the EIP-AGRI and investments linked to organic farming or agri-environment climate measures. EIP-linked investments require the involvement of an operational group.
		(c) concern infrastructure related to the development, modernisation or adaptation of agriculture and forestry, including access to farm and forest land, land consolidation and improvement and the supply and saving of energy and water;	75% if contributing to environment or climate change objectives, including organic farming, else 53%	Max. investment support is 100%
		(d) are non-productive investments linked to the achievement of agri-environment-climate objectives [...], including [...] enhancing high nature value systems.	75%	Max. investment support is 100%. This article includes investments linked to organic farming.

Besides articles 35 and 17, a number of other articles allow support for operational groups:

Article	Title	Content	Max. EU contribution (% of public contribution)	Comment
14	Knowledge transfer and information activities	Support under this measure shall cover vocational training and skills acquisition actions, demonstration activities and information actions.	80%	
15(1)b	Advisory services	Support under this measure shall be granted in order to promote the setting up of [...] farm advisory services	53%	This article allows support for advisory services that offer innovation brokerage, connect partners, and help in the preparation of operational groups. Article 15(4) specifies that advice may also cover issues related to climate change, biodiversity and the protection of water, the development of short supply chains and organic farming
19	Farm and business development	Support under this measure shall cover: (a) business start-up aid (b) investments in creation and development of non-agricultural activities; [...]	53%	
27	Setting-up of producers groups	Support under this measure shall be granted in order to facilitate the setting up of producer groups and organisations	80%	
54(2)	National rural network	Networking by the national rural network shall aim to [...] (d) foster innovation in agriculture, food production, forestry and rural areas	53%	According to this article, the national rural development networks can install an innovation brokerage service for operational groups

5

INSPIRATION FROM THE MEMBER STATES



IMPLEMENTING THE EIP-AGRI IN FLANDERS (BELGIUM) - THE PLANS OF THE GOVERNMENT

INTRODUCTION

Shortly after the launch of the EIP-AGRI by the European Commission, its implementation began in Flanders. The Platform for Agricultural Research, which brings together all the relevant actors,¹³ acted as a forum for discussion. It was here that a set of reference points and opportunities were identified. The Platform concluded that the EIP-AGRI represents an interesting addition to the Flemish way of working, and that it complements existing initiatives. In particular, it judged as positive the synergy between the measures of the Rural Development Regulation and those of Horizon 2020. On the other hand, concerns were also voiced regarding the balance of the planned bottom-up approach and the coherence of the initiatives, as well as the potential overlap with other funding instruments, and administrative duties, controls and audits.

GENERAL OBJECTIVE

From a policy perspective, the support provided to operational groups had two objectives. Firstly, it should help farmers to use innovation in order to address challenges and opportunities, and secondly it should support research institutes and other actors seeking funding through Horizon 2020. Interviews and an orientation paper on the implementation of EIP-AGRI in Flanders showed that the best ways to meet these objectives would be through an open call for proposals for operational groups, or through the provision of funding to learning networks.

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¹³ The Platform for Agricultural Research groups together representatives of relevant universities, the Institute for Agricultural and Fisheries Research, university colleges, experimental stations, farmers' organisations, Flemish ministerial cabinets, government departments and the main funding agency.

SUPPORT FOR OPERATIONAL GROUPS

Based on the discussions, the ministry decided to issue a call for proposals to start operational groups. In principle, the call will be open, with no topics specified in advance. However, it reserves the option to propose themes if adjustments are needed (e.g. if an acute need emerges in a certain sector, or there is repeated imbalance between sectors). The support provided will help each operational group develop its initial ideas into a fundable concept, or some other concrete output (e.g. a project proposal). This initial idea should stem from the problems or opportunities experienced by farmers. Actors such as the experimental stations, farmers' organisations or the Flemish Institute for Agriculture and Fisheries may also help groups that apply for funding, and they can facilitate the process. Existing knowledge and expertise should be acknowledged.

Those requesting assistance do so by way of a proposal (including a simple budget), following a call. The proposals are evaluated by an independent jury, based on specific evaluation criteria. These criteria include, for example, the composition of the operational group, the objectives and output, the quality of the proposal, the innovation potential, and the complementarity with existing initiatives. The maximum budget is EUR 40,000 for no more than two years. The funding rate is 90% of the operational group's total budget. The final budget allocation is determined based on the work plan. Investments and overhead costs are not supported.

