

eip-agri
AGRICULTURE & INNOVATION



EIP-AGRI Seminar
'Promoting creativity and learning through
agricultural knowledge systems and interactive
innovation'
SEMINAR REPORT
3-4 DECEMBER 2015



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1. Introduction

The European Innovation Partnership for agricultural productivity and sustainability (EIP-AGRI) aims to stimulate innovation and to contribute to the competitiveness and sustainability of European agriculture and forestry sectors. See www.eip-agri.eu.

A key element – among others – for fostering innovation and contributing to competitiveness and sustainability are the so-called **Agricultural and Knowledge Information Systems (AKIS)** which exist at national / regional level in the EU-28 Member States. The importance and relevance of these AKIS has been increasingly highlighted in recent years by the EU's Standing Committee on Agricultural Research (SCAR), particularly through the work of the SCAR Standing Working Group (SWG) on AKIS which was first established in 2010.

The most recent report (2016) of the SWG AKIS entitled *Agricultural Knowledge and Innovation Systems Towards the Future: A Foresight Paper* can be viewed [here](#).

Despite its importance, awareness and understanding of the concept of AKIS still remains relatively limited. Therefore on 3-4 December 2015, DG Agriculture and Rural Development (in close co-operation with Teagasc, the Agriculture and Food Development Authority for Ireland) organised a two day seminar dedicated to promoting understanding of AKIS and to highlighting practical examples of the changes taking place in approaches to knowledge exchange, learning and innovation in the agricultural, forestry and rural development sectors.

A diverse group of farmers, advisers, researchers and others was invited to the seminar and this report gives a brief overview of the presentations and discussions that took place. More information is available via the links included in the text of the report.



2. Context and objectives

Approaches to knowledge exchange, learning and innovation in agriculture are evolving rapidly. The traditional, top-down 'linear model' of knowledge transfer is increasingly outdated. Knowledge no longer flows one-way from researchers, trainers and technical experts only. Direct, peer-to-peer learning between farmers and other key actors is increasingly important, whilst new forms of media and information technology provide exciting new possibilities for working together and exchanging knowledge.

Inevitably, the individuals, organisations and institutions involved in training/education, advice and research, face some challenges re-orientating themselves towards the changing context of their work. New approaches and new tools for knowledge exchange take time to become fully established. New skills are needed to make wise and effective use of new channels of communication. Language barriers exist and in many cases there are still gaps between research, advice and practice which block the two-way flow of information / knowledge and limit the interaction between research and practice that is needed to foster innovative solutions to sectoral needs and opportunities.

Meanwhile the relationship between farmers, society and the natural world is also changing. Farmers are facing the fact that the future of agriculture and the organisation of food production will be very different from the current situation they know. And in this changing world, farmers must embrace new knowledge, new skills and innovative new ideas to develop and manage smarter and more sustainable production systems.

“The future agriculture will be an agriculture of knowledge. Not only research, but also advisory services, demonstration farms, farmers’ organisations and networks are at the heart of these changes. But we need to make sure we get it right.”
 - European Commissioner Phil Hogan -



Objectives and format of the seminar

The purpose of the workshop was to help build understanding of how the flows of knowledge in Europe can be improved. This included consideration of how farmers create knowledge, where they get their information from, and if their AKIS are currently providing sufficient incentives / opportunities for them to exchange knowledge, develop new ideas and support interactive learning and innovation. It was also anticipated that the seminar would be a great opportunity to showcase some real success stories from farmers with finding, creating and using new knowledge.

“This seminar was all about bringing people together, listening to each other, learning from each other, and finding new and better ways to share the knowledge and expertise that will build the agriculture and food production of the 21st century”
- European Commissioner Phil Hogan -

A total of 140 people, including around 40 farmers, from 25 countries participated in the seminar. The first day began by introducing the concept of **Agricultural Knowledge and Innovation Systems (AKIS)**, and continued with a dynamic interactive session to share experiences and ideas on how knowledge and information flows within national / regional AKIS, whether this meets the **real knowledge needs** of farmers and how these flows can be improved / enhanced.

The second day opened with an address from Phil Hogan, EC Commissioner for Agriculture and Rural Development, and continued with a **keynote presentation** from the host, Teagasc, on the delivery of an integrated package of knowledge, information, advisory and training tools to farmers in Ireland. This was followed by further interactive discussions during which participants had the opportunity to actively share their **practical experiences of new tools, approaches and perspectives** for improving knowledge exchange and promoting interactive innovation in agriculture.

See the [EIP-AGRI website](#) for more information about the seminar. Links to the key presentations and supporting documents are also included in Section 6 (Further Reading) of this report.



3. Agricultural Knowledge and Innovation Systems (AKIS)

Setting the scene for the meeting, **Inge Van Oost from DG AGRI** introduced the concept of **Agricultural Knowledge and Innovation Systems (AKIS)**.

AKIS is originally a theoretical concept which has come to be used more practically to describe and promote understanding of the **structures** and **processes** that deliver knowledge to the great diversity of actors involved in agriculture. Farmers, advisors, researchers, education / training providers, input suppliers, retailers, media services, ministries etc. are all part of national / regional scale AKIS since they all either need, produce or exchange knowledge.

“Knowledge is no good unless it can be used by those who benefit most from it”
- European Commissioner Phil Hogan -

The problem is that within many AKIS the traditional, so-called ‘linear model’ of knowledge transfer from researchers to advisers and then to farmers is not sufficiently adapted to the demands of 21st century agriculture. AKIS are dynamic and change over time, but many are not ready to solve the new and complex challenges that are arising (for example) with diminishing resources, growing populations, changing societal expectations, new technologies and the increasingly apparent impacts of climate change.

As Ms. Van Oost explained, “In the past it may have been sufficient to work out solutions to agricultural problems in a research context and then pass them down to the farmers. But nowadays we need to put together all the brains we can get to co-create knowledge and share the expertise needed to tackle the complex challenges we face.”



A dedicated Strategic Working Group (SWG AKIS) of the Standing Committee of Agricultural Research (SCAR) has been exploring the form and function of different AKIS since 2008

The PROAKIS project

In order to help better understand the diversity of AKIS in the EU Member States, and the many opportunities which exist for knowledge exchange, **Katrin Prager from the Hutton Institute in Scotland, UK**, introduced the results of the PROAKIS project.

The PROAKIS project aimed to discover how, and from what sources farmers get reliable and relevant knowledge in order to continuously evolve, to successfully solve problems and to respond to new challenges and opportunities for development. The project developed an inventory of AKIS in the EU-27 Member States with national reports and a searchable database on-line at: www.proakis.eu.

As Ms. Prager explained, "AKIS are all quite different between countries and regions. There is no 'one size fits all' that makes the ideal AKIS. Depending upon how knowledge exchanges are organised, some AKIS are more or less effective than others. Overall there is clearly potential to better organise farm advice to enhance learning and innovation in response to the changing day-to-day needs of farmers".

Thanks to the PROAKIS project there is now much greater awareness of the diversity of AKIS in Europe, but it is also obvious that knowledge flows within European agriculture need to be improved. In the light of these introductory presentations, the question then asked to participants was **what is needed to build an effective AKIS for the future?**



"Given the fact that the future of agriculture and food production, including the way it is organised, is expected to be very different from the current situation, it seems fair to conclude that the AKIS from the past are not fit for the future. The challenges ahead demand a serious reflection upon the role of actors within the AKIS, the interaction between subsystems and with other themes, AKIS policies etc."

- Strategic Working Group AKIS, Standing Committee on Agricultural Research (SCAR) -

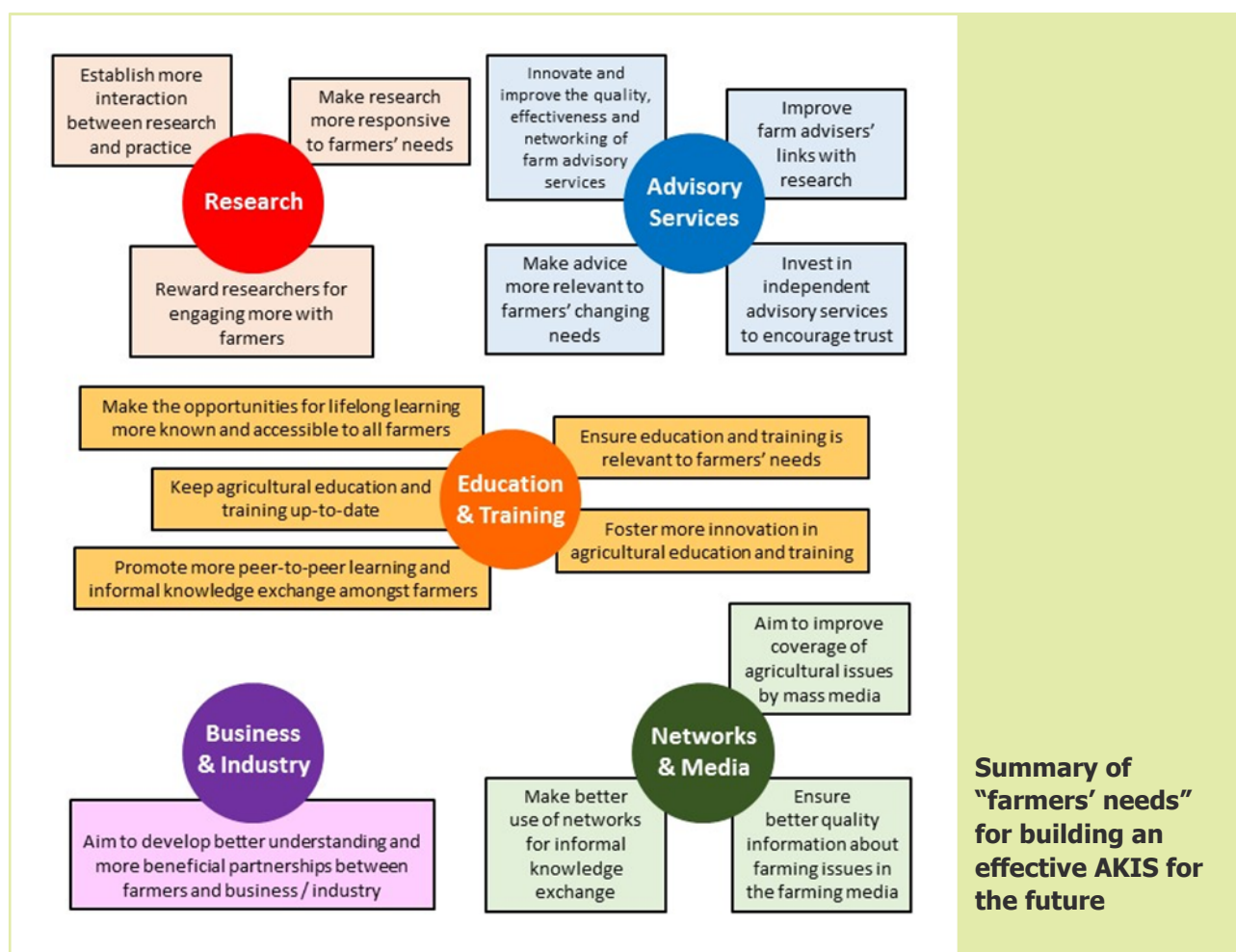
4. Building an effective AKIS for the future

Working in small groups of 6-7 people the participants were asked three questions:

- Q1: Which **parts** of the national / regional Agricultural Knowledge and Innovation Systems (AKIS) **are not** currently addressing the **real knowledge** needs of farmers? **And why?**
- Q2: How could Agricultural Knowledge and Innovation Systems (AKIS) be **better organised** in order to **more effectively** address the **real knowledge needs** of farmers?
- Q3: What incentives or support are needed to improve the co-creation and flow of knowledge to address the **real needs** of farmers?

After a very active discussion, a rich assortment of views and practical suggestions were collected and clustered. After the meeting, all responses from the participants were tabulated and synthesised to highlight the main clusters of “farmers’ needs” for building an effective AKIS for the future that related to each of the five main parts of national / regional AKIS (Research, Advisory Services, Education and Training, Business and Industry, Networks and Media).

The summary table produced is included in [Section 5](#) of this report, with a condensed summary in the figure below.



5. Collection and clustering of responses from seminar participants

Farmers' needs for building effective Agricultural Knowledge and Innovation Systems (AKIS) for the future

Reading from **left to right**, the summary table below is structured with:

- The main parts of the national / regional AKIS listed in **Column 1** (with the exception of the first row which includes general responses received);
- Corresponding responses to the three questions inserted in **Columns 2-4**, and;
- A simple summary statement in **Column 5** of the farmers' needs identified for building an effective AKIS for the future.

Q1: Which parts of the national / regional Agricultural Knowledge and Innovation Systems are not currently addressing the real knowledge needs of farmers? And why ?	Q2: How could Agricultural Knowledge and Innovation Systems be better organised in order to more effectively address the real knowledge needs of farmers?	Q3: What incentives or support are needed to improve the co-creation and flow of knowledge to address the real needs of farmers?	Farmers' Needs for Building an Effective AKIS for the Future	
General Responses about AKIS	<ul style="list-style-type: none"> • AKIS should not only focus on the farmer / producer, but also on consumer needs and opinions • Be clear about different types of research connected with AKIS: pure vs. applied, academic vs. practical etc. 	<ul style="list-style-type: none"> • More events like this with farmers! • Better co-ordination of AKIS actors in order to set goals and actions • More dialogue within AKIS • Farmers should take greater role in AKIS • Various "non-farmer" actors in the AKIS should have more direct contact with farmers' realities (lack of money, lack of time) so that they better understand the farmers' needs • Make room for <u>more diversity</u> in AKIS • Institutions need to be more "down to earth" and focused on "common sense" • AKIS should be more focussed on the <u>economics</u> of innovation • AKIS must focus on sustainability (considering both environment and profitability) • Promote AKIS more effectively – demonstrate the benefits - attract new actors to engage 	<ul style="list-style-type: none"> • What is a "successful" farmer? What kind of information does an AKIS aim to transfer to a "successful" farmer – environmental? Productivity / profitability? Both? • What can be done for the farmers who don't need any help or new knowledge (80% of all farmers)? • Targeted financial support • AKIS should be paid partly by farmers and society • Tax incentives! 	

Q1: Which parts of the national / regional Agricultural Knowledge and Innovation Systems are not currently addressing the real knowledge needs of farmers? And why ?	Q2: How could Agricultural Knowledge and Innovation Systems be better organised in order to more effectively address the real knowledge needs of farmers?	Q3: What incentives or support are needed to improve the co-creation and flow of knowledge to address the real needs of farmers?	Farmers' Needs for Building an Effective AKIS for the Future	
<p>Research</p>	<ul style="list-style-type: none"> • Good capability exists to carry out relevant research, but poor connectivity exists between researchers and farmers -> researchers do not know the <u>real</u> problems of farmers • More interaction is needed – researchers need to know farmers' problems • There is a cultural gap between researchers and farmers, including communication • Agricultural researchers do not talk to farmers • Researchers are not reaching out to farmers • Researchers must connect to practical users 	<ul style="list-style-type: none"> • Put researchers in direct contact with farmers for each to hear the other • There should be a "contact point" for connecting farmers' urgent questions / problems with relevant research capacity • More knowledge brokers as intermediates between farmers and researchers • More participatory research e.g. example of Soil Association from UK 	<ul style="list-style-type: none"> • Support for initiatives that take researchers to actually spend time on farms • Funding for farmer groups (organised by farmers or independent advisers) to meet with researchers e.g. as in Teagasc • Support for more co-creation projects involving collection of needs from practice, joint development of projects, access to budget, outputs for all participants • A proportion of research funding should be linked to farmer participation at design / early implementation stage • More support for the EIP! 	<p>Establish more interaction between research and practice</p>
	<ul style="list-style-type: none"> • Research often meets farmers' needs, but is vulnerable to the influence of politics and new funding priorities • Research is not fully addressing farmers' needs, but the <u>situation is improving</u> • Research is only partially meeting practical needs because farmers are not involved in setting the EU/national research agenda • Research must be applied at farm level • Researchers are not in touch with farmers and therefore do not provide practical solutions • Research is too theoretical • Research is not focussed on farmers' problems • Outputs of research are not suitable for practical farmers • Research is too reductionist, farmers need a 'systems' approach • Results are often useful, but not always easy to translate into practice • The timescale of research projects is too slow for farmers to wait (results simply 	<ul style="list-style-type: none"> • Ask farmers what needs to be researched • Farmers need to take more control of research and researchers need to know source of money (levies) • More stakeholder groups to inform research (must involve farmers) • Farmer-led research focused on farmer needs and creating real impact • More adviser-moderated farmer discussion groups to guide research • Use discussion groups of 10-15 farmers to exchange ideas during visits to research farms / field experiments • Carry out research on real farms (as alternative to research farms) • Farmer-led and managed practical trials on their own farms (advised, not controlled, by researchers and advisers) • Faster response to farmers' needs with practical and ready-to-use solutions • Research should focus on long-term projects, not just 3-5 years 	<ul style="list-style-type: none"> • More incentives / direct funding for farmer-led research • Vouchers and prizes for farmers to come forward with needs / ideas for research • Strengthen link between levies paid for research and farmer control over research topics • Compensate farmers who engage in research projects • EIP-AGRI Operational Groups! 	<p>Make research more responsive to farmers' needs</p>

Q1: Which parts of the national / regional Agricultural Knowledge and Innovation Systems are not currently addressing the real knowledge needs of farmers? And why ?	Q2: How could Agricultural Knowledge and Innovation Systems be better organised in order to more effectively address the real knowledge needs of farmers?	Q3: What incentives or support are needed to improve the co-creation and flow of knowledge to address the real needs of farmers?	Farmers' Needs for Building an Effective AKIS for the Future
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	<p>confirm things that farmer has already discovered)</p> <ul style="list-style-type: none"> • Research results are not in time • Communication of information coming from research is not appropriate for practical farmers • Researchers are not speaking the language of farmers • Research topics are very technical, not linked to reality on farms • Specific needs of small-scale farming are not addressed by modern research • Research only addresses the needs of larger farmers • Farmers must be able to understand research results • The information about what research is being done is not getting to the farmers • Farmers do not know what research is applicable to their interests • Long-term research is needed which will address farmers' needs in 10-15 years, not just their needs today • Basic research is not addressing the immediate knowledge needs of farmers, but it may be addressing their future needs • Most important for farmers is that research contributes to profitability 	<ul style="list-style-type: none"> • Provide farmer training to help them identify, communicate and solve problems themselves • To create a kind of platform for collecting the needs of farmers in a problem orientated way • Better inventory of farmers' needs • Make research results freely available and easy to access – including comparative farm data • More "research open days" to inform farmers and get feedback 		
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	<ul style="list-style-type: none"> • Researchers are not motivated to work on practical problems with farmers • Research is driven by search for funding, not the real needs of farmers • Researchers are only interested in publishing peer-reviewed papers • Researchers are assessed on basis of publications • Research is focussed on scientific excellence rather than farmers' needs • Researchers are promoted based on peer-reviewed papers, not their good advice to farmers 	<ul style="list-style-type: none"> • Researchers should be better rewarded for co-operation with farmers • Introduce an award for the (applied) researcher with best farm innovation (voted by farmers) 	<ul style="list-style-type: none"> • New evaluation criteria for researchers to reward their work with farmers rather than publications 	<p>Reward researchers for engaging more with farmers</p>
<p>Farm Advisory services</p>	<ul style="list-style-type: none"> • Do not forget – there are <u>many</u> excellent advisers (technical and sector knowledge) • Overall there is a good level of advisory service and access (public and private) • Existing advisory services are largely meeting demands, but they are too fragmented and advisers must be kept upskilled • Advisory services <u>are</u> working, but not for all countries, sectors and farm sizes • Advisers are better orientated to farmers needs than researchers are! • Advisers spend too much time on compliance paperwork • Technical skills / knowledge of advisers are not upgraded • Advice is too general • Information may be out of date • Advisers struggle to be good on all topics • Too much focus on getting paid, whilst little expertise on real problems / needs of farmers • Cost of a “good” advisor (usually private) is prohibitive • Advisers are not passionately interested in the subject • Lack of co-operation amongst advisers • Adviser may be expert in a particular issue, but does not have a system / business model view 	<ul style="list-style-type: none"> • Less paperwork and more time for the practical processes • Better training of advisers • More specialist advisers • An adviser-adviser network in order to ensure more consistent messages • A network of advisers would be a good idea (but success will depend on individuals) • More advisers are needed because person-to-person contact is most useful and effective • Greater use of technology to imitate person-to-person contact (webcams, skype, webinars) • More follow-up of advice to understand what works well / less well in practice • More focus on direct exchange between farmers • Facilitate learning – don't just tell farmers what to do. Explain the logic / science behind the advice, then there is a real learning curve • Teams of different experts / advisers are needed to provide more <u>integrated support</u> to complement farmers' skills (e.g. for development of business ideas) • Fewer and more comprehensive places to seek information 	<ul style="list-style-type: none"> • Funding for an Adviser Network to share knowledge more quickly and efficiently, and keep advisers up-to-date • We need more funding for advisers to <u>host processes</u> e.g. co-creation of knowledge • Incentives for more Discussion Groups (peer-to-peer) with advisors as facilitators • Invest in new technologies for advisory services e.g. ICT (3D glasses etc.) to link farmers and advisers for remote diagnosis of on-farm problems • Financial and technological support for on-line advisory forums • Set-up an information platform that translates research knowledge etc. into language / terms that a farmer can quickly and easily read and use • A <u>Farming Hot-line</u> - economic support for 24 hour, live (via the internet) interactive problem-solving and question-answering service for farmers, connecting them directly with the “actors” (or their representatives) who have the information that farmers seek • Award for Farm Adviser of the Year 	<p>Innovate and support the quality, effectiveness and networking of farm advisory services</p>

	<ul style="list-style-type: none"> • A more integrated service is needed • More follow-up to advice is needed • Insufficient government funds invested in on-farm advice • There is insufficient innovation in delivery of advisory services 	<ul style="list-style-type: none"> • Better organised points of contact between farmers and sources of information (e.g. websites, study groups etc.) 		
	<ul style="list-style-type: none"> • A gap exists between advisers and researchers • Advisers have poor linkage with research • Inadequate “translation” of research knowledge into language suitable for advisers and farmers 	<ul style="list-style-type: none"> • Stronger linkages between advisers and researchers • Advisers should be a facilitator between farmers and researcher • Consult with advisers in order to specify research priorities 	<ul style="list-style-type: none"> • Funding for more cooperation between farmers, advisers and researchers (multi-actor projects) 	<p>Improve farm advisers' links with research</p>
	<ul style="list-style-type: none"> • Advice is not specific to individual situations • Advisers are too focussed on top-down knowledge transfer • Advisers have knowledge, but don't always apply correctly to local / regional context • The advisory needs of farmers differs from region to region • Farmers do not need “one size fits all” advice. They need individual advice addressing sustainability factors relevant to them – economic, social and ecological • Advisers are not addressing the “new needs” of farmers e.g. those coming with short supply chains (how to reach customers etc.) • Advisory services are not addressing changing needs – climate change, sustainability issues etc. • Farmers are willing to pay, but advice must be profitable 	<ul style="list-style-type: none"> • Organise a “local office” where farmers can go to select and collect all forms of advice relevant to them • “Face-to-face Farm Google” – an office with a list of services available in the region that is adapted to the needs of different farmers • Organise farmer groups (with a facilitator / advisor) to identify real problems and try to find solutions • More benchmarking (e.g. Farm Profit Monitors) should be organised – collection and comparison of financial and other data is very helpful for farmers 	<ul style="list-style-type: none"> • More incentives for encouraging bottom-up farmer discussion groups (co-ordinated by advisers) 	<p>Make advice more relevant to farmers' changing needs</p>

	<ul style="list-style-type: none"> • Lack of independent advisers • Insufficient trust in advisory services • Conflict of interest where advisor is employed by company selling agricultural products • Advisory entities are connected to industry and therefore not independent • Must be independent, not selling products • Must be more independent - paid by public money and/or farmers, not commercial interests 	<ul style="list-style-type: none"> • More farmer discussion groups facilitated by advisers can build trust 	<ul style="list-style-type: none"> • Invest in building trust. Bring communities of farmers, suppliers, buyers etc. together with a neutral catalyser. Win-win solutions need vision! 	<p>Invest in independent advisory services to encourage trust</p>
<p>Education & training</p>	<ul style="list-style-type: none"> • Education and training best meets the real knowledge needs of farmers • Education and training (whether academic or practical) works well if it is properly resourced • Education is not focussed on issues that are <u>really relevant</u> to farmers • Must separate the real needs of farmers from the needs of agro-industry • Education / training is not practical enough • Universities lack sufficient links to practice • Beware of too much theory that students cannot implement on-farm • Not enough focus on training needs associated with transition from student to active farmer • More education / training needed for new entrants • Many important issues are not addressed in agricultural education e.g. succession planning, business transfer or market questions 	<ul style="list-style-type: none"> • System has to convince farmers that they need education / training • More practical training according to farmers' needs • Must teach farm management as <u>combination</u> of business and technical • Educate farmers on good practices, including reducing production costs 		<p>Ensure education and training is relevant to farmers' needs</p>

	<ul style="list-style-type: none"> • Education is working, but is not adapted to the changing realities in different regions • Curricula are out-of-date • Agricultural education is quickly out-dated • Teachers are not farmers themselves and are too far removed from real-world farming issues • Time-lag with the updating of training with new knowledge is a problem 	<ul style="list-style-type: none"> • Practical training connected to research should be offered (especially to young / new farmers) 		<p>Keep agricultural education and training up-to-date</p>
	<ul style="list-style-type: none"> • Education and training must be more accessible • Times of training are not convenient for farmers • Life-long learning is important • Older farmers (40+) are not encouraged / supported to learn new things • Lack of awareness amongst farmers of available training courses 	<ul style="list-style-type: none"> • Learning / education opportunities for <u>all farmers</u> (not only young farmers) • Need to differentiate the knowledge needs of farmers more clearly – needs of a farmer with 50+ years' experience is different from a farmer with 5 years' experience • More appropriate delivery of training on farmers' terms (season, location, timing etc.) 	<ul style="list-style-type: none"> • Economic incentives are needed to encourage farmers to attend training events etc. – the cost of their attendance is <u>real</u> • Must cover costs of replacement labour when farmers are on training courses • Financial incentives should be linked to behavioural changes arising from training 	<p>Make the opportunities for lifelong learning more known and accessible to all farmers</p>
	<ul style="list-style-type: none"> • Practical agricultural schools meet farmers' needs, but are not very innovative • Innovation in agricultural education / training is needed • Not enough use of internet for training (e.g. webinars) 		<ul style="list-style-type: none"> • Make it a condition of farm support payments / grants that the farmer must undertake relevant training courses • Develop an "open educational platform" for farmers with on-line database of best practices, including photos, Youtube videos etc. • Farmers need support to balance / mitigate the risk from trying new things and "learning by doing" e.g. funding some of the costs associated with farm trials • Award for agricultural teacher / lecturer of the year 	<p>Foster more innovation in agricultural education and training</p>

	<ul style="list-style-type: none"> • Real learning involves actual practice or seeing things work in practice • Language is the key obstacle to improve flow of knowledge between EU farmers 	<ul style="list-style-type: none"> • Farmer-to-farmer exchange is the most useful way of learning • More courses / practical events are needed on successful farms to demonstrate good practice • Greater attention to inter-generational learning / knowledge exchange • Voluntary discussion groups and social networks for peer-to-peer learning to solve problems • Need more facilitators for meetings between farmers • Train farmers as facilitators – new skills for the future 	<ul style="list-style-type: none"> • Financial support for peer-to-peer learning between farmers • Give support for farmers to visit other farms to learn • More opportunities for practical exchanges between EU farmers (ERASMUS for farmers) • Funding for networks of national / EU demonstration farms • Support for proper setting-up of demonstration farms as “learning experience” • Financial incentives for best farmers to host visits by other farmers to see good practice, innovations etc. 	<p>Promote more peer-to-peer learning and informal knowledge exchange amongst farmers</p>
Networks & media	<ul style="list-style-type: none"> • General media is too negative about farming • “Good news” related to farming is missing in the mass media • Knowledge is not news-worthy • Mass media only presents superficial analysis of farming issues 	<ul style="list-style-type: none"> • Press should tell more success and failure stories to the general public in order for society to understand the value of farmers 		<p>Aim to improve coverage of agricultural issues by mass media</p>
	<ul style="list-style-type: none"> • Media is often not up-to-date • Mass media provide information, not knowledge • Insufficient practical and technical information • Media should promote more good examples / practices (big potential) • Media should promote innovative solutions 	<ul style="list-style-type: none"> • Need for more periodic newsletters or briefs for getting the right knowledge to farmers at the right time 		<p>Ensure better quality information about farming issues in the farming media</p>
	<ul style="list-style-type: none"> • Lots of local / small-scale networks exist and function well by providing practical solutions for farmers, but they are not supported • Many successful, demand-driven networks with clear target groups, but not connected with formal AKIS • Networking is not always supported by physical infrastructure e.g. availability of good internet access in rural areas 	<ul style="list-style-type: none"> • Creation of more thematic networks linked to AKIS at regional level • More regular face-to-face exchange between AKIS actors at regional level • Create innovation networks with farmers being the core of the process • Work with all forms of media to promote farmer networks and networking • Social media is a very good way to connect with other farmers 	<ul style="list-style-type: none"> • Financial support for farmers to join networks • Effective networks need a dynamic facilitator (agricultural organisations have a task here) • Funds needed to connect more farmers to the internet as a prerequisite to using and benefiting from AKIS • To generate real innovation must find incentives to connect with new players – consumers, designers, ICT-companies etc. 	<p>Make better use of networks for informal knowledge exchange</p>

Business & industry	<ul style="list-style-type: none"> • Business and industry are worst at meeting the real needs of farmers • Good advice for strengthening productive, but insufficiently addressing environmental and societal needs • No attention to local level adaptation of solutions • No holistic approach to farm management • No view on sustainability • Commercial interest vs. farmers' needs • Meeting the needs of shareholders, not farmers • Perception that industry may have too much influence on research and advice • No objective advice available from business and industry • Businesses only transfer the knowledge <u>they</u> need farmers to have • Too much selling, not enough advice • More focused on selling than farmers' needs • Only interested to sell (often unnecessary) stuff to farmers • Mainly want to sell products • Industry success measured in sales • Position of producers in supply chain is weak • Business and industry do not want farmers to be independent • Big industry controls the markets 	<ul style="list-style-type: none"> • There <u>is potential</u> for business and industry to improve data sharing for benefit of farmers 	<ul style="list-style-type: none"> • Support / encourage businesses to share data and emerging trends <u>earlier</u> to enable producers to supply new products to meet new market demand • Incentivise farmers to collaborate to add value to products, short-term supply chains and sell locally / directly to chefs and retailers -> thereby reducing % lost to wholesalers / supermarkets 	<p>Aim to develop better understanding and more beneficial partnerships between farmers and business / industry</p>
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6. Finding, creating and using new knowledge

Inspiring success stories

An especially valuable feature of the workshop was the opportunity to share practical experiences and new perspectives on a range of alternative tools and approaches for improving knowledge exchange and promoting interactive innovation amongst farmers. A total of 16 success stories about finding, co-creating and using new knowledge were shared in 8 parallel discussions on the following themes:

- Farmer-to-farmer knowledge exchange
- Social media for farmers
- Farmer-led interactive innovation and learning
- Innovative agricultural media
- Better farm performance through bench-marking
- Knowledge networking
- Thinking out of the box
- Pooling resources and knowledge for future farming

Around half of the success stories presented were contributed by farmers.

[Click here for an overview and further links.](#)



Some lessons learnt and 'hot tips' from practical experience

Building knowledge networks for farmers

There are a growing number of practical 'knowledge networks' being used by farmers. These range from EU-level thematic networks financed by Horizon 2020 that focus on compiling and disseminating best practices and research results to farmers in easily-understandable language, to farmer-led "platforms" exchanging new knowledge and innovations for practical uptake and further adaptation.

Workshop participants shared some key lessons from their growing experience of establishing and running these knowledge networks:

- Peer-to-peer exchange of knowledge and experience is a very powerful approach and knowledge networks are relevant to all aspects of agricultural production
- Direct interaction with other farmers combined with seeing practical examples of good practice / successful alternatives plus up-to-date information on profitability can change farmer behaviour
- Successful knowledge networks are built on the willingness of participating farmers, scientists, advisers etc. to share without reservation their knowledge and long-term experiences and observations. The more diverse this experience is, the better
- Some specific tools that work well for building knowledge networks include on-farm visits and group discussions; visual web-based information; easy to use interactive information tools; web-based programmes for benchmarking performance; networking for common monitoring of pests and diseases etc.
- Note that integrated approaches tend to work best. For example, combining face-to-face, on-farm contact with web-based networking. Try to avoid relying only on web-based networking, it is usually less effective
- Ideally, knowledge networks are animated by independent facilitators or initiated and driven by farmers. Both approaches both work well
- Bringing scientists into the network to communicate directly with farmers, especially face-to-face on-farm, creates a very conducive environment for problem solving and developing innovative ideas
- Be aware that effective networking can be hindered by too much formality
- There is much additional benefit to be gained from inter-regional and trans-national networking, but it requires extra effort and may involve additional skills, such as other languages
- When building your network, take care not to spend too much time and effort trying to involve farmers who are difficult to reach or who may not wish to be contacted. To begin with it is more productive to work with farmers who are interested and easily accessible. It will be easier to grow the network later when you have real results / benefits to show

It is widely agreed that there is great potential for the creation and facilitation of more knowledge networks for farmers, both formal and informal. The greater integration of knowledge networks into regional / national AKIS should be a high priority and the integrated approach of organisations, such as Teagasc in Ireland which combines advising with research and education, should be adopted more widely.

Farmer groups for innovation and learning

Just like any other entrepreneur, most farmers are used to solving their own problems. Farmers naturally tend to experiment. They understand the specific situation of their farm and are constantly adapting their farming systems to improve productivity and profitability. But when farmers trial or test, they are usually doing it alone since the majority of agricultural research takes place off-farm. The EIP-AGRI aims to close this gap between research and practice, and to promote more farmer-led interactive innovation. Some initiatives for farmer-led innovation and learning already existed before rural development funding became available for setting-up and running EIP-AGRI Operational Groups and interactive innovation projects.

Facilitated / moderated farmer groups were discussed during the workshop and some useful learning points were noted:

