

eip-agri
AGRICULTURE & INNOVATION

agriⁱnnovation

WHERE RESEARCH AND PRACTICE MEET

2014

1



- EIP and Rural Development Programming
- Horizon 2020: Expanding our Horizons
- EIP-AGRI website: a one-stop-shop for agricultural innovation in the EU
- EIP-AGRI Service Point: building bridges between practice and research

The Platform for Knowledge Based Bio-Economy
relevant ERA-NETs

Spain: Taking the road to innovation - how a
forward-looking mind can help conserve traditional farming

Denmark: Higher productivity in organic arable crop production

funded by





Table of contents

Welcome	3
EIP-AGRI: what it does and how it works	4
Success story of disseminating research and innovation results to farmers	6
Innovation with farmers in the driver's seat	9
Agricultural Knowledge and Innovation Systems towards 2020 - An orientation paper on linking innovation and research	11
Getting involved in the EIP-AGRI	14
Innovative multi-actor project recovers vine growing area in Galicia, Spain	16
Boosting opportunities Innovating Water in Europe	18
EIP and Rural Development: innovation is all around us...	20
Estonian potatoes and automatic weather stations: beating the late blight disease	22
Expanding our Horizons	24
More than the sum of its parts: PLATFORM	26
Flora in your French cheese? The FloracQ Project	31
Addressing specific challenges in agriculture through EIP-AGRI Focus Groups	32
Uptake of knowledge in agriculture - an Irish initiative	35
Success story of disseminating research and innovation results to farmers: Taking the road to innovation	38
A global view: same issues - different solutions	40
New website: the one-stop-shop for agricultural innovation	43
The EIP-AGRI Service Point: building bridges between research and practice	44





Welcome

Welcome to the first edition of the annual EIP-AGRI magazine - which will reach a total of 6000 rural stakeholders and researchers.

This magazine will give you an introduction to some of the different elements that make up our new approach to boosting research and innovation in the farm and forestry sectors and it will give you a taste of some of the best practices that are already making a difference in the field.

We need to make a difference. If agriculture wants to meet the multiple expectations emerging from society and contribute to tackle the challenges of food security, food safety, quality, sustainability and climate change, it has to be more and more knowledge-based. Farmers need to be aware of and have access to the best practices available. This also means that we need to innovate to produce more and better with fewer resources.

That's why the European Commission has highlighted "food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy" as a top priority for Horizon 2020, the new EU framework programme for research and innovation. With nearly € 4 billion, the budget available for research and innovation in this field at EU level will nearly double.

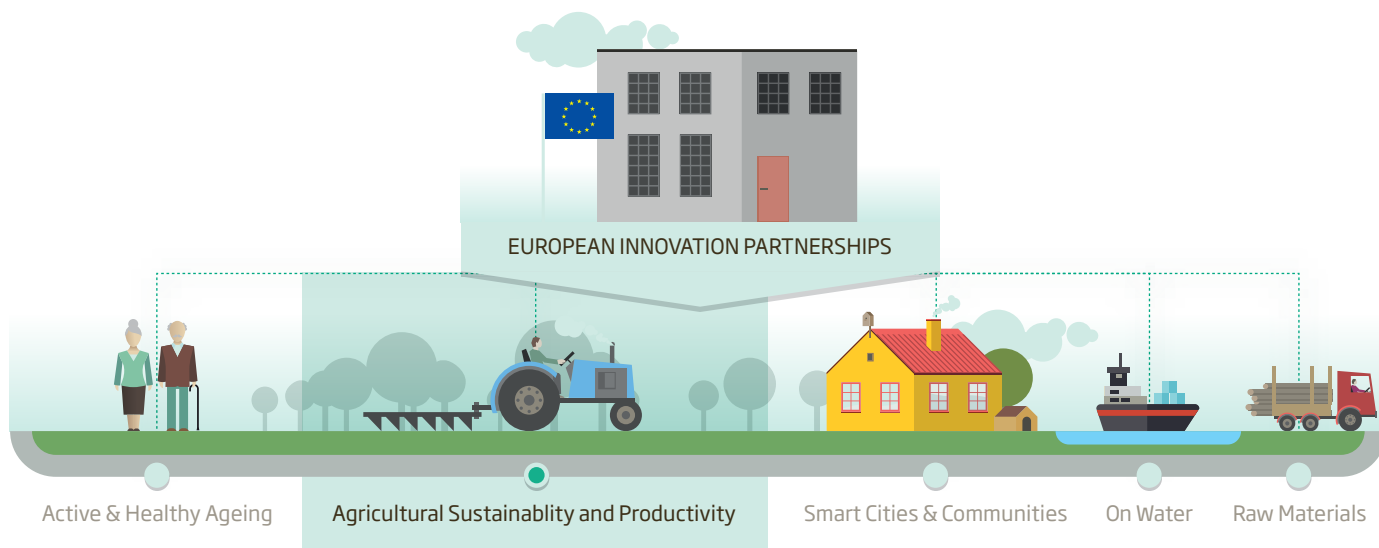
The change is not only about budget, it also involves the way we work. We are developing so-called "multi-actor approaches" and "thematic networks" to ensure interactions between researchers, businesses, farmers/producers, advisors and end-users. With this, we want to stimulate the joint creation of knowledge and the exchange of knowledge in research and innovation projects. This in turn will support innovation-driven research, taking into account the existing diversity of farming and agro-food systems throughout Europe's various regions and making the most of it. It is crucial to build bridges between laboratories and fields, between academics and farmers.

The EIP-AGRI is a concrete example of this new approach. It goes beyond speeding up the transfer from laboratory to practice and focuses on setting up real partnerships - using bottom-up approaches and linking farmers, advisors, researchers, businesses, and other actors in practical innovation projects.

With their Rural Development Programmes, Member States can support innovation projects on the ground, implemented by EIP Operational Groups. We are creating an EIP-network supported by a website, which we hope to turn into a reference one-stop-shop for agricultural innovation in the EU, providing information on research and innovation projects, sharing results and good practices, as well as funding opportunities for innovation action.

On the next 40 pages, you can read more about how all of these new elements will play together and how you and your organisation can get involved in developing a strong innovation culture in EU agriculture.

Dacian Cioloș
European Commissioner



The EIP-AGRI: what it does and how it works

Towards a smart, sustainable and inclusive European economy

The EIP-AGRI is one of the five European Innovation Partnerships that were launched to boost the EU's capacity to innovate. The EIP-AGRI focuses on agriculture and forestry, whereas the other EIPs target issues related to active & healthy ageing, water, raw materials as well as smart cities & communities. The idea behind the EIPs is that they should be challenge-driven, focus on societal benefits and rapid modernisation and provide favourable conditions for cooperation between research and innovation partners in order to achieve better and faster results.

An EIP for agriculture and forestry, bringing the lab to the field

Each EIP has tailor-made goals. EIP-AGRI has been set up as a new tool to help create an innovation culture in the agricultural and forestry sector in view of becoming more productive and sustainable and the main operational objective to achieve this is to build bridges between research and farming practice.

Networking will play an immense role in the EIP-AGRI. Not because it is fashionable but because it is the right tool to deliver the right results

when improving cooperation and knowledge exchange is one of the challenges. The key to its success is to involve as many actors from agriculture and forestry as possible but also to get the right kind of people on board. The EIP-AGRI network is not only for farmers and other rural actors: the doors are also wide open for businesses, NGOs and – of course – researchers and scientists. The idea is to break down cultural, geographical and professional barriers and allow information to

flow between all of these actors so that innovative techniques and solutions can be developed and transferred.





A network supported by EU policy

The EIP-AGRI is about creating synergies between existing policies, most notably the Rural Development policy and the EU research and innovation policy Horizon 2020. The EIP-AGRI focuses on forming partnerships, using bottom-up approaches and linking actors through different types of interactive innovation actions such as the establishment of Operational Groups under Rural Development Programmes, multi-actor projects under Horizon 2020 as well as EIP-AGRI Focus Groups.

But again, the EIP-AGRI network is not a closed club and all innovation projects and actors are welcome – regardless of where they get their funding.

Rural Development – one cornerstone

As Member States’ and regions’ Rural Development Programmes are being adopted, funding will come on tap for EIP innovation projects that look at tackling practical issues and opportunities. These projects will be carried out by Operational Groups. The composition of an Operational Group may vary from project to project according to the project pursued – they can be made up of farmers, farmers’ organisations, researchers, NGOs, businesses or anyone else who has something to bring to the table in terms of ideas and solutions.

Horizon 2020 – another cornerstone

Within the EU research and innovation framework, Horizon 2020, around EUR 4 billion have been allocated to “Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy”. Innovation can be achieved through research, but very often it is also achieved through the collaboration of different types of people with different experience and knowledge and people from different professional backgrounds. So beyond the funding of applied research to provide the necessary knowledge base for innovative approaches, Horizon 2020 also funds practice-oriented formats such as “multi-actor approach” and “thematic networks” where end-users such as businesses, farmers/producers, advisors will be included all along the project’s lifespan – from idea to testing to dissemination – a concept which is in line with that of interactive innovation projects. ●



More information:
http://ec.europa.eu/europe2020/index_en.htm
www.eip-agri.eu



Success story of disseminating research and innovation results to farmers

Project HighCrop – Higher productivity in Danish organic arable crop production

HighCrop was a research, development and demonstration project regarding higher productivity in organic arable farming. One of the aims of the project was to identify and close the knowledge gap between organic scientific research and organic farmers practice.

In Denmark the implementation of agricultural research is primarily performed by the advisory service, and this advantage is used in many projects, including in the one described here. A large part of the HighCrop project was research-based, but this article will mainly focus on the parts of the project carried out by the Knowledge Centre for Agriculture, that is to say the implementation part. The Knowledge Centre is the national part of the Danish Agricultural Advisory Service, and in the project they worked in many different ways to implement knowledge in practical organic farming.

Farmers' barriers for using research knowledge

Although we know that results from research are used in practice, it still seems to be the case that part of the research results are not well implemented. In the HighCrop project, farmers' barriers for implementing research results were investigated. A few main principles for long term increase in yield regarding manure, precrops and weed control were presented to farmers in interviews, the aim was to find out if these principles were used and if they were not; what were the barriers stopping them from being used in practice. For the interviews, the farmers were selected by advisors; they were all arable farmers with their main income from the farm. The in-

terviews themselves however, were conducted by the researcher. This resulted in very useful networking between farmers and researchers.

New tools

In the project, two new tools were developed for use by farmers and advisors.

Firstly, an Excel tool predicting the long term effect (2-6 years) of choice of crop, precrop, tillage and weed control on yield, weed occurrence and carbon content in the soil. The farmer gets a very good idea of the tendency of the effect of his choices. For the farmer, the long term effects are usually difficult to take into consideration and



often the short term benefits will cost in the long term. The tool's calculations are based on knowledge from research combined with experience from skilled organic advisors. Although partly based on scientific data, the user-friendliness is high. Training in using the tool is included in education of advisors and agronomy teachers in the Organic Academy, which provides education in organic production specifically targeted advisors and educators. Farmers can use the tool themselves, but it is best used together with the advisor or in a group of farmers, because it unavoidably will lead to very fruitful discussions.



The other tool deals with the farmer's overall strategy on farm. It is a 'picturebox' with five different types of cards.

- 1 Aims/future cards - what are the future aims for the farm and the farmer.
- 2 Four diagram cards - large effect, small effect, easy to do, hard to do. These cards are placed the table.
- 3 Action cards - cards with professional recommendations
- 4 Precondition cards - what are the necessary preconditions for the success of an action.
- 5 Position cards - the farmer's desire to follow the recommendation. The picturebox can be used to make the aims for the farmer clearer so it is possible to make a better strategy for the farm, and make the implementation of professional recommendations more focused. The picturebox has been used by farmers alone or in groups.

Demonstration and dissemination

Demonstration and dissemination were made through field trials, education, open field days, videos and fact sheets.

Organic field trials on organic farms are one of the most important ways for the advisory service to translate research results into practical use. During this project, the field trials included sowing time for precrops after harvest, the effect of manure placement on weed/crop competition and the yield stability of lupine/barley mixture. The work in the Danish field trials is always performed by skilled trial personnel and the results are always published before Christmas, making it available for the farmers to use in the next season. In the project, during the growing season, farmers and others who were interested were invited to visit the trials. Open field days were held in the long term crop rotation trials at the Aarhus university as well. Here the researcher gave information about the trials and the results from the project. We included demon-



stration of new technology, hoeing machines with cameras, drones and robots for weed control on the open field days.

Education of advisors

In Denmark advisors play a key role in dissemination of new knowledge. It is important that the advisors have knowledge of ongoing research and that they have possibility to comment on the research during the project. For this purpose, there were special courses for organic advisors as part of the project. The education took place in the field trials and by the researchers, not only from this project but also from other relevant projects. In this way the advisors could use knowledge from the project before it is published. This results in a faster dissemination from researcher to farmer.

These different approaches to dissemination are often used in other projects performed by the Knowledge Centre for Agriculture. In smaller projects than HighCrop only some of the activities will be used. ●

The project HighCrop has two main hypotheses;

- 1 Higher yields and reduced environmental impact can be achieved by introduction of energy crops and improved management of nitrogen (N) in catch crops, green manure and crop residues.
- 2 Low yields in practical arable organic farming are caused by a knowledge gap that requires new strategic management tools to overcome it.

Partners: Aarhus University, DTU-Risø, Knowledge Centre for Agriculture, Organic Denmark. Project leader: Professor Jørgen E. Olesen, Aarhus University.

Funded by Organic Research, Development and Demonstration programme (Organic RDD).

Videos from HighCrop: Picturebox

<http://video.dlbr.dk/video/9195474/praesentationsvideo-for-highcrop>

Hoeing machine demonstration

http://www.youtube.com/watch?v=uh_JhKILGrE

General website

<http://agro.au.dk/forskning/faciliteter/httpwww.okoplatform.dk/oeko-planter/highcrop-organic-rdd/>

Innovation with farmers in the driver's seat

Field labs in the "Duchy Originals Future Farming Programme"

The Duchy Originals Future Farming Programme provides innovation support services to bring farmers and researchers together in 'field labs' to get the best of each others' knowledge and experience. It helps farmers across the UK reduce their inputs and improve productivity in a healthy and sustainable way. The programme, initiated and run by the Soil Association, supports innovation in line with organic principles, and actively seeks to involve non-organic as well as organic farmers. By doing so, the Programme puts farmers in the driver's seat of field-based practical innovation.

Field labs for boosting innovation

The field lab approach brings farmers together to discuss a shared problem and to work with a facilitator and an academic researcher. In this way, farmers are helped to develop concrete in-field experiments to test for sustainable solutions on their land. The field labs help farmers to learn practical research skills that make the most of the time and money they already invest in trying new approaches. This cooperative approach recognises and supports farmers as innovators, building their skills as citizen scientists as well as enabling researchers to learn from the farmers. Farmers generate the topics and ask the questions. The researchers give the opportunity to the groups of farmers to test for solutions in a thorough yet pragmatic way.



'Do It Yourself' trials to identify real gaps

The farmer field school approach is an internationally tested method for bottom-up, participatory innovation. It has been adapted for the United Kingdom where many farmers have been to college or university, have access to research and feel more limited by time and knowledge than by capital. The Soil Association brings farmers together with a researcher and facilitator to focus on particular research questions. Farmers then meet as a group up to four times during the trial to track progress and compare notes.



The aim is to work out effective practical approaches to tackling a problem in sustainable farming. Farmers learn how to do more effective 'Do It Yourself' trials and identify real gaps where academic research could make a crucial difference. The major difference between a field lab and an advisory meeting or farm walk is that farmers test solutions directly rather than just discussing the issues or relying on standard answers.

Cooperation and organisation as key issues

The programme started in 2013 and is funded by the Prince of Wales's Charitable Foundation. It is delivered by the Soil Association in partnership with Duchy Originals from Waitrose and the Organic Research Centre (ORC). The field labs are open to all farmers and growers. The Soil Association contributes, through the Programme, the time of the researcher and facilitator and up to £500 (EUR 600) for other costs which the field lab may incur. Part of the facilitation is to help find other farmers/growers interested in similar areas and questions. The field labs are complemented by a dedicated research fund that is led by farmers: they set the priorities, shape the projects and, alongside scientists, peer-review the proposals. The fund supports projects and practical studies that have a demonstrable research impact and lead to on-farm practical advantages.



Recognise farmers as innovators

Response by farmers has been positive. During the first two years 450 farmers have participated in the field labs. 'Reducing antibiotics in dairy cows' and 'Liver fluke field based risk assessments' are just two out of the 22 topics covered so far. 2200 farmers have been involved at related technical events. A total of £111,000 (EUR 136,000) has been granted in seven practical research projects.

Research Manager Kate Pressland says "Recognising farmers as innovators in combination with provision of substantial active innovation support services are key points of a successful approach." ●



More information on the project is to be found via <http://www.soilassociation.org/fieldlabs>



Agricultural Knowledge and Innovation Systems towards 2020 – An orientation paper on linking innovation and research



Standing Committee on Agricultural Research - Strategic Working Group on Agricultural Knowledge and Innovation Systems (AKIS)

An article by Anne Vuylsteke and Krijn Poppe

In view of the deep economic crisis and the future challenges of sustainably feeding 9 billion people in 2050, innovation is high on the agenda. Innovation and adopting new ways of working is now extremely important for the Agricultural Knowledge and Innovation Systems (AKIS) to be able to provide an effective and efficient response.

The Standing Committee on Agricultural Research (SCAR) is mandated to play a role in the coordination of agricultural research efforts across the European Research Area. This includes questions of advisory services, education, training and innovation. The SCAR set up a Strategic Working Group with participants from the European Commission and the Member States (both civil servants and researchers or extension workers) to reflect on AKIS. Since

2010, the group has published two reports.

The first report shows that AKIS is a useful concept to describe a system of innovation, with emphasis on the organisations involved, the links and interactions between them, the institutional infrastructure with its incentives and also the budget mechanisms. AKIS differ between countries, regions and sectors and change over time. These occurring changes, however, do not guarantee that the AKIS are able to answer the challenges facing them. There is a particular need for improving the interactions between the parts of the AKIS (extension, education, research and support services) as they react to different incentives.

The focus of the second report is on the implementation of the European Innovation Partnership

'Agricultural Productivity and Sustainability' (EIP-AGRI) in relation to Horizon 2020. Its analysis shows that governments can stimulate so-called



'interactive innovation' by implementing the EIP-AGRI through multi-actor groups that work in a participatory way. This can be done through an instrument portfolio that gives incentives for research,



development and innovation and at the same time stimulates knowledge exchange and adoption of innovation and technical application in the production process. It is necessary to give special attention to the activities of facilitators and innovation brokers, and at the same time, the input and knowledge of farmers must also be given value. Furthermore, governments should give Operational Groups the opportunity to develop cross-border interactions and invest in AKIS-subsystems that have been underdeveloped in certain specific national or regional situations.

But research is not a synonym of innovation, and governments have other instruments for promoting innovation. Extension and education, fiscal measures, credit guarantees, innovative procurement, inducements such as prizes and other incentives can help too. This implies that in addition to a science and research policy, it makes sense to have an innovation policy. This should be on a European-wide scale which goes beyond the research

networks and stimulates a wide participation of relevant actors. The interactive innovation approach will require a shift in the mindset of the actors involved and especially the researchers. Governments should therefore incentivise research to be responsive to the needs of innovation processes, through actions within research policy and the functioning of research institutions.

The research policy should for example create evaluation criteria to stimulate transdisciplinary and interactive research, involve practitioners in research funding and evaluation processes, stimulate exchange of practices between stakeholders, create funding for projects that involve science and practice on an equal footing and establish an easily accessible database for high-quality, non-academic publications and articles.





Research institutions should develop targeted training courses to enhance skills for effective science-practice interaction, create specialised centres and establish a database with information about institutions, methods, tools, publications and trainings on interactive research and, finally, include the assessment of a researcher's (non-academic) societal impact into the overall evaluation of his/her performance.

Finally, interactive innovation approaches could also benefit from modern ICT support, just as ICT is changing working processes and collaboration in the rest of the daily life. There is great potential for using existing social software tools and platforms for communication, interaction, knowledge sharing, maintaining information available and, therefore, for stimulating multi-actor innovation. It is not possible to predict which ICT tools will be best to use in a given situation, but focus should be on the end-user and the purpose of the network. Regular updates in the content of the ICT tools and selecting first movers, ambassadors etc. could play an important role in a successful application. ●



More information
EU SCAR (2013), Agricultural Knowledge and Innovation Systems towards 2020 - an orientation paper on linking innovation and research, Brussels.



Krijn J. Poppe is a business economist working in the research management of the Agricultural Economics Research Institute (LEI) of Wageningen University and Research Centre, the Netherlands. He co-chairs the collaborative working group AKIS (Agricultural Knowledge and Innovation Systems) of the EU's Standing Committee on Agricultural Research (SCAR).

Anne Vuylsteke is policy advisor for research and innovation within the Department of Agriculture and Fisheries of the Government of Flanders. Since 2013, she is also the co-chair of the SCAR strategic working group on Agricultural Knowledge and Innovation Systems (AKIS 3).





Getting involved in the EIP-AGRI

We have asked some of the organisations that are already active in the EIP-AGRI why and how they are working with the EIP-AGRI:



Tania Runge - Copa-Cogeca

From the very beginning Copa-Cogeca recognised the potential of European Innovation Partnerships in bridging knowledge transfer between science and practice and fostering the uptake of innovative solutions. We have encouraged our members - 72 national members representing farmers' unions and agri-cooperatives - to make best use of the possibilities offered. It is vital to strengthen innovation in the agriculture sector as it is the driver for future success in business, whether through new technology, improvements to the organisation and management of production processes, or new business models. Our organisations are heavily involved in national/regional discussions on how best to integrate the European Innovation Partnership

concept in the Rural Development Programmes.

"Furthermore, Copa-Cogeca very much supports the shift in the European research programme Horizon 2020 to an approach better focused on needs and practical solutions that will boost innovation in agriculture."

Tania Runge is Senior Policy Advisor in Copa-Cogeca, contact person for research and innovation.

It gives the farming sector the possibility to participate in multi-actor projects or thematic networks. Working back to back with scientists and other actors along the value chain will allow farmers and their agri-cooperatives to better address the numerous challenges they face. It is essential then to ensure that the selection of innova-

tion topics is driven by the demands of end-users and that farmers are involved from the beginning in the innovation process.

We are convinced that EIPs can facilitate cross-border work and collaboration - be it of administrative nature or sectoral - to steer the innovation process in view of generating new knowledge, supporting competitiveness of European farm holdings and food businesses with well skilled people in the agri-food sector.

copa*cogeca
european farmers european agri-cooperatives

Bram Moeskops - IFOAM

IFOAM EU welcomes the steps the EIP-AGRI has taken to improve communication between science and practice, which is essential for accelerating the shift towards sustainable agriculture. The EIP-AGRI will be successful if it employs a holistic approach that connects food production based on ecosystem services with responsible food habits. Organic farming offers a good basis for engagement in interactive innovation processes. Traditionally, organic farmers have actively had to seek new ways of innovating, because the 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.

"Now, with the new approach of the EIP-AGRI, organic farmers have a chance to become active partners for sustainable innovation in rural areas."



Bram Moeskops is Scientific Coordinator at IFOAM EU, the umbrella organisation of the organic food and farming sector in Europe. He is responsible for the coordination of TP Organics, the European Technology Platform for Organic Food & Farming, which coordinates the input of the sector to EU research & innovation policy.

IFOAM EU hopes that the EIP-AGRI will continue to strongly involve NGOs as it did with the High-Level Steering Board. Indeed, the engagement of the whole civil society is needed to make the EIP-AGRI successful.

There are numerous ways that you and/or your organisation can get involved in the EIP-AGRI. Visit the EIP-AGRI website to find out more about:

- How to participate in a Focus Group
- How to propose a topic for a Focus Group
- How to share ideas and projects within the network
- How to look for project partners
- How to start an Operational Group with Rural Development funding
- How to voice needs for research

Trees Robijns - Birdlife

BirdLife expects a lot from the European Innovation Partnership since we see the necessity for real innovation on the ground in order to address the pressing environmental problems that face Europe today. Europe's farmland biodiversity is in a crisis that poses a real challenge for our long term capacity to produce. Biodiversity is an important element in the mix of challenges facing rural areas and to be able to find long term sustainable solutions for people living in these areas, including farmers, we need to develop new ideas and change our strategies to include more innovative approaches to tackling biodiversity loss.

BirdLife and its Partners work every day to find new and innovative ways to preserve and restore Europe's biodiversity in harmony with healthy and productive farming systems in a thriving rural landscape. Often we are not talking about technical innovations, since we have a lot of these answers already, but social innovation to make sure that the good practices are more widely adopted and new forms of cooperation are established. Too often in the past, innovation has taken place in isolation.

"Partnerships are excellent places to exchange and spread ideas so that more people and more actors are a part of the solutions to our most pressing problems."



Trees Robijns is EU Agriculture and Bioenergy Policy Officer with BirdLife Europe. Within Foudation BirdLife Europe Ms Robijns follows the issues of CAP reform, sustainability of bio-fuels and other agriculture related conservation issues.

BirdLife and its partnership are enthusiastic about the European Innovation Partnership and hope that we will develop lasting relationships with all parties in this initiative that will allow us to look towards the future with a more inventive and solution oriented outlook. ●



Innovative multi-actor project recovers wine-growing area in Galicia, Spain

A wine-growing area in Galicia (Spain) was about to disappear due to difficulties concerning profitability and the lack of recognition of local grape varieties. In 2006, the Local Action Group (LAG) started a reflection process to find alternatives to improve future prospects for the winegrowing area. Several stakeholders met to collectively analyse the situation and as a result, a private foundation based in the area called the Juana de Vega Foundation, took the lead and offered the possibility of funding for an innovative action in support of the wine sector in the area. The CSIC-Viticulture Research Group from the Spanish National Research Council came up with a proposal for an interactive innovation project: 'the Viticulture project'. The project was launched by Consejo Superior Investigaciones Científicas (CSIC), 8 farmers, 3 advisory organisations, the LAG and the Galician government. However, while examining which locations were more suitable for wine production and which of the grape varieties traditionally growing in the area would be the best for winemaking, the project partners soon realised that "emotional intelligence" was key to ensure a fruitful cooperation in this diverse group.

The Viticulture project started with a common interest between the private Foundation Juana de Vega wanting to improve the formation (and the competitiveness) of companies in the Galician food and agriculture sector and a group of vine growers and owners of vineyards who wanted to recover the vine growing area of Betanzos. The Foundation granted funding for the Viticulture project that the Spanish National Research Council proposed to rescue the vineyards of Betanzos.

Getting everyone on track

The research team, the winemakers, advisory organisations, the Galician Government and others met first dur-

ing a kick-off meeting and then during several follow-up meetings, field trips and interviews.

José Luis Santiago Blanco, tenured scientist at Misión Biológica de Galicia - Spanish National Research Council (CSIC) explains: "During the project, it became clear that the needs and demands from the different actors didn't always match at first sight. As often is the case, prejudices needed to be overcome to make the project a success. The researchers were clear that the farmers did not have to pay to participate in the project. But at the same time they were afraid that the vine-growers would blame them for any problem. The vine-growers themselves were afraid the researchers would kill their vines and wanted guarantees. What's more, for some of the participants, it was hard to understand how much



José Luis Santiago Blanco from Misión Biológica de Galicia-Spanish National Research Council (CSIC) gave a presentation on 27 February 2014, during the workshop 'Establishing Operational Groups under Rural Development Programmes' in Lisbon, Portugal. Different actors from Greece, Malta, Portugal and Spain attended the workshop.

More information on the project can found at www.mbg.csic.es/vitis

time would be needed for research." But fortunately, with "emotional intelligence" all challenges could be tackled. That is to say, by listening carefully to all the needs and worries of everyone involved,, the different approaches and perceptions were reconciled with the possibility of paying the farmers a rent for each vine used in the project, maintenance expenses covered by the Foundation and a contract proposal by the researchers for a technician to be in charge of all vines.

A happy ending

Four years later, the research group completed the study on the different vine varieties. They appointed the most appropriate wine-growing areas and the most suitable varieties for high quality winemaking in this Galician area was chosen. The results led to the inclusion of two varieties in the Spanish Official List of Vine Varieties with Commercial Interest.

Innovation: trigger to success

The project proved to be innovative on different fronts. The interactive innovation project was innovative in itself at that time: researchers, farmers and governmental institutions working together funded by a private foundation. The results of the projects led to the legalisation of the vineyards and the commercialisation of the wines.

Farmers learned new techniques for crop management to increase the wine quality and they are now well aware - and proud - of the quality and exclusiveness of their wines. New wineries have even been set up.

And that is not all, soon there will be a quality label for these wines and a tourist route linked to the area.

Tips for researchers in future Operational Groups

José Luis Santiago Blanco has some useful recommendations to share for researchers who want to get involved in future Operational Groups under Rural Development Programmes. "Previous contacts in the rural area are very welcome: not everybody is able to develop these kinds of projects. It goes without saying that experience, background and great knowledge are key for the researcher. Be aware that you need time to gain the farmers' trust by making farmers part of the project, giving them support and the willingness to solve any question or doubt they may have, you are already a huge step closer. Talking about your project on TV, radio, in the press, at workshops and conferences adds to the sense of pride of all actors and thus the success of your project." ●



Boosting opportunities: Innovating Water in Europe



Robert Schröder works as a national expert in the 'Protection of Water Resources' Unit of the Directorate General for the Environment of the European Commission. In this position, Mr Schröder is responsible for the development of the European Innovation Partnership on Water Efficiency.

An article by Robert Schröder

Alongside the EIP-AGRI another four EIPs have been set up by the European Commission: Active & Healthy Aging, Smart Cities, Raw materials and Water. One of the first EIPs in place, EIP Water, started its operational phase in December 2012.

The European Innovation Partnership (EIP) on Water aims to boost opportunities for innovation in the European and global water sector. It facilitates the development of innovative solutions to deal with water challenges, contribute to economic growth and to support the implementation of water policy. Furthermore, it is active in developing concrete action to remove persistent innovation barriers.

Innovation in the field of water of course has many links to agriculture. There are many opportunities for synergies between the activities of the EIP Water and the EIP on Agricultural Productivity and Sustainability. At the same time, overlap between the two partnerships should be avoided, which is why the EIP on Agriculture is looking

at water related innovation issues at farm level, whereas the EIP Water (in relation to agriculture) focuses on innovation in water management in rural areas. However, as it is not always possible to make such a strict division, the European Commission ensures coordination of the two partnerships and invites stakeholders to cooperate to ensure that innovation can play its role to support both water and agricultural objectives.





In December 2012, the EIP Water Steering Group selected eight priority areas, which provide the framework for the activities of the EIP Water. Water reuse and recycling, water and wastewater treatment, including the recovery of resources, as well as flood and drought risk management and ecosystem services are among the priority areas with the strongest direct links to agriculture.

At the centre of the EIP Water are entities known as Voluntary Multi-stakeholder Action Groups. The partners of these groups should be from across the supply chain of innovation. They work towards developing concrete innovative solutions which respond to a clear demand, can be applied in practice and can be replicated inside or outside Europe. They support the implementation of water (and other) policies and, where relevant, contribute to economic growth. Action Groups do not receive any direct EU funding and are selected through regular calls for expressions of commitment. Only excellent proposals with the most potential are

selected, to ensure that Action Groups will be associated with high quality activities. After two calls for expressions of commitment, 25 Action Groups have been selected on the basis of strict quality criteria and excellence. One of the selected Action Groups is WIRE, which brings together 48 stakeholders involved in irrigated agriculture, water reuse and food security. They will work on innovative approaches in irrigation to deal with the effects of climate change and will make the link between the EIP Water and the EIP on Agriculture.

Other Action Groups with strong links to agriculture are: "Industrial Water Re-use and Recycling", "Anaerobic Membrane Bioreactor for Recovery of Energy and Resources" and "ESE - Ecosystem Services for Europe". Their activities, as well as the activities of all Action Groups including contact information, can be found on the website of the EIP Water - the "EIP Water Online Marketplace" (www.eip-water.eu).

This online platform is an important element of the EIP Water and

is its main communication channel. It was launched in August 2013 as a source of information about the EIP Water activities and on-going work. It is a key tool to bring together supply and demand of water related innovations across borders. Its slogan is "Matchmaking for water innovation" and it has a strong focus on supporting its over 1.000 registered users in identifying the right partners across the entire innovation value chain. Together with its monthly Newsletter with over 2.500 subscribers, the EIP Water also uses its Marketplace to disseminate water innovation related news and events. ●

EIP Water
Boosting opportunities – Innovating water

For more information, visit www.eip-water.eu or contact them at ENV-EIP-WATER@ec.europa.eu



EIP and rural development: Innovation is all around us...

An article by Mike Mackenzie

Innovation is not just a word

Or is it? When it comes to discussions about policy, the word sometimes spreads faster than the reality. And herein lies a danger. Words have a tendency to “go slack” and lose their meaning; and indeed, if “innovation” becomes a sticker which is casually stuck onto anything thought worthy of attention, the word will lose its power to fire the imagination and inspire action.

This is one reason why, following the recent reform of the EU’s rural development policy (the so-called “second pillar” of the Common Agricultural Policy, or CAP), it is so important that the promises of support for experimentation and development are stiffened with practical detail and money.

Rural development policy has “innovation” anchored within itself as one of its six priorities. The focus is broader than that of the EIP-AGRI, as the innovation sought is not only

in the agri-food sector but also in forestry, other rural businesses and the delivery of public services. However, the policy certainly also stands firmly behind the EIPs drive to use innovation as an engine to lift agricultural productivity while lightening the pressure on natural resources.

The innovation priority is not an empty slogan: the legislation (primarily Regulation (EU) No 1305/2013) also sets out a range of measures (types of investment / activity) to which EU Member States or regions (according to the country’s governmental structure) may allocate funding in their Rural Development Programmes (RDPs) to give the EIP-AGRI a brisk and favourable wind.

In fact, depending on how a given Member State designs its RDP, EIP-AGRI Operational Groups - i.e. groups of various types of partners which develop and implement

projects for trying out new ideas - could have access to many rural development measures, whether or not these explicitly mention the EIP-AGRI. Good examples are the measures related to knowledge transfer, use of advisory services, and investments inside and outside the farm sector.

“One measure which explicitly declares its “pro-EIP-AGRI” identity is the measure Co-operation. Designed to help individuals, businesses and other entities to work together in various ways in rural areas (for the sake of economic, environmental or social goals), the Co-operation measure can assist EIP-AGRI Operational Groups in various stages of their work.”



Co-operation measure is set out in article 35 of the Rural Development regulation



Mike Mackenzie is dealing with the fundamental principles and structure of the EU's rural development policy in DG AGRI. His particular responsibility is the role of this policy in supporting care for the environment, stimulating technological development and encouraging various forms of "collective activity", including the development of short supply chains and local markets.



First, funding could be made available to help Operational Groups to get off the ground and to fully develop their project plans (from a broad starting outline). The relevant costs could be those related to recruitment of members, to theoretical work and to general organisation, and could potentially be incurred through the use of an innovation support service / innovation broker.



Secondly, the Co-operation measure could cover execution of an EIP-AGRI project itself. Even where certain project costs could also be covered by other rural development measures (e.g. certain investments), Member States would have

the option of covering those costs directly through the Co-operation measure - rather than spreading reimbursement around different measures - if doing so lightens the administrative burden.

On this basis, one could dream up any number of possible projects to cite. But an important point is that these need not be large and complex. If a group of farmers - perhaps working with a research body - simply wished to adapt a new farming technique which had appeared in one part of the EU to the particular conditions of their area, they could get financial help to do so through rural development policy and within the EIP-AGRI: help to organise themselves, to fully develop their project and to cover key running costs. As all these possibilities are put to use over the next seven years, a balance must be struck. On the one hand, all financial support paid through rural development policy is subject to rules, and these must also be applied to EIP-AGRI projects. If this is not clearly done, experience of past publicity surrounding

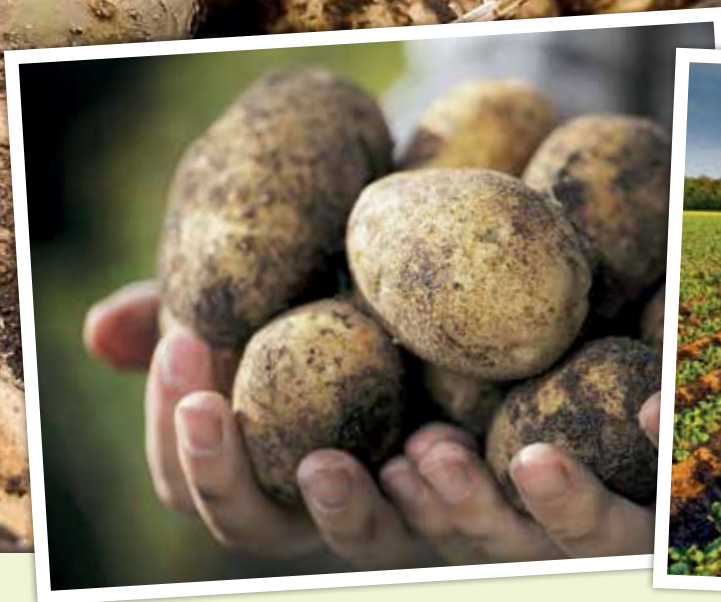
CAP funding hints that critical and colourful media stories could be the result. On the other hand, a narrow and simplistic focus on the rule-book will not deliver results. Much like the LEADER approach, which continues to channel rural development funding into projects/strategies which are thought up at local level and not based on any pre-existing template, so also the EIP-AGRI requires Member States to be just a little "adventurous" in granting support (though within the rules). The success of LEADER shows that this balance can indeed be struck.

The scene is set for rural development policy to make a very solid contribution to the EIP-AGRI. In this context, there is no need for the word "innovation" to go slack and lose its force. Rural development policy offers real possibilities and money; it is now up to Member States to use them. ●

Estonian potatoes and automatic weather stations: beating the late blight disease

With more than 50 million tons produced annually, potatoes are an important crop in the EU. However, it can be quite vulnerable to diseases such as the potato late blight, which can lead to yield and quality losses that can exceed 50%. This is a problem that also affects Estonian farmers, where potatoes are one of the key crops. To control the disease, it was necessary to increase the number of fungicide applications during the season. But more fungicides also means an increased risk to the environment and to human health, and higher production costs. The Estonian farmers cooperative CA Talukartul wanted a solution that could help them avoid increasing fungicide use. Yet, it is quite a complex process to sort out when and when not to apply fungicides: the biology of the pathogen, different climatic conditions, variety resistance, fungicide properties etc., can all affect the potato blight. By setting up weather stations that give information about the weather conditions in the field, farmers were able to estimate better whether or not they needed to react with irrigation against drought or fungicides to protect their crops against the late blight. This has resulted in less use of fungicides, better quality of the crops, less loss and therefore more revenue for farmers. During the farming trials for fungicide applications in 2011 the results were positive: an additional income for farmers ranging from EUR 88 /ha to EUR 1373/ha. An average additional yearly income for farmers throughout the whole project period of 2011-2013 was 242.2 EUR/ha.





Partner up

Based on pre-existing regular contacts between the researchers from the Jõgeva Plant Breeding Institute (PBI) and farmers' cooperative CA Talukartul, setting up the project was not that hard. So they started a three-year cooperation project led by Mati Koppel from Jõgeva Plant Breeding Institute (PBI). Combining the farmers' needs and the experience of Jõgeva PBI using Decision Support Systems was a good basis to find a reliable, simple and less time-consuming solution for farmers to time fungicide treatments.



More information on the project can be found at www.etki.ee

Get to work

By protecting the potato crops from place-specific potato blight and setting up a monitoring system for irrigation, the quality of potatoes should increase and their value be optimised. The project explores a protection system to prevent potato blight with the help of automatic weather forecast centres that are situated in the fields, as well as by observing the need for irrigation. One of the project activities was to build thirteen automatic weather forecast observatories in potato fields all over Estonia. The recordings via the stations are automatically saved and are available on the internet for all of the project's participants.

Find a common language

The project set up field-based weather forecasting adapted to Estonian conditions: selection of models, resistance of varieties, selection of fungicides. But unfortunately the researchers and farmers did not speak the same

language, meaning that the models for timing fungicide applications were too complicated and took farmers too much time to understand and therefore to apply. But they did find a simple and fast solution by forwarding messages through the collaborative internet tool Google Docs. "Finding a common language where practice and research understand each other was, and still is, essential to this project," says Mati Koppel from Jõgeva PBI. "Keeping the information simple and transparent by using recommendations, proposing suitable fungicides and at the same time you had farmers filling in what they actually used at that specific moment. It was simple and very efficient to keep track of things. Farmers learned how to use everything by doing it together. They were satisfied that they had learned to use the system independently throughout the project." ●



Horizon 2020 – general structure

Horizon 2020 focuses on three overarching priorities: excellent science, industrial leadership and the tackling of societal challenges. Within the priority “societal challenges” there is a focus on 7 different challenges such as “Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy” and “Health, demographic change and well-being”.



Expanding our Horizons

With a budget that has almost doubled, agricultural research has been put firmly on the agenda in the EU’s research and innovation framework, Horizon 2020, where innovation has also been given a much stronger accent. In this section we take a closer look on what this actually means in practice.

Horizon 2020 – general information

Horizon 2020 is the new EU funding programme for research and innovation running from January 2014 to December 2020 with a budget of approximately EUR 80 billion. Being a core part of Europe 2020 this programme

- responds to the economic crisis to invest in future jobs and growth;
- addresses people’s concerns about their livelihoods, safety and environment and;
- strengthens the EU’s global position in research, innovation and technology.

We have known for some time now that the challenge for farming is to produce more with less. But finding a remedy to this, is somewhat newer: there is a need for holistic solutions that will target food security, climate change and environmental objectives simultaneously as no single research path will be sufficient in ensuring sustainable food security. This is why Horizon 2020 supports and facilitates getting a large array of research areas on-board to develop agro-food systems which are resource-efficient, diverse and competitive, equipped to deal with pest and disease related issues in a sustainable manner, adapt-

ed to climate change and contribute to its mitigation and optimised for the delivery of public goods. As a programme integrating research and innovation funding, Horizon 2020 provides a coherent approach that will allow innovative projects to be supported from laboratory to commercial exploitation or to practical use. In practical terms this means that the development of a sustainable and competitive agri-food industry will be encouraged by the creation of new knowledge through funding basic and applied research, by fostering innovation in the agro-food industry, by support-

ing close to end-user and market innovation activities (such as prototyping, testing, demonstrations, pilots, product validation and market replication) as well as demand side approaches, such as pre-commercial procurement, public procurement of innovative solutions and inducement prizes.

There is also a reinforced effort for participation of SMEs in Horizon 2020, which stimulates SME participation across the whole programme. A dedicated SME-exclusive instrument is introduced in order to support innovation among the SMEs and therefore allow them to put forward the most innovative ideas and help them to grow and expand their activities.

And finally, co-creation of knowledge and knowledge exchange in research and innovation projects is stimulated through “multi-actor approaches” and “thematic networks”

There is a specific call for SMEs related to resource-efficient eco-innovative food production and processing (SFS 8 2014) that can be found on <http://ec.europa.eu/research/index.cfm>.

Multi-actor approach, research involving the agricultural community

The multi-actor approach requires that end-users and multipliers of research results such as farmers and farmers' groups, advisors and enterprises should be closely involved throughout the whole project period. This should lead to innovative solutions that are more likely to be applied in the field because those who need the solutions will be involved right from the start: from de-

fining the questions, to planning, to implementing research work, to experiments and right up until possible demonstrations and dissemination.

Thematic networks, unlocking and exchanging knowledge across the EU

The thematic networks should again involve a range of actors from science and practice, along the same lines as the multi-actor approach. These networks aim to:

- collect existing scientific knowledge and best practices on the chosen theme: what do we have/what do we need to facilitate the use of the results.
- develop end-user material such as info sheets in a common format and audio-visual material. The material should be available long-term and easily understandable and accessible to end-users. It may serve as input for education and for a research database.

The 2014 calls for projects include the development of four networks around specific themes that are proposed by the applicants themselves. These networks should focus on best practices and research results that can be put into practice soon, but have not yet been sufficiently tested and adapted to practice needs. The network partners will have to synthesise, discuss and present research results that can be used for innovative solutions, and turn them into easily, accessible material for broad dissemination to farmers and other actors in the agricultural innovation chain. The resulting innovative knowledge will also feed into the EIP-AGRI network

and its database. As the themes for the networks are not pre-defined they can be linked to both sectors or products (e.g. arable crops, fruits, vegetables, pigs) and to a broad range of cross-cutting subjects e.g. crop rotation, certain farming practices, energy, eco-system services, implementation of a directive, social services, bio-based products, short supply chains etc. – giving many innovative network ideas the possibility to participate in the call. A fifth thematic network will help to build a wide European network of innovation support services, by exchanging and developing methods for innovation brokering and advisory activities with a focus on innovation actions. Looking at the EU agricultural research and innovation landscape there is a number of existing platforms, initiatives and networks. Each has an important role to play such as the Joint Programming Initiative on Agriculture, Food Security and Climate Change which brings together 21 countries who are committed to building an integrated European Research Area, or like the ERA-nets which work to develop and strengthen the coordination of national and regional research programmes. The challenge is of course how to inter-link all these initiatives and create a forum where information is available across the initiatives, and here the EIP-AGRI will have a role to play in creating synergies and linkages between the many different policies and initiatives in the field. ●

Keep up to date on the opportunities under Horizon 2020 by subscribing to the EIP-AGRI newsletter at http://ec.europa.eu/agriculture/eip/newsletters/index_en.htm.





More than the sum of its parts: PLATFORM

An article by Dr. Christine Bunthof

This year many of Europe's funders of bioeconomy research met in the Boerhaave museum, Leiden (NL), to discuss how to effectively pool funding and knowledge for these fields of research that are essential to innovation in the agri-, food and forestry sectors. The PLATFORM project held its annual workshop in this centuries-old building which became a University Hospital in the 17th century. It is now the Netherlands national museum of science and medicine, where the history of life sciences is presented to school children, tourists and anyone else, linking it to current daily life.

The participants in the PLATFORM project are ERA-NETS, European Research Area Networks, and Joint Programming Initiatives, or JPIs. In both ERA-NETS and JPIs, EU Member States coordinate, and sometimes pool National Research Funding, to allow researchers across Europe to work together on solving problems and creating knowledge for an innovative and competitive EU economy.

The PLATFORM project invited the EIP-AGRI service point to co-organise one of the workshop sessions, to explore potential synergies and collaboration between the ERA-NETS, JPIs and the EIP-AGRI. The participants were very interested in the EIP-AGRI, and explored how they could integrate the interactive innovation model advocated by the

EIP-AGRI in their own approach, to ensure that the research results would be put to use. They also considered that the EIP-AGRI network would be very useful in promoting research results and in identifying research needs from practice for their future calls.



The Platform for Knowledge Based Bio-Economy relevant ERA-NETS

The EU-funded FP7 project PLATFORM brings together the ERA-NETS and JPIs in the area of the knowledge based bio-economy with the aim to enhance exchange and cooperation between ERA actors and to strengthen the impact of ERANETS in the European bio-economy. The work of PLATFORM includes mutual learning and networking, outreach and interlinkage, and establishing a forum for overarching strategic discussion. An annual workshop and other project meetings are key facilitating events towards these aims and include brainstorm and discussion sessions towards a common vision and roadmap.

Dr. Christine Bunthof is the account manager for Joint Programming and ERA-NETs of Wageningen UR. She coordinates PLATFORM, and is active in FACCE-JPI and a member of the European Bioeconomy Panel.



Website: www.era-platform.eu
Contact: christine.bunthof@wur.nl

The project consortium with 13 partners is coordinated by the Netherlands. The executive team consists of experienced ERANET coordinators and managers committed to form an active and open network. The activities bring together a wide range of actors, including the ERA-NETs funded by FP7-KBBE calls as well as some neighbouring ERA-NETs, self-sustained networks in the bioeconomy, three JPIs, and SCAR Collaborative Working Groups.

PLATFORM aims to work together with other initiatives such as the ERA-NET broad learning initiative ERA-LEARN, the information and analysis source NETWATCH, and JPIs TO COWORK - the JPI mutual learning project focussing on Framework Conditions.



What is an ERA-NET?

ERA-NETs are one of the tools assisting EU Member States to coordinate their research funding and programmes. They are intended to reduce fragmentation of research resources, and to facilitate collaboration between researchers from different countries, for instance by organising joint calls on specific themes.

The ERA-NET scheme is part of EU action to strengthen the European Research Area, promoting knowledge and the free movement of researchers. Under the Sixth Framework Programme (FP6), ERA-NET actions were created to encourage research funding bodies to develop joint activities, common research agendas and joint calls of transnational research. Since then, ERANETs have been involved in the mapping and encouraging the participation of national research capacities to implement collaborative research targeted at common scientific priorities.

More than 30 ERA-NETs in the bioeconomy sector have been funded under FP6 and FP7 including agricultural, forestry, fisheries, food and biotechnology research. (See table p28).



Joint Programming: Bigger is better

Environmental pressures will be felt by agriculture first - Joint action is the answer

The overall aim of Joint Programming Initiatives (JPI) is to pool national research efforts in order to make better use of Europe's public R&D resources in a few key areas of major importance. In a JPI, Member States develop common research agendas and engage in joint research activities on a voluntary basis to tackle major societal challenges. Among the main priority topics identified at European level, two relate to the bioeconomy: The JPI "A Healthy Diet for a Healthy Life" (HDHL) and the JPI "Agriculture, Food Security and Climate Change" (FACCE).

FACCE- JPI, which has its secretariat in Paris (FR) and Swindon (UK), has already launched 5 different actions. The JPI has created a Knowledge Hub for concerted risk assessment for European agriculture and food security with EUR 15 million contributed by Member States to fund the efforts of 65 research groups across 17 countries. It has also launched an international call worth EUR 7 million on climate change mitigation. This call involves 11 JPI countries as well as the USA, Canada and New Zealand. Actions are also underway on 'Climate smart agriculture' and 'food security and land use change' and 'promoting synergies and reducing trade-offs between food supply, biodiversity and ecosystem services'. For Horizon 2020, FACCE will help identify new topics for ERA-Nets.

List of ERA-NET projects in the bioeconomy sector

Title of ERA-NET	Field of research
FP6 ERA-NETs	
ACENET	Applied Catalysis
BiodivERsA	Biodiversity
CORE ORGANIC	Organic Food and Farming
ERA-ARD	Agricultural Research for Development (ARD)
ERA-IB	Industrial Biotechnology
ERA-NET BIOENERGY	Bioenergy
ERA-PG	Plant Genomics
ERASysBio	Systems Biology
EUPHRESKO I	Phytopathology (Statutory Plant Health)
EUROTRANS-BIO	Research for SMEs in Biotechnology
MariFish	Marine and Fisheries
SAFEFOODERA	Food safety
SNOWMAN	Sustainable management of soil and groundwater
WOODWISDOM-NET	Wood Material Science and Engineering
FP7 ERA-NETs and ERANETs +	
ANIWHA	Animal Health and Welfare
ARIMNet & ARIMNet2	Agricultural Research in the Mediterranean
BiodivERsA2	Biodiversity
CAPITA	Catalytic Processes for Innovative Technology Applications
C-IPM	Integrated Pest management (IPM)
CIRCLE-2	Climate Impact Research
COFASP	Sustainable exploitation of marine resources in the seafood chains
CORE Organic II & CORE Organic Plus	Organic Food and Farming Systems
EMIDA	Emerging and Major Infectious Diseases of Livestock
ERA-ARD II	Agricultural Research for Development
ERA-CAPS	Plant Sciences
ERA-IB-2	Industrial Biotechnology
ERA-MBT	Marine biotechnology
ERASynBio & ERASysBio+	Synthetic Biology
ERASysAPP	Systems Biology Applications
ETB-PRO	Research for SMEs in Biotechnology
EUPHRESKO II	Phytopathology Research
FACCE-ERANET+	Food security, Agriculture, Climate Change
FORESTERRA	Forest research in the Mediterranean
ICT-AGRI & ICT-AGRI2	ICT and Robotics in Agriculture and Related Environmental Issues
PreSto GMO ERA-NET	Genetically Modified Organisms (GMO)
RURAGRI	New relationships between rural areas and agriculture in Europe
SEAS-ERA	Marine research
SUMFOREST	Sustainable and Multifunctional Forestry
SUSFOOD	Sustainable Food Production and Consumption
WOODWISDOM-NET2 & WOODWISDOM-NET+	Wood material science and engineering in the forest-based value chains

For more information on these ERANETs, please see http://ec.europa.eu/research/bioeconomy/pdf/bioeconomy-era-net-actions_en.pdf.



Agriculture, forestry and fisheries under FP7 *

The European Union funds research through its Framework Programmes. When launched in 2007, the seventh of these, FP7, was the largest to date – and one of the biggest research programmes in the world. The programme supported 'Food, agriculture and fisheries, and biotechnology' research with the aim of building a European 'Knowledge-based bioeconomy' (KBBE).

The Seventh Framework Programme (FP7) set out to contribute to the Union becoming the world's leading research area, with a budget of EUR 50 billion for the period 2007-2013. This made it one of the biggest research programmes in the world, strongly focused on promoting and investing in world-class state-of-the-art research, based primarily upon the principle of excellence.

FP7 was structured into four specific programmes – Cooperation, Ideas, People and Capacities – with the 'Food, agriculture and fisheries, and biotechnology' research theme funded under the 'Cooperation' programme. The goal was to build a European 'Knowledge-based bioeconomy' (KBBE) to address the growing demand for safer, healthier, higher-quality food, and the sustainable use and production of renewable bio-based resources.

Guided by the strategic research agendas of the relevant European Technology Platforms and requests from Member States, ERA-NETs, and expert groups, the EU committed more than EUR 1.9 billion to fund KBBE research over the duration of FP7, structured into three major activities:

① Sustainable production and management of biological resources from land, forest and aquatic environments

At the heart of the bioeconomy are the land and sea resources on which it depends. Intensive production practices, global competition and climate change are all threats to the sustainability of European agriculture, forestry, aquaculture and fisheries.

The Commission therefore set out to fund projects proposing a balance between socio-economic goals and

responsible natural-resource management, favouring an integrated approach that made full use of all the major players involved – farmers, consumers, regulatory bodies and scientists.

② 'Fork to farm': Food (including seafood), health and well-being

The production and consumption of food is central to any society. This is one reason why food-related science is so important – along with its potential to reduce the harmful effects of diseases, through functional foods, for example.

To address this, FP7 prioritised projects that reflected the increasingly complex dynamics of food production, and which took a complementary approach to food, health and well-being. Research covered five topics: consumers; nutrition; food processing; food quality and safety;

environmental impacts and the total food chain.

3 Life sciences, biotechnology and biochemistry for sustainable non-food products and processes

Life sciences and biotechnologies also have a broad variety of industrial applications in producing new environmentally compatible products based on renewable raw materials. Research leading to new bio-based

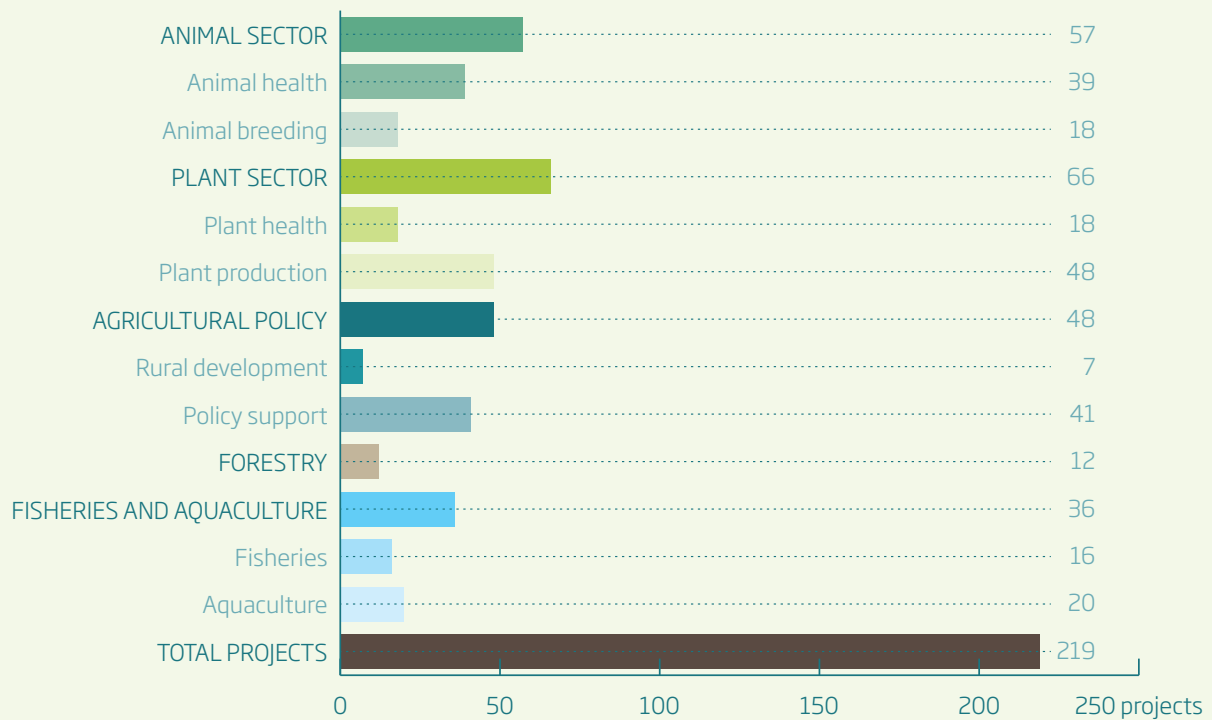
products – enabled by advances in nano-biotechnologies, bioinformatics and systems biology – could reduce reliance on fossil fuels, for example.

Funding therefore focused on improved production and industrial processing of renewable raw materials, as well as on new ways to protect and improve the environment using biotechnology, such as cutting waste and cleaner industrial products and processes. ●

For further information:
http://ec.europa.eu/research/fp7/index_en.cfm?pg=food



Statistics on FP7 KKBE and ERANET projects in primary production research



FOOTNOTE

* This article first appeared in research*eu focus magazine Issue 14, released April 2014



 Best Practice

Flora in your French cheese? The FloracQ Project

The French regions Auvergne, Rhone-Alpes and Languedoc Roussillon are not only known for their fine wines but also for their high quality unpasteurised milk cheeses. The production of these cheeses is very important for regional development: the cattle maintain the permanent grasslands and preserve the natural environment while the cheeses represent a significant economic benefit for the farmers. These cheeses need micro-organisms from the milk to develop their specific taste, but farmers in general remove all micro-organisms for food safety reasons. This means that the quality of these cheeses is put under pressure.

All regional actors involved with raw milk cheese production, from cooperatives to research institutes, were already linked together in a national thematic network called Fromages de Terroirs. The network was set up to create a common agenda on research and innovation actions regarding cheese production issues. During a meeting of this network, worries about production quality were raised by the farmers. Françoise Monsallier, from the Cantal Chamber of Agriculture started an investigation to find a solution to the issue. Although there was a very strong common interest in microbial flora as an important factor in this issue, scientific research on the topic was not developed enough to give any specific solution.

“To find a solution, we set up an interactive innovation project, with a diverse mix of practice and science, with 42 farmers, 10 cooperatives, 5 farmers’ organisations, 3 training and education centres, 3 research institutes and 2 chambers of agriculture.”

says Françoise Monsallier.

The group had to find out which factors influence the presence of good microbial flora and how to proceed in such a way that the good microbial flora could be preserved. Having Cantal Chamber of Agriculture as an innovation broker and support service proved to be a great advantage: they had a high degree of expertise in both research and development and farming practices. On top of that, they were able to encourage the farmers, cooperatives and research institutes to participate because of good relations through the Fromages de Terroirs network.

“There is a crucial role for advisory services as innovation support services, so it would be interesting to recognise them more as innovation brokers.” says Françoise Monsalier, Cantal Chamber of Agriculture.

Funding was available via ‘CasDAR’ the French national funding dedicated to support innovation in agriculture. The interactive innovation project discovered that housing conditions affect the microbial flora and that the flora in milk evolves during the time between milking and putting it into the reservoir tanks. The project developed an advisory method in order to disseminate new good practices to farmers about milk quality. To share the results and innovation, they worked out training courses for farmers to learn about the best methods. Seminars were organised involving both farmers and scientists to explain the project. The project designed a whole toolbox to diagnose all different microbial flora. This resulted in the other geographical areas such as the Alps and Jura being interested in applying the research results to their own unpasteurised milk cheeses - a sign that there is a strong interest in sharing results, knowledge and innovation in European agriculture. ●



Addressing specific challenges in agriculture through EIP-AGRI Focus Groups

How to make High Nature Value farming more profitable without losing the HNV characteristics? How to mainstream the application of precision farming across the EU? How to manage permanent grassland in a way that combines profitability, carbon sequestration and biodiversity?

In 2013 six EIP-AGRI Focus Groups were set up and are currently putting their findings and recommendations into reports. In 2014, a total of seven new Focus Groups will be launched to find answers to specific questions related to the EIP-AGRI.

All EIP-AGRI Focus Groups gather and summarise knowledge on relevant practices, listing problems and opportunities. They take stock of the state of play in research, highlighting and developing possible solutions to these problems. Based on this, the groups propose priorities for innovation actions including dissemination of good practices and ideas for applied research involving farmers, advisors, industry and other practitioners.

Practical results > new food for thought > new Operational Groups

Focus Groups bring together experts contributing both practical farming experience and scientific knowledge to tackle specific questions. The Focus Groups disseminate further innovation and existing good practices in their field. Their findings, conclusions and recommendations are presented in Focus Group reports which are made available through the EIP-AGRI network.

The reports aim to answer the initial question given to the Focus Group, such as "How to optimise the yield

gap in organic arable farming?". But a report does more than that: through recommendations, practical checklists and good practices, the report aims to inspire people across the EU who want to start new Operational Groups or research projects.

New acquaintances > bigger network > innovation boost

In addition, Focus Groups allow people to meet new experts, possibly dealing with the same questions but from a different angle. This can prove very fruitful for further work together.

"Now we have created our network via the Focus Group Organic Farming, it is important to continue our work. We need to spread the good work we have done and spark it further. I believe this is what EIP-AGRI is at its best." Aira Sevón (Finland), Focus Group member.

Each Focus Group meets at least twice to discuss the questions and find solutions. They can continue their work in collaborative workspaces on the EIP-AGRI website after the delivery of the recommendations report.



Report EIP-AGRI Focus Group on Protein Crops: more cooperation and integration needed

The report of the Focus Group shows that a lot of progress can be made at local scale (on-farm animal feed production). However, progress can certainly be made in the yield for a wide range of crops and in the way protein crops are used in rotation to optimise the whole farm production. To improve the competitiveness of EU-grown protein crops at a wider scale, first of all (average) yields need to be improved. The Focus Group concluded that peas, field beans and soya offer the best potential and can all three improve substantially on yields and technical requirements (anti-nutritional factors), provided the breeding sector makes an effort.

However, the infrastructure to process these crops is not developed for the larger-scale protein production for processed feed. Cooperation and integration between the compound feed industry and the plant production-related stakeholders is needed to make a difference. The Focus Group brought together experts from the feed industry and plant breeders for the first time. This proved very useful in clarifying what plant breeders should aim for when developing new varieties. The Focus Group illustrated that combining the knowledge and experiences of the industry, farming practice and farming advisors can lead to new perspectives.



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



Report EIP-AGRI Focus Group on Organic Farming: inspiration to diminish yield gaps in Organic Farming

After a year's work, the EIP-AGRI Focus Group on Organic Farming has issued a report on how to close the yield gap in Organic Farming.

The report describes the main causes of the yield gap. Poor soil fertility management, inadequate nutrients supply, insufficient weed management, pest and disease pressure and variety choice are the main specific causes identified. Several horizontal themes are also highlighted: the need of a systems approach; the need to enhance knowledge sharing across the sector; the development of resilient systems; and the need for a broad cultural shift.

From the causes identified, the Focus Group was able to present proposals for actions which could represent topics for Operational Groups. Practical solutions which have already been implemented and new practical solutions include farming systems co-design, information and decision support systems and how to increase soil microbial activity and biodiversity by farming techniques. Finally the report gives recommendations for future research topics and methodologies as well as proposals for training and education programmes.



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

The right expert in the right place

Twice a year the European Commission launches a call for experts for new Focus Groups. The Focus Groups in 2014 will handle topics such as High Nature Value farming, precision farming, permanent grasslands and fertiliser efficiency in horticulture.

The moment the call is launched in the EIP-AGRI newsletter and through the press and social media, everybody who considers himself/herself an expert on the topic can apply by filling in the online application form before a certain deadline.

For the last call, which closed 8 April 2014, there were over 330 applications for a total of 80 places. "Not an easy job: all applicants have their strengths and value. But we need to come down to a list of 20 experts. We need to find a good mix between farmers, researchers, advisors and other profiles, all with key expertise within the specific field of the Focus Group. In addition to other criteria, we also take geographical balance into account.", says Rob Peters, Head of Unit DG AGRI.

The EIP-AGRI Focus Group Charter

The EIP-AGRI Focus Group charter guides the work of the Focus Groups. The charter explains the general objectives, what the European Commission expects from the expert members, what the Focus Group should produce, ie. the deliverables and the selection procedure.

http://ec.europa.eu/agriculture/eip/focus-groups/charter_en.pdf

Raising the right questions

A Focus Group has a relatively short lifespan and is expected to produce a report within 12-18 months. The main questions are already defined by the European Commission when the call is launched. Each Focus Group is accompanied by a key expert who develops a starting paper based on the main questions. It is this paper that will guide the work of the Focus Group. Cristina Micheli, key expert Organic Farming:

"Every key expert writes a starting paper on the topic that all Focus Group experts study before the first meeting. A lot of time and effort precedes the final version of the starting paper. It is obvious that both the main question and the starting paper are crucial to come up with good results."

Proposing topics

Would you like to suggest a topic for a focus group? Is the question narrow and well-defined? Will the potential results help stimulate innovation? Do other people and organisations support your idea? Please let us know by completing the form on the EIP-AGRI website http://ec.europa.eu/agriculture/eip/focus-groups/idea/idea_en.htm

All proposals will be taken into consideration for new Focus Groups in 2015. ●



Focus Group topics in 2013 - 2014

Organic Farming: optimising organic arable yields	Protein crops: increasing competitiveness
Reducing anti-biotic use in pig farming	Genetic resources: cooperation models
Organic matter content of Mediterranean soils	Integrated pest management (IPM) in <i>Brassica</i> species
High Nature Value (HNV) farming profitability	Mainstreaming precision farming
Profitability of permanent grassland	Fertiliser efficiency - focus on horticulture in open field
Optimising crop production profitability through ecological focus areas	Alternative/innovative supply chains
IPM practices for soil disease suppression	



Uptake of knowledge in agriculture – an Irish initiative



An article by James Campbell

There are some farmers who are relatively quick to engage with new technology and take advice, to implement new ways of doing things or adopt innovative systems of production. Research findings already available have been put into practice by the most innovative farmers.

But human nature dictates that many people stand back and allow others to lead the charge towards innovation – look before you leap! Also, according to another old saying ‘you can lead a horse to water but you can’t make him drink’...

How can more farmers be encouraged to adopt new systems that could increase the efficiency of their operation?

An innovative approach to this has been underway in Ireland for the past few years. The Irish Farmers Journal, has been at the forefront of this initiative, working in conjunc-

tion with Ireland’s Agriculture and Food Development Authority (Teagasc) and industry sponsors (ABP Food Group, Dawn Meats, Farmer Business Developments – FBD – and another meat business, Kepak Group).

The Teagasc/Farmers Journal BETTER farm programme was launched in 2008 and the first phase was completed in December 2011. BETTER is an acronym for Business and Environment through Technology, Extension and Research.

Sixteen commercially focused farms received an intensive technical service provided by two dedicated Programme Advisors. Reports of the issues arising, the practical problems tackled and the progress made on these farms were published each

week in the Irish Farmers Journal. Physical and financial performance on the selected farms increased over the three years and was well ahead of the trends recorded for beef farms nationally over the period. This involved improvement in technical performance across a



range of factors, including fertility, stocking rate, weight for age, grass utilisation and animal health. Articles in a newspaper or journal can create awareness – but this is only the first step. A bigger challenge is to influence behaviour –



can journalists or advisors, through words and pictures, written or broadcast - convince and persuade farmers to adopt new practices? Studies indicate that this is unlikely, no matter how brilliant the journalism.

Fundamentally, behavioural change is much more likely to be achieved through 'peer to peer' interaction.

Discussion Groups are a proven means of exchange of information and knowledge at a local level, and will positively stimulate change through the take up of knowledge, advice, research and innovation. A recent report for the Nuffield Farming Scholarships Trust, Heather Wildman** concluded that discussion groups can be an invaluable platform to debate differing views, practices, advice and guidelines - cutting through the 'spin'. Discussion groups facilitate direct farmer to farmer accounts of personal 'hands-on' experience that is highly trusted and respected. Participants ask and answer - what worked for you?

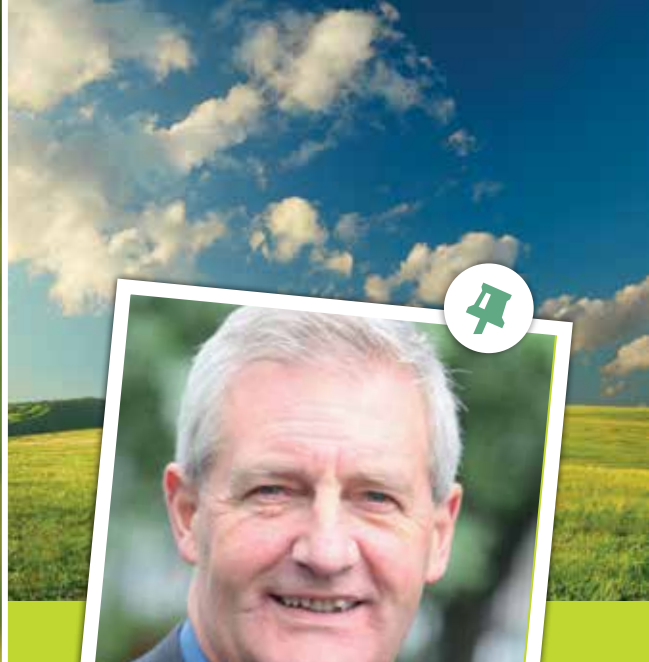
To ensure that the key technical messages learned on the BETTER farms are harnessed and further developed in phase two of the programme, discussion groups of 12 to 15 'satellite' farmers have been established around each of the 'core' farmers. This second phase also involves an additional 18 BETTER farms being established across the country.

In a recent study*** of the role of journalists internationally in the Agricultural Knowledge and Information System, it was confirmed that one of the main techniques used to make a story interesting to readers is to place it in the context of a real farm experience - describing actual farm application of a new technique and the results obtained. The BETTER farm programmes build on this technique, with the focus remaining on the farm as developments occur rather than just providing a once-only journalistic feature.

It is probably unfair to generalise, but scientists are often criticised for failing to 'speak a language that

the layman can understand'. Knowledge transfer is a challenge. It is fair to assume that agricultural communicators play a role in making farmers aware of knowledge generated by agricultural research scientists. I believe that agricultural journalists can play an important part in transferring knowledge - although some may not see that as their role. (I refer to those who believe that the only role of the journalist is to question and investigate with a view to exposing 'clever' public relations or mis-representation of the facts).

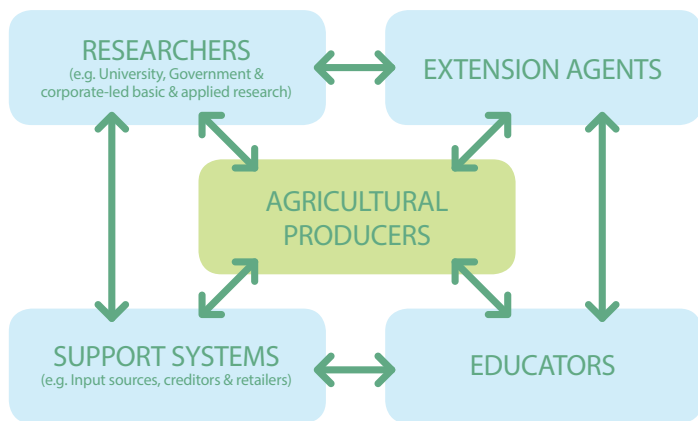
The Irish Farmers' Journal (IFJ) is published by The Agricultural Trust. Any surplus funds are directed for re-investment into scientific based information that can support farming. Its journalists are specialists with particular interest in extension and advisory work. You can read articles in the series on BETTER farms at <http://www.farmersjournal.ie/tag/BETTER%20Farm>. The same approach has been initiated through the Northern Ireland Suckler Beef Programme in association with the College of Agriculture, Food and Rural Enterprise (CAFRE)



and ABP Food Group. That programme is entering phase two this year. <http://www.farmersjournal.ie/tag/NISBP>

A knowledge exchange programme focusing on dairy farming is to be launched in 2014, involving farms on both sides of the Irish border.

Where agricultural communicators operate in the Agricultural Knowledge and Information System – William Nelson and co-authors, Texas A&M University



A potentially overwhelming number of providers of knowledge seek to communicate with farmers to a greater or lesser extent, many with a motivation related to sale of goods or services. Neighbours, advisors, consultants, open meetings, farm visits, vets, banks, accountants, commercial companies who supply farm inputs, colleges, research institutes, farming press, websites, social media are some examples. ●

James Campbell was Northern Ireland editor of the Irish Farmers Journal until June 2013 and continues to contribute articles to the paper. He is chairman of the Northern Ireland Agricultural Research and Development Council (Agri-Search) and treasurer of the International Federation of Agricultural Journalists. The Irish Farmers' Journal (IFJ) is published by The Agricultural Trust. The Trust supports agricultural development projects, through investment in science and technology that can be implemented in Irish conditions.

FOOTNOTES

** Study and report for the Nuffield Farming Scholarships Trust, entitled 'Influencing and motivating change: have dairy discussion groups had their day?' - Heather Wildman, August 2013.

*** An Examination of the International Federation of Agricultural Journalists' Involvement in Agriculture Knowledge Transfer - William Nelson and co-authors, Texas A & M University.



Success story of disseminating research and innovation results to farmers

Taking the road to innovation

How a forward-looking mind can help conserve traditional farming

The region of Galicia in the northwestern corner of Spain has been the final destination of the pilgrimage route the Way of Saint James (El Camino de Santiago) since the Middle Ages. The route has led people from all over Europe to the city of Santiago de Compostela where the apostle Saint James is believed to be buried. Due to the movement of the different populations in and out of the city, the Way of Saint James has contributed for centuries to the communication between different European regions and therefore played a part in the dissemination of innovative ideas and inventions.

The Arqueixal organic dairy farm is situated very close to the Way of Saint James and it may be that it was the history of this area that influenced owner Xosé Luís to foster innovation in the agriculture sector in A Ulloa in the heart of the region of Galicia.

Going against the grain with organic production

Sixty years ago, Galician agriculture was oriented towards self-subsistence production. The development plans that were implemented in Spain during the 60s following the post war period, fostered a transi-

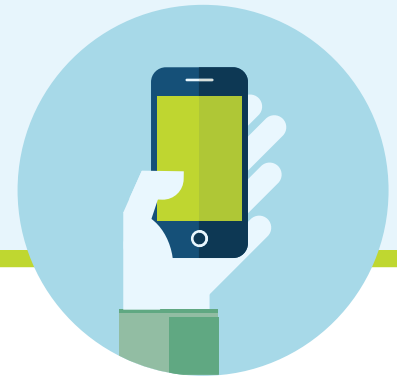
tion to an industrialised agriculture which was sped up by Spain's entry into the EU in 1986. The competition with more productive farms from other European countries pushed Galician farmers to specialise in dairy production, to increase the size of their farms and to become much more dependent on imported fodder. These changes led to the disappearance of traditional agriculture and traditional products in A Ulloa.

Around the same time as the entrance of Spain in the EU, Xosé Luís had just inherited his parents' farm and was not comfortable with the

trends at the time. Concerned by the disappearance of traditional products and in an effort to avoid a production system which did not meet his beliefs, Xosé Luís decided to reorient his farm to an organic production of traditional cheese from A Ulloa. This change would enable him to increase his income compared to selling raw industrial milk without having to increase the size of his farm and be dependent on imported feed which he could not easily control. Furthermore, his work would contribute to preserving traditional landscapes and natural values, which was also important in his books.



More information
<http://www.arqueixal.com/>
<http://www.granxamaruxa.com/>
<http://www.milhulloa.es/>
www.ciam.es
EFFECT project:
<http://ec.europa.eu/research/agro/fair/en/uk3819.html>



Research: proving very useful

Xosé Luís quickly found that knowledge on organic dairy production was very poor at the time. In the mid-1980s there was only one other organic farm in Spain and most agricultural advisors were trained in industrial production techniques and did not know anything about organic production.

A few years later, by the end of the 90s, a regional agriculture research centre, the CIAM (Centre for Agricultural Research of Mabegondo) was involved in EFFECT, an international research project on reducing nitrogen fertilisation needs by growing clover species. The CIAM was already working with cattle and dairy farms from the region in this project but they were also looking for an organic dairy farm which would be interested in testing their results and Arqueixal was the only example. It was a match made in heaven. Thanks to the cooperation with the CIAM, Xosé Luís got access to the sources of information and knowledge he needed to develop his farm.

Innovation Support Services trigger success

This first project fostered his participation in other projects of the CIAM, such as one to increase protein production and nitrogen fixation by the cultivation of peas and other crops to reduce weeds in wheat crops. As a true innovation support service provider, the CIAM also advised Xosé Luís to contact a private research centre on dairy products which assisted him to diversify his production by developing two local varieties of cheese, organic yoghurt and bottled milk. The innovative efforts to recover and revitalise the traditional cheese of the A Ulloa area resulted in the Arzúa-Ulloa cheese receiving a protected designation of origin in 2010.



An inspiration to others

Other farms of A Ulloa began initiatives to develop new products inspired by the traditional ones from Arqueixal. One of these farms “Granxa Maruxa” developed cream biscuits called “Maruxas”. Another, “Milhulloa” farm, started to commercialise dried turnip greens, a very popular seasonal vegetable in Galicia. Thanks to the Milhulloa initiative, the vegetable now can be sold all year round and a lot of organic farms from A Ulloa have teamed up in a network with Arqueixal to commercialise their products.

Almost 30 years after Xosé Luis took the first innovation steps and began working with researchers to develop his farm, other farmers from A Ulloa have followed his example and due to his involvement in the European project ‘EFFECT’ his work has also inspired other European farmers. The Way of Saint James may no longer be the main factor which causes innovation to spread through Europe from this region, but activities from here certainly continue to influence and inspire. ●



A global view: same issues – different solutions

An article by Tassos Haniotis

The challenges facing our farming sector are not an isolated European phenomenon. More mouths to feed, soaring input prices and the ever looming threat of climate change affect farmers' production conditions and income perspectives throughout the world. However, different countries tackle the problems and opportunities differently. We asked DG Agriculture and Rural Development's Tassos Haniotis to share some of his insights into the matter.

Tassos Haniotis is the Director of the Economic Analysis, Perspectives and Evaluations Directorate in DG Agriculture and Rural Development of the European Commission. He previously held posts as Head of Unit in the Agricultural Policy Analysis and Perspectives unit and the Agricultural Trade Policy Analysis unit in the same Directorate General, as Member and subsequently Deputy Head of the Cabinet of former European Commissioner for Agriculture Franz Fischler. He holds Ph.D. and M.S. degrees in Agricultural Economics from the University of Georgia, USA, and a B.A. in Economics from the Athens University of Economics and Business in his native country Greece.



During a recent trip to Australia, I was struck by the fact that, despite the diminished focus on environment and climate change in the new government line, most of the Australian Bureau of Agricultural and Resource Economics and Sciences' (ABARES) Science and Innovation Awards for Young People in Agriculture reflected climate and environmental concerns. During the same trip a young and new dairy Chinese farmer (up until recently a non-agricultural commodity trader...) with whom I shared a panel put economic efficiency next to environment in his presentation.

On the other hand, presentations on Brazilian agriculture continue to focus on huge infrastructure

projects and transport efficiency, mainly aiming at transporting grains and soybeans more efficiently by rail, road and river to the export ports of Brazil's northeast. In the US, the debate has recently shifted its focus on big data, i.e. on the use of the most advanced technology (from seeds to satellite images) to improve farm efficiency at a very micro-level of soil precision, leading in the way to significant questions of proprietary rights and potential impact implications.

And in a recent conference in Brussels, "sustainable intensification" was the new term in town, despite the clear understanding that what, how and where to intensify is still not much analysed or known.



The above are a non-exhaustive list of approaches reflecting a growing recognition that world agriculture is entering a new phase, with the common aim of adjusting food supply to shifting demand needs resulting in very different responses. The fact that agricultural and food prices have moved at a higher level and in parallel with prices of other commodities has put concerns about food security back on the agenda as both consumers and producers have been hit by higher costs in developed and developing countries.

Different explanations have surged in the search for the causes of these developments. Some pointed towards the combined effect of limited land availability and declines in yield growth as well as strong global population and income growth, especially from China and India; others emphasised the increase in the use of feedstuff for biofuels whilst more extreme weather conditions and climate change are certainly also factors to be reckoned with. A relatively new factor is the so-called shale gas “revolution” in

the US which has direct and indirect impacts on commodity prices – for example via the impact of relative gas price changes on the fertiliser market.

So the analysis of what is causing this price volatility is not the same throughout the world and this also means that different countries tackle the issue differently. Several concerns have been raised in the global farm policy debate, and quite diverse policy problems emerged from the food security/price volatility debate, from efforts to address the price interests of the rural and urban poor to a renewed focus on the gap between existing research, innovation and productivity priorities and future market and trade challenges.



Looking across the globe, biotechnology seems to be widely used outside Europe (although the product scope remains limited). Brazil is focusing on increasing its land efficiency by intensifying to some extent the livestock density in its grazing land, thus freeing up land for arable production. The price advantage stemming from natural gas is helping the US build its own infrastructure with new investments, especially on fertilisers. Australia has put into the forefront its own ambitious infrastructure project to transport its products more efficiently. And on the ground (although not always in official statements), climate change is in research and innovation projects everywhere.

These trends also reflect the growing recognition that the slowdown in productivity observed in many parts of the world is the result of underinvestment in agriculture, especially in research and extension, that took place during the years of low prices, and thus low investment returns in the sector. But the increase in research and the focus

on innovation takes also different paths, with some countries relying heavily on the private sector to cover the gap between required knowledge and applying it on the ground.

The fact that research and innovation priorities vary from region to region is hardly surprising as not only the analysis behind the question of food security differs but so do the farming systems, production conditions and economic importance of agriculture. However, looking across the board, there are a number of global trends which also reflect the developments in the EU. This is for instance the case with the stronger emphasis on sustainability which is found in many countries' R&I priorities. Yet one of the clearest trends - which may be due to the economic crisis and reduced government spending power - is the question of speeding up and facilitating the translation of research into real improvements on the ground - something which is certainly also high on the agenda in the EU. ●



In Brazil, EMBRAPA has taken a step away from genetics, which is increasingly being done by private companies, and the public research company is now directing its focus towards sustainability.

The priority is to promote growth in production that doesn't hurt native vegetation. In the area of grains, the focus is on improving crop management to make production more efficient and less harmful to the environment. Precision farming is also high on the agenda and one of the big issues is crop rotation - due to the success of the soy bean production and the lack of a financially viable cereal or grain crop to include in rotation.

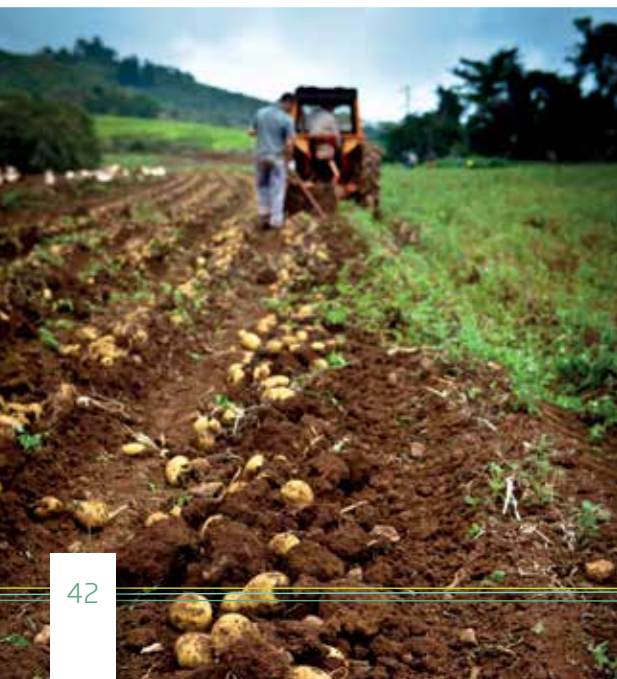


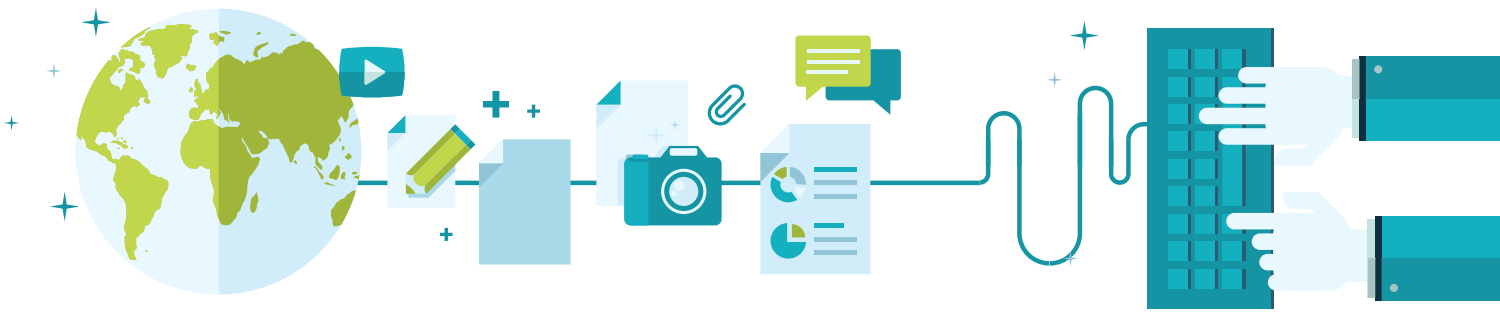
In Australia national spending on agricultural R&D is estimated to be over AUS \$ 1.6 billion per year. Public research and innovation is mainly targeting six priorities:

Improve the productivity and profitability of existing industries and support the development of viable new industries; Better understand and respond to domestic and international market and consumer requirements and improve the flow of such information through the whole supply chain, including to consumers; Support effective management of Australia's natural resources to ensure primary industries are both economically and environmentally sustainable; Build resilience to climate variability and adapt to and mitigate the effects of climate change; Protect Australia's community, primary industries and environment from biosecurity threats and Improve the skills to undertake research and apply its findings.



In the US, an estimated USD 11.1 billion (or around 2.8 percent) of the total spent on science in 2009 was related directly to food and agriculture with the business sector conducting around 57 percent of total food and agricultural R&D, a lot of which was earmarked for research in food processing.





The one-stop-shop for agricultural innovation

The EIP-AGRI website with a new interactive innovation platform

This summer, the new interactive EIP-AGRI website will be launched. The website will contain information on innovation ideas and projects that are being developed in different European countries and regions. You can find out which innovations have been tried and tested, which research needs have been generated from practice and which case studies are in progress. Collaborative workspaces for specific innovation topics and an overview of funding opportunities for innovation projects will contribute to making the network grow.

Are you an expert?

Everyone involved in innovation in agriculture will be able to sign up and share and exchange information about his/her ideas, projects or expertise. The more people who join, the more useful it will be for everyone. The website visitor will be able to search for these experts working on specific topics.

Funding, to get your idea started

To get an innovative idea started, funding can be helpful or sometimes even necessary. The website collects and publishes information on the different funding opportunities that are available through the Rural Development Programmes, the Horizon 2020 programme for Research and Innovation as well as other EU and national funds.

What are your research needs?

Practitioners such as farmers, advisors and agri-businesses can share their research needs on the website by filling in an online form. This is meant to inspire and catalyse further innovation actions, including practice oriented research and provide input for the European research agenda.

Looking for inspiration?

Innovation projects from research and Operational Groups with innovation actions and results shared during EIP-AGRI activities, are also available on the website. All innovation actors are invited to provide information on their own innovation actions, innovative solutions to problems in agriculture and relevant research projects that will be added to the projects database.

Searching for partners?

Many people have interesting innovative ideas but it is often a challenge to find the right partners to build a project. The website has an easy-to-use search function which will enable people to find the right partners. ●

Work in progress always under construction

You can continuously help build the site and databases by adding information about research and innovation projects.



SHARE WITH US



SEARCH AND FIND



FOCUS ON



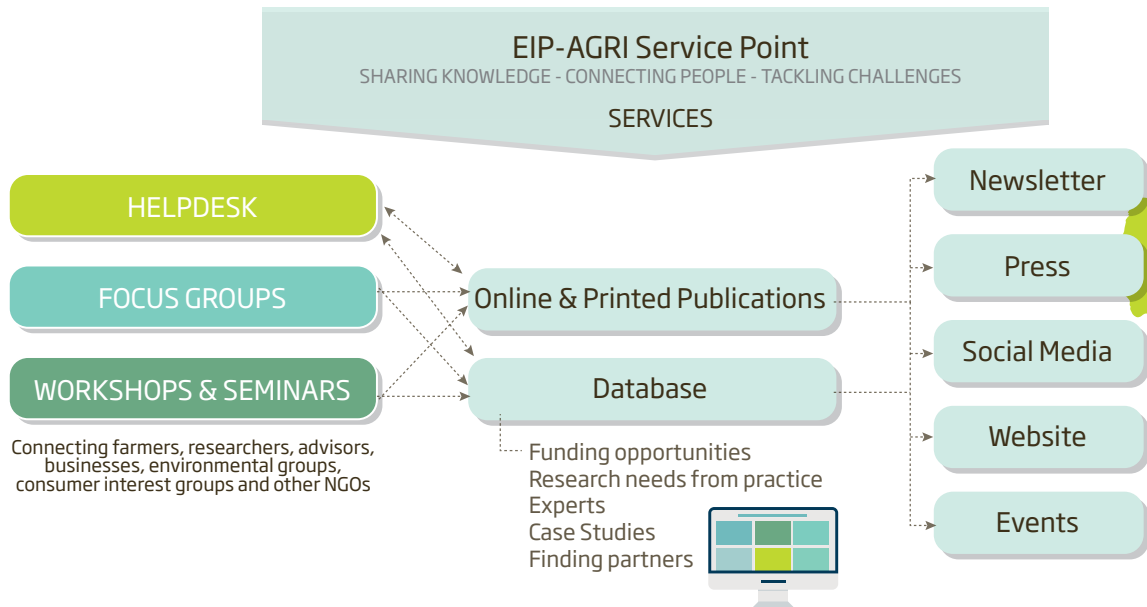
DEEPEN YOUR KNOWLEDGE



STAY UP TO DATE



MY EIP-AGRI



The EIP-AGRI Service Point: building bridges to connect research and practice

When an innovative solution developed in Finland can help a Slovenian farmer to solve her problem, the EIP-AGRI network wants to make this information available to her. Easier said than done? The European Commission established the EIP-AGRI Service Point in April 2013 to help do just that.

Getting innovation ideas off the ground

The Service Point team of some 20 experts provides information on questions such as funding opportunities for innovation and research projects, upcoming events, information for and about Operational Groups funded by Rural Development Programmes, best practices on innovation projects and actions and many other issues related to the EIP-AGRI. This information is available on the EIP-AGRI website, via monthly newsletters and other publications but it is also possible to simply pick up the phone or send an email and the Service Point helpdesk will provide the information you need.

Sharing your idea with others

Although more and more activities are moving to the virtual world, face to face contact remains one of the best ways to promote and improve cooperation and networking. The Service Point organises and facilitates EIP-AGRI workshops, seminars and conferences to bring people together from across the agricultural innovation landscape: farmers, scientists and local authorities just to mention a few. The EIP-AGRI events often deal with practical questions such as how to prepare proposals for the next call for Horizon 2020 or how to set up Operational Groups with Rural Development funds. But there are also events that target questions related to innovation

within a specific sector or cross-cutting issues related to agricultural productivity and sustainability.





The more the merrier: helping the network grow

The EIP-AGRI website acts as a one-stop-shop for agricultural innovation and one of its key features is a user-friendly search portal which links to a database containing information about Operational Groups, research projects, innovation actions and projects as well as research needs from practice. The idea behind the database is that content should be generated by the users and information about interesting projects and initiatives – successful or not – is always very welcome. Evidently, the more information contained, the more valuable the database will be for its users: the network will only be as strong as the total sum of its participants, so the Service Point also has a role in encouraging the users to provide information on the innovative actions and projects they have been involved in.

Spreading the word all over Europe

Every organisation can also act as a 'multiplier' to help the network grow. Through five workshops, key multipliers were invited to be informed on the EIP-AGRI and the setting-up of Operational Groups. The Service Point has also created an online multipliers toolkit. A list of ready-to-use checklists, tips and tricks and dos and don'ts are in the making to help



all possible multipliers inform and motivate their members to join the EIP-AGRI network. The Service Point keeps close contact with everyone, offering their help by updating the existing material or providing new material to make sure the network keeps growing.

We like you #eipagri



When Googling 'farm' and 'social media' you get an impressive 248.000.000 hits. There are hundreds and thousands of blogs, facebook pages, twitter accounts, LinkedIn pages. New updates are posted every second. Social media can lend a hand in boosting the EIP-AGRI network and so the Service Point will ensure that interesting publications, events, calls and live coverage from EIP-AGRI events is reported on dedicated EIP-AGRI social media channels.

Twitter: [@eipagri_sp](https://twitter.com/eipagri_sp)
LinkedIn: be.linkedin.com/in/eipagriservicepoint



Addressing specific agricultural challenges through Focus Groups

The EIP-AGRI Service Point organises Focus Groups on very specific issues such as reducing antibiotics use on pig farms, mainstreaming precision farming and improving productivity in organic arable farming. Focus Groups consist of 20 experts with different competencies: farmers, advisors, agro-business representatives and researchers but all with different types of background and experience.

The Focus Group members act as an important player to disseminate their results within their country and network to set up (themselves or motivate others to set up) innovation actions under the EIP-AGRI. ●

The EIP-AGRI network and the European Network of Rural Development

The EIP-AGRI network is a separate network to the European Network of Rural Development (ENRD). Both networks were initiatives of the EU Commission DG Agriculture and Rural Development (DG AGRI). Both networks have a facilitating body contracted to the DG AGRI, in the case of EIP-AGRI this relates to the Service Point, and in the case of the ENRD it is the Contact Point.

However the two networks have different tasks and roles:

- The EIP-AGRI focuses on innovation in agriculture: forming partnerships and linking all innovation actors in agriculture and forestry from across the EU. This includes those involved in relevant Horizon 2020 projects, as well as those receiving funding through the National Rural Development Programmes.
- The ENRD deals with Rural Development in the broad sense, for networking of national networks, organisations and administrations active in the field of rural development, encouraging the involvement of stakeholders in the implementation of rural development.

For more information on ENRD: www.enrd.eu





Managing Editor: Rob Peters,
Head of Unit - Research and Innovation unit, AGRI-H5, Directorate-General for Agriculture and Rural Development, European Commission

Layout and Design: EIP-AGRI Service Point

Photographs: Bertelsen Inger, Bunthof Christine, Campbell James, Cioleş Dacian, Esposito-Fava Aurélien, European Commission, Fog Erik, Haniotis Tassos, Koppel Matti, Luís Xosé, Moeskops Bram, ORC (The Organic Research Centre), Poppe Krijn, Robijns Trees, Runge Tania, Santiago Blanco José Luis, Schröder Robert, Schutz Ulrich, Shutterstock.com, Vuylsteke Anne

Subscribe to Agrinnovation publications at the following address: servicepoint@eip-agri.eu

You can also order a paper copy free-of-charge via the EU Bookshop website: <http://bookshop.europa.eu>

The contents of the Agrinnovation Magazine do not necessarily reflect the opinions of the institutions of the European Union.

The Agrinnovation Magazine is published in English and available in electronic format on the EIP-AGRI website.

Manuscript finalised in June 2014.

© European Union, 2014

Reproduction is authorised provided the source is acknowledged.

For additional information on the European Union: <http://europa.eu>

Printed in Belgium

The text in this publication is for information purposes only and is not legally binding.

Belgium



www.eip-agri.eu:
the one-stop-shop for
agricultural innovation in Europe

Online from
summer 2014



SHARE WITH US information about you, your projects and project ideas, research needs,...



SEARCH AND FIND funding opportunities, partners, interesting projects,... at the EIP-AGRI meeting point



FOCUS ON practical innovative solutions to problems and opportunities provided in the EIP-AGRI Focus Group chapter



DEEPEN YOUR KNOWLEDGE by having a look at different EIP-AGRI related publications in our library



STAY UP TO DATE on innovation related agricultural topics and read about the latest EIP-AGRI news and events



MY EIP-AGRI connects you to your own EIP-AGRI dashboard that enables you to follow the information and people you are interested in.

Stay up to date!

- subscribe to our monthly newsletter on our website
- follow us on twitter @EIPAGRI_SP
- join us on LinkedIn: www.linkedin.com/in/eipagrIServicepoint