The Flemish EIP-AGRI network will support the operational groups and guarantee their collective interaction with the EU bodies. Its activities will focus mainly on the general functions of the operational groups in Flanders, for instance answering questions, supporting the exchange of information between operational groups, and organising workshops and interactions with the EIP-AGRI Service Point. The network will be a cooperative undertaking of the Ministry, the Flemish Rural Network and the secretariat of the Platform for Agricultural Research. As such it will address all the relevant stakeholders and information flows.



IMPLEMENTING THE EIP-AGRI IN FLANDERS – THE ORGANIC PERSPECTIVE

THE FORK NETWORK

The Flemish Research and Knowledge Network for Organic Food and Farming (FORK Network) is at the heart of knowledge exchange in Flanders. The network comprises CCBT¹⁴ (Coordination of applied research and extension on organic farming in Flanders), NOBL¹⁵ (Network for Organic Food and Farming Research) and the "Biobedrijfsnetwerken", or farmers' networks,¹⁶ the latter being facilitated by the organisations Landwijzer and BioForum.¹⁷ The FORK Network receives financial support from the Flemish Government under the Flemish organic action plans (2008-2012, 2013-2017).

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¹⁴ CCBT coordinates the work of five applied organic farming research stations. It works with the farmers' networks to define the research needs, organise demonstration activities and disseminate research results. (www.ccbt.be/?q=english)

¹⁵ NOBL is the overarching network for all stakeholders in the area of organic food and farming research (representatives of universities, university colleges, applied research stations, CCBT, organic farmers' networks, regional research stations, the government, and farmers' and consumers' organisations). The common aim is to reinforce agricultural research and promote the circulation of knowledge to boost the organic food and farming sector in Flanders. (www.nobl.be/en)

Farmers are the cornerstone of the network. Through the farmers' networks, they can share their knowledge and can also rely on that knowledge being further developed and circulated by experts. Facilitators are available to help the farmers, while the researchers also "speak the same language". The farmers' networks encourage their members to identify gaps in their knowledge and to formulate their research needs so that these can be translated into projects. Care is taken to translate the results of projects into useful, readily applicable information for farmers. This in turn is promulgated in the monthly newsletter of CCBT, which also keeps its readers updated on related research news.

The FORK Network welcomes the analysis of the European Commission, which has confirmed much of what the agroecological innovation project¹⁸ run by IFOAM EU, TP Organics and ARC2020 already suggested, such as the need for more participatory research at the grassroots level. The network embraces the launch of the EIP-AGRI, and identifies with its objectives. Its members have now organised themselves to contribute to it in full.

THE FORK NETWORK AS A PARTICIPANT IN THE EIP-AGRI PROCESS

The coordinators of the FORK Network and BioForum provided inputs into the EIP-AGRI decision-making process, working through TP Organics and IFOAM EU Group. NOBL organised a workshop on participatory research in December 2012, to which a representative of DG Agriculture and Rural Development was invited to exchange ideas about the upcoming EIP-AGRI.

At the regional level, BioForum is a member of the Flemish Platform for Agricultural Research. It contributed to the formulation of a national regulation on implementing EIP-AGRI operational groups in Flanders, based on inputs from the organic sector and from various stakeholders during the CCBT and NOBL meetings.

RESULTS

Currently a lot of questions remain, and work is ongoing to deal with possible interpretations of the Flemish implementation of the operational groups. The Flemish approach has two objectives. It aims to help farmers use innovation to address challenges and opportunities, and it supports research institutes and other actors in accessing funding under Horizon 2020. The second objective seems to receive more attention.

Much depends on the interpretation of "innovation", and on whether or not the assessment criteria focus only on the economic prospects for Flemish agriculture. Experience has shown that, given the rather limited extent of the Flemish organic sector, such an economic criterion makes it very difficult to apply for project funding. Moreover, researchers evidently receive insufficient reward for working with farmers' networks. Often they are judged only on the number of their scientific publications. If the EIP-AGRI or Horizon 2020 do not tackle this problem of "publish or perish", few researchers will waste their time collaborating in farmers' networks.

When the EIP-AGRI was launched, the FORK Network realised that its model of organic farmers' networks was the ideal interpretation of what an EIP-AGRI operational group should be: a network of farmers, researchers and experts, all working together to increase and disseminate knowledge. Farmers take the lead, while the facilitators make sure the farmers and researchers understand each other. Research projects are developed jointly by researchers and farmers, and the results are fed back to the farmers in an appropriate form. This process does not seem to meet the current Flemish objectives.

Any operational group in Flanders must develop an initial idea that is already very clear and which can be used to trigger a more extensive, fundable project (either national or European) or another fundable concept. Experience shows that formulating and clarifying a problem in a systematic approach, while working with the mixed and highly varied farms that typify organic agriculture, calls for a very diverse team of farmers and researchers. It takes time and is almost a project in itself.

.....
¹⁶ Biobedrijfsnetwerken are networks in which farmers, advisors, researchers and facilitators exchange knowledge, and within which farmers can stimulate new research. Networks exist for numerous sectors: dairy goats, dairy cattle, beef cattle, poultry, vegetables and arable crops, berries, fruit and greenhouse vegetables.

¹⁷ BioForum is the umbrella organisation of the organic sector, whose membership consists of a strong network of certified producers, processors, distributors, retailers and relevant organisations. (www.bioforumvlaanderen.be); Landwijzer is an education centre for organic and biodynamic farmers (www.landwijzer.be).

¹⁸ <http://agro-ecoinnovation.eu/>

The FORK Network views the EIP-AGRI as a promising development in the state of research and knowledge exchange. It is to be hoped that the initial objectives of improving bottom-up research and stimulating the participation of different actors in innovation for the food chain are achievable, and that links can be formed between initiatives at the European and national levels.



THE EIP-AGRI IN BRITTANY AND PAYS DE LA LOIRE (FRANCE): FOCUS ON PLANT PROTEIN IN ANIMAL FODDER

Brittany and Pays de la Loire are market leaders for livestock production (milk, pork, poultry etc.) in both France and Europe. They are well aware of the fragility of these sectors, which depend heavily on imports of plant protein, the price of which has increased considerably in recent years. Growing demand in Asia is causing increased market uncertainty and threatening a steep rise in livestock production costs.

Brittany and Pays de la Loire have decided to invest in research to improve the quality of plant proteins and animal feed rations. They are encouraging sustainable agricultural practices favourable to the local production of plant protein, while also working to improve the nutritional qualities of the resulting produce.

The two regions have commissioned *Pôle Agronomique Ouest* (PAO – the agronomic centre of western France)¹⁹ to work on plant proteins, while connecting the various local partners affected by the problems in this sector. The objectives are to promote research projects and produce common solutions, in order to reduce the reliance on imported plant protein.

REGIONAL OPERATIONAL GROUPS

In 2012, PAO brought together research organisations and economic players from the relevant sectors, such as farmers, chambers of agriculture and other stakeholders to determine some common priority areas for action. Working groups were soon established for a variety of activities, including:

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¹⁹ www.pole-agro-ouest.eu/Pole_Agronomique_Ouest/Bienvenue.html

- Expanding protein sources
- Increasing protein levels in cereals
- Securing protein and/or oilseed crop yields
- Identifying and comparing mixed cultures
- Maintaining forage crops
- Studying the process and technologies of protein production and preservation
- Reviewing the purchase and production of plant proteins at the farm level
- Reviewing the effects of promoting oil and protein seed crops.

While this work is not specifically aimed at organic farming, the organic sector is fully integrated in the groups established in the region, through organisations such as the *Fédération régionale de l'agriculture biologique de Bretagne* (FRAB – Brittany's regional federation of organic growers). The groups continue to work together to find innovative solutions to all the problems identified.

The regions of Brittany and Pays de la Loire support this work to the full. In their capacity as the new managing authorities for the European Agricultural Fund for Rural Development, they are planning to introduce supportive measures for operational groups in this area, as part of their regional rural development programme and in the context of the EIP-AGRI.

CONFERENCES ON PLANT PROTEIN

To promote exchanges between the players, the regions decided to organise conferences on the subject of plant protein. The first of these took place in 2012, in Rennes. It brought together regional and national players, particularly those involved in the working groups.

In June 2013, prompted in large part by the European Commission's communication on the EIP-AGRI, the decision was made to enlarge the field of activities to other EU Member States by organising a European conference in Nantes. In this way, contacts were established with researchers and technical centres in Ireland, Scotland, Portugal, Spain, Italy, Belgium and other places.

PARTNERSHIP WITH EUROPEAN OPERATORS

The June 2013 conference encouraged the first steps in the formation of a partnership between the regional structures animated by the PAO and their European partners. This group, which remains open to additional participants, is already working to define its priorities and provide guidance for inter-regional activities around Europe. The research topics it is helping to define should focus on both the production and improvement of products, and could lead to the formation of different operational groups.

The nascent partnership, which is in part a response to the European Commission's efforts to facilitate exchanges between research and practitioners and to improve the dissemination of innovative approaches within the European Union, has also been created to respond to calls for proposals in Horizon 2020 that deal with this subject. Some of the European experts in the working groups headed by PAO are also involved in the focus group on protein crops set up by the European Commission. PAO can act as a source of information and proposals for the work of this focus group.

The European partners all share the opinion that if research in this area does not receive additional support very soon, the overall balance of the European livestock sectors could be jeopardised.



DévAB: A FRENCH INNOVATION NETWORK FOR THE ORGANIC SECTOR

The joint technological network Development of Organic Farming (RMT DévAB, in French) was launched in June 2008 and is supported by the French Ministry of Agriculture.

Its members include the Network of Agricultural Technical Institutes in France (ACTA), the Network of French Chambers of Agriculture (APCA), the French National Institute for Agricultural Research (INRA), the Technical Institute for Organic Farming (ITAB), the higher education institution for agriculture ISARA-Lyon, the agricultural college VetAgroSup in Clermont-Ferrand, and the network of agricultural high schools FORMABIO.

The aims of DévAB are to develop organic farming and improve its agronomic, environmental and economic performance, to facilitate the development of projects and knowledge transfer by connecting actors and organisations, and to strengthen international collaboration while developing innovative partnerships across Europe. The network includes a wide range of partners spread across the whole country, involved in research, training and extension activities.

The network's objectives and activities were organised at the outset into four interacting principles: technical innovation, economic development, environment and natural resources, and knowledge exchange. More than 120 people are involved in the network, which now offers a collective space for dialogue where all the stakeholders in organic farming can share their ideas for the sector's development, with a common understanding, while acknowledging each other's differences. The exchanges have been encouraged and strengthened through productive working groups and complementary activities (seminars, debates, meetings...).

The main outputs of the network are available for free on the website.²⁰ The network has published 30 technical leaflets on innovation and organic farming, and another 10 leaflets on economic themes in various fields of production. The leaflets were developed for farmers, advisors, trainers and processors, and for different types of crops, livestock, vegetables etc. DévAB has also published a comprehensive book entitled *Organic Farming and the Environment* (Fleury, 2011), which was produced through a participatory action research approach. This research began with a collective effort to define problems, then attempts were made to solve the problems, drawing on various players and resources, including scientific, technical and empirical knowledge, and local know-how.

DévAB is a neutral and open network that stimulates the development of organic food and farming through annual seminars that involve many partners on various topics. As an attractive and functional organisation, it enables forward-looking and exploratory work, such as charting pathways for farmers towards organic farming. Thanks to its products and projects, a dynamic process is now underway, although the medium-term future has yet to be secured.

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²⁰ www.devab.org

One of the strengths of the DévAB network is the way it divides responsibilities between the partners. As such, DévAB has become a network of experts, exchanging ideas and producing successful publications. The website, the annual seminars, and the working groups give a structure to the information exchanges. While much energy is still required to push the network toward its goals, the group's useful work has already been recognised by the authorities tasked with its evaluation. Its contributions benefit both newer and established organic farmers.

With common rules and regulations taking hold across Europe, organic farming is increasingly becoming a cross-border issue. While other organisational models undoubtedly exist, it is safe to assume that many concerns will be shared. We now have an opportunity to increase the scale of work, and to compare and discuss other viewpoints.

In the future, our work will focus on other questions. For instance, at what scale is it best to address the development of organic food and farming (national, regional...)? What kind of collaboration should take place (e.g. the relative importance of research, extension services and training, and their contributions in the scope of the network)? Are there any forms of knowledge that should be given priority?

DévAB will be restructured next year to take into account the responses to these questions. Greater focus should now be placed on the food processing sectors, and perhaps a new emphasis is needed to reach out to the European level, taking advantage of the opportunities offered by the EIP-AGRI. Any interested country is welcome to join the initiative!



PLANS FOR THE EIP-AGRI IN LOWER SAXONY (GERMANY): THE COMPETENCE CENTRE FOR ORGANIC FARMING AS OPERATIONAL GROUP

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The EIP-AGRI represents a new approach which promises to build bridges between research and practice. A key element of the EIP-AGRI are the operational groups that are intended to link farmers, advisors, researchers, businesses and other actors. Every country in Europe, indeed every federal state within Germany, defines the operational groups in a different way.



The Lower Saxony Ministry for Agriculture also differs from the other federal states in its interpretation of an operational group and plans, wherever possible, to use existing networks as operational groups. For this reason, the existing Competence Centre for Organic Farming in Lower Saxony (KÖN) is to be made an operational group for organic agriculture, as it already links the different sector actors in the federal state.

KÖN was originally founded in 2002 as a cluster for the various different advisory services on organic farming. Its members included the Ökoring Niedersachsen and the Landesvereinigung Ökologischer Landbau Niedersachsen e.V. (LÖN), an umbrella group of organic farming associations in Lower Saxony (Bioland, Demeter, Naturland, Öko-Obstbau Norddeutschland). It works in close collaboration with farmers, processors, retailers and other stakeholders.

The objective of KÖN is to enhance the organic value chain. It bundles competence and know-how in the organic sector, develops knowledge of organic farming, processing and retailing, and works to disseminate that knowledge. It works to share practical solutions in its support for the various stakeholders, and it maintains close contacts with the state government of Lower Saxony. On behalf of the state it also carries out a range of projects to enhance organic farming, processing and retailing, and to strengthen the organic value chain.

KÖN is involved in several national networks and has excellent contacts with the farmers' associations. It practices knowledge transfer in different areas of its operation. The agricultural and processing consultants employed by KÖN are able to enhance their knowledge of organic farming while carrying out research as the basis of recommendations for politicians and other actors, and while completing market studies and practical trials. They can then translate this knowledge into practical consultancies for the farmers.

The close collaboration of the different stakeholders enables KÖN to work more efficiently than could the individual institutions alone. Resources, such as the consultants' expertise, can be combined in ways that ensure a wider range of better quality services for farmers, processors and retailers. The customers benefit from this knowledge exchange, and they know that KÖN is a "one-stop shop" they can turn to with diverse questions, all of which will be addressed by an appropriate consultant.

The way in which KÖN operates means that it already fulfils many of the preconditions for becoming an operational group. As has been shown, knowledge transfer is already a big part of its work. As an operational group, KÖN would launch a range of projects for different products in local value chains, which would also build on strong research inputs. The first step would be to organise expert roundtables tasked with assessing what projects are the most necessary for advancing organic farming in Lower Saxony.



5.6

PROPOSAL FOR AN ORGANIC OPERATIONAL GROUP IN ESTONIA

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In Estonia, the Ministry for Agriculture launched a call for pre-applications by operational groups. The groups that submitted a proposal included the Estonian Organic Farming Platform, which consists of local organic farmers' organisations and organic processors, as well as the Research Centre for Organic Farming of the Estonian University of Life Sciences and the Estonian Organic Farming Foundation. The objective of this group is to increase the productivity and efficiency of plant production by improving soil fertility through the development and implementation of innovative technologies.

Organic farming has developed quite rapidly in Estonia and it currently accounts for 15.3 % of the total agricultural area. However, yields are much lower than for conventional farming. This situation should improve with the development of appropriate crop rotations, including catch crops during winter. Estonian agro-climatic conditions are highly variable; different regions have different soil types, precipitation rates and temperature conditions. In designing effective and balanced rotations, it is therefore very important to find crops and cultivars that are well adapted to local conditions. Growing catch crops (green manures) in winter diminishes leaching and enriches the soil's nutrient content. However, there is still a major lack of knowledge and experience pertaining to green manure crops and mixtures suitable for the local conditions. Minimum tillage is another useful technique for improving soil quality, but one that farmers are not familiar with. Two thirds of Estonia's farm holdings are mixed farms (including livestock). The remainder are purely arable farms, which ought to cooperate with livestock farms for better exploitation of the nutrient cycle. There is a need to incorporate protein crops appropriately into crop rotations, in order to reduce the country's dependency on imports.

Preliminary action plan of the operational group

- Analysis of the nutrient balance in crop rotations and feed rations; analysis for the integration of arable farms with mixed farms
- Field experiments (in institutes and on farms), including appropriate soil analyses and assessment of biodiversity indicators, to identify suitable crops/cultivars for rotations, and green manures
- Experimental trials of low tillage techniques
- Dissemination of knowledge and experiences of innovation by means of field days, seminars and conferences, as well as through the media and internet
- International networking for the exchange of knowledge and experiences, in particular with the focus group on organic farming.



5.7

CRISOPERLA: A LEARNING AND INNOVATION NETWORK FOR SUSTAINABLE AGRICULTURE IN TUSCANY (ITALY)

Crisoperla is Italian for the common green lacewing. It is a small insect, yet it is a big ally of the organic farmer in controlling pests. The Italian organisation, *Crisoperla ...liberi da parassiti*, named itself after this insect as it also sees itself as an ally of the environment and public health, in the fight against any type of farming that pollutes and kills, and as an ally of people battling the injustice of a global economy that exploits and impoverishes. *Crisoperla* was described as an example of a learning and innovation network for sustainable agriculture (LINSa) by the SOLINSA European research project (2011-2013). This project was intended to identify effective and efficient approaches to promote innovative networks that support sustainable agriculture and rural development.

The association was born out of the project *Fare Sistema* (meaning “work as a system”), which was set up at the end of 2007 by two agricultural technicians to help the development of organic farming in the province of Massa and Carrara in Tuscany. The objectives of *Fare Sistema* were 1) to encourage a collaborative process between organic farmers, 2) to create an organic farmers’ group for the acquisition of raw materials and 3) to promote a balance between the supply and demand for local, organically certified food products – in particular through ethical purchasing groups (Gruppi di Acquisto Solidale, or GAS).

To begin with, the project worked through technical experts to connect organic farmers within the province, bridging the gaps caused by their geographic distance. Through participatory communication activities, a dialogue developed which addressed the issues affecting each of the producers. Out of this a collaborative process was launched which provided assistance that was not only technical in nature and aimed at individuals, but which was also intended to support the development of the members’ capacities for collective reflection, interactions and learning.

In the space of a year, the project had achieved its objectives. A group of organic producers had become established, which could purchase raw materials jointly. The producers were coordinated as a network that also included the ethical purchasing groups and local markets of the province. Taking this as the starting point, the producers decided to develop the *Fare Sistema* into a form of open organisation with a number of branches. This would be better able to implement the changes and innovations they wanted to achieve.

ANGELA ULIVI

Crisoperla ... liberi da parassiti - Associazione biologica per l'Economia Solidale

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www.crisoperla.it



The Crisoperla association was launched in April 2009, with the objective of promoting organic farming, sustainable development and an inclusive economy. The following year, the association expanded its relations to include a number of ethical purchasing groups in Liguria. Activities now take place in the cross-border context between Liguria and Tuscany, characterised by a vibrant scene that includes an environmental defence group, civil society organisations and other associations. Spontaneous relationships arise between Crisoperla members and other organisations.

Today, Crisoperla manages a growing number of projects which involve different players at different levels (policy, economy, networking and cultural). One example is a project to consolidate the presence of organic products in local markets. The intention is not to promote the local market as the only tool for building networks and as a model of commercial organisation. Indeed, Crisoperla is convinced of the benefits of integrating different forms of relationship and marketing (purchase at farms, points of sale, ethical purchasing groups etc.). Such integration responds to the diversity of producers' needs, while also promoting consumption and enhancing the overall organic culture. The project also hopes to benefit from the willingness recently demonstrated by some communities to promote the visibility of organic products in the small, local producer markets that have been popular for several years now.

It is important to work in several places, on many fronts and simultaneously, in order to trigger "positive contamination" among:

- **municipal policy makers** – to define market regulations and collaborate in the promotion of organic products
- **organic producers** – to ensure the more regular supply and distribution of various types of products, to promote the participation of other producers, and to align production planning more closely with demand
- **consumers** – to increase the demand for organic products, and to encourage their participation in institutional, cultural and economic mediation work.

Another of Crisoperla's objectives is to represent the interests of organic farmers in provincial and regional institutional committees, with an eye to improving the level of assistance for organic farming provided by institutions and/or local farming organisations, which at present is poor or even non-existent. Crisoperla is involved in networks with regional and national organic associations, and it supports them in various activities to promote organic farming.

Crisoperla's effectiveness derives from its diversity, both with respect to the players involved and in terms of the regions. The distinctive non-hierarchical structure is innovative because it makes Crisoperla a forum for confrontation and the exchange of ideas and information, where each participant contributes to the common objectives. The division of roles and competencies is not immutable: some producers have also become active in the political and cultural initiatives; similarly, some roles such as mediation, listening and coordination, which were initially performed by the agronomists alone, have now been extended to a wider group.

Fare sistema, the project that gave birth to Crisoperla, was co-financed by the Regional Agency for Development and Innovation in Agriculture and Forestry (ARSIA) in Tuscany, and the Province of Massa and Carrara. Since its creation, Crisoperla has carried out all its activities using its own resources (membership fees, volunteering and other financial contributions from members). The only outside contribution it has received was EUR 2 500 for its participation in the SOLINSA project.



A POLISH PERSPECTIVE ON THE EIP-AGRI

The success of the EIP-AGRI depends on the diversity of agriculture in the various countries of the European Union. The Polish farming sector has many strengths, but also many weaknesses. Tools proposed by the European Commission in the EIP-AGRI, such as operational groups and networks, will provide opportunities for strengthening productivity and enhancing exports of national products and services. Polish agriculture draws on a large supply of productive resources – there are about 15.5 million hectares of arable land in Poland, and a big part of the population still lives in rural areas (39.2% in 2012). However, the sector is widely viewed as a very unattractive employer. A low level of public trust and high levels of bureaucracy combine to hamper developments here significantly. A more positive development is the growing awareness that exists in some sections of society. Polish consumers are becoming more demanding, and this is having a direct impact on the quality and range of products and services offered on the market. Recently, significant growth has also been observed in partnerships between the research and business sectors. Such cooperation is essential for raising the level of innovation in the agricultural sector. The EIP-AGRI tools are likely to strengthen this trend.

The financial support available through the EIP-AGRI is aimed at the whole agricultural sector, without distinguishing between conventional or organic farming. That means the organic sector in Poland faces a lot of competition. Therefore, the means adopted for informing the sector about the available support will be very significant; so too will be the method used for distributing the payments. Here, small-scale farmers are in a difficult position. To ensure a good flow of information, an institution will be established known as an innovation broker. In Poland, this will be established by the National Advisory Centre in Brwinów, which will conduct campaigns and organise meetings between researchers and the business and farming communities, in an attempt to translate between science and practice. Hopefully the commitment of Polish scientists to finding practical solutions for the organic sector will continue to grow. If their expertise is not taken into account, many important aspects might be ignored.

The EIP-AGRI will support projects that foster knowledge transfer and innovation in agriculture, forestry and rural areas. These will focus on cooperation and the development of the knowledge base in rural areas, and will also seek to strengthen links between agriculture, food production and forestry. They will also support research and innovation, including measures to improve environmental management and performance. From the perspective of the Polish organic sector, these are extremely important issues. There is still a severe lack of appropriately educated personnel, both in academic circles and within the sector itself (farmers, processors, sellers etc.). Many innovative technologies that already exist are still not available to the Polish organic sector. This probably stems from the low financial capacity of the country as well the prevailing barriers to awareness. All the tools available during the next CAP period have considerable potential to increase the productivity of the Polish organic sector as a whole.

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Polish food is well liked around the world, and there is still a demand for organic food. According to the Polish Agricultural and Food Quality Inspection body, there were 26 500 organic producers at the end of 2012, with 25 900 organic farms covering an area of over 650 000 ha. That represented a 10% growth in comparison to 2011.

Effective promotion of the tools available under the EIP-AGRI, combined with proper management of financial support will strengthen the organic sector in Poland, as it will in other European countries. As the funding is used, it will be important to take steps to ensure the new ideas and partnerships are maintained even beyond the support period. And each step should uphold those aspects of sustainability and the protection of land and farmers that are so fundamental to all our lives. Each project, operational group or network should provide answers that help farmers – concrete solutions to help them find a market for their products, to improve the link between their products and consumers, and to improve the quality of their land. In short, to sustain their will to grow food.



ERIAFF NETWORK – EUROPEAN REGIONS FOR INNOVATION IN AGRICULTURE, FOOD AND FORESTRY

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The Minister for Agriculture of Tuscany Region, Gianni Salvadori, instigated the creation of the ERIAFF Network on 20 September 2012, in Florence, Italy. In the spirit of the EIP-AGRI, ERIAFF should encourage further discussion of rural and agricultural research and innovation, and enhance cooperation in this area between the European regions. It is a collaborative platform for all EU regional governments. Contributions are voluntary and it receives no statutory or financial commitments. So far, 28 regions have announced their participation in the network and 15 are involved as observers.

The collaboration of the ERIAFF partners is enshrined in a joint statement which emphasises the importance of innovation as a crosscutting priority in all their agricultural policies. The regions are seen as having a strategic role to play in the uptake of innovation in the territories of the EU. The joint statement stresses the importance of a broad understanding of the term innovation that includes non-technological (organisational, social etc.), as well as technological approaches. It also calls for the administrative and financial rules applied to the Structural Funds and the Cohesion Fund to be kept simple and clear, in order to maximise expenditure on research and innovation.

ERIAFF regions commit themselves to cooperation. This includes selecting common innovation priorities, establishing links between their regional operational groups, providing support to regional stakeholders to apply for project funding at EU, national and regional levels, and organising seminars and workshops to deepen the collaboration.

A number of macro areas for strategic innovation have so far been selected as starting points for further collaboration:

- Strengthening the role of farmers in the agro-food production chain
- Improving the technological transfer from the laboratories to the farms
- Ensuring economic development in rural areas through better integration with national and urban planning
- Promoting innovative techniques and technologies for climate change mitigation and adaptation measures (efficient use of energy, water and genetic resources; development of innovative methods to fight new pests and diseases)
- Improving the environmental and social sustainability of farm and forestry management practices
- Improving the quality of foods (enhanced nutritional profile) and food safety

In the next EU programming period (2014-2020), the ERIAFF Network can play an important role in enhancing the uptake of innovation in agriculture across the EU, and in fostering the added value of regional policies and actions for Europe as a whole.

6

THE INNOVATION POTENTIAL OF ORGANIC AND AGROECOLOGICAL FOOD & FARMING

Agroecology, including organic farming, provides a comprehensive, sustainable approach to agricultural production. The sustainability of agriculture is vital for the survival of an intact environment and biodiversity in Europe, for the health and wellbeing of the European population, and for the integrity of Europe's rural communities.

Agroecology and organic farming promote a "closed system" approach. They use multiple and diverse crops or livestock, and rely on biological processes for building soil fertility and controlling pests and diseases. Operating within the constraints imposed by these principles, the sector has generated a wide range of innovations and developed new ideas that have been put into practice on farms and in companies throughout the EU. Many organic farms and food businesses have become creative, living laboratories for smart and green innovations. The organic sector has already generated a multitude of useful new practices for sustainable agriculture that can be applied in both organic and conventional farming – and it will generate more. For example, organic systems can only use a very limited range and quantity of inputs, compared to conventional food systems. Less than ten per cent of the types of pesticides permitted in conventional and integrated farming may be used in organic production. (Those used are naturally sourced products, such as neem and quassia). As a result of this, organic science has developed a rich knowledge base of natural pest control methods, which will be of use to many agriculturalists.

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In the words of the global report by the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD):

Organic farming, with its stringent rules on external input use, has to be even more innovative to solve production problems, sometimes opening up new avenues.²¹

The organic community has, moreover, maintained a research capacity in areas that, for the last twenty years, have been counted as low priority by the wider agricultural research community. Many of these research areas are now thought to hold a wider strategic significance, for instance in achieving high productivity through the efficient use of natural resources, improved nutrient recycling techniques, and agroecological methods for supporting the health of soils, crops and livestock. The practices developed by organic farmers and scientists will become increasingly relevant as rising prices and stricter chemical regimes prompt more farmers to look for ways of reducing their input use.

Not only are organic farming techniques becoming relevant to the wider agricultural sector; organic food processing innovations are also important for the food industry as a whole, where consumers are increasingly calling for minimally processed food. The prohibition of certain techniques and additives in organic food processing increases the pressure to innovate.

Innovations in the organic sector are not limited to production and processing methods, but also extend to marketing. In several regions throughout Europe, producers and consumers are engaged in efforts to shorten supply chains. Shorter supply chains allow producers better remuneration for the value they add to their products and to the wider environment. Consumers benefit from high-quality products at a fair price.

Finally, organic values have an important part to play in areas of socio-economic research, such as the role of (organic) farming in the empowerment of rural areas or the promotion of healthy and sustainable diets.

To summarise, therefore, innovation in the organic sector can have a wide range of impacts, for instance on the production of crops and livestock, processing technologies, quality management, marketing and farm diversification (including tourism, care farming and renewable energy), and they can influence scientific insights for consumer wellbeing. The organic sector should get ready to contribute to the EIP-AGRI through such innovations, and to help make it a success in overcoming future food security and environmental challenges.

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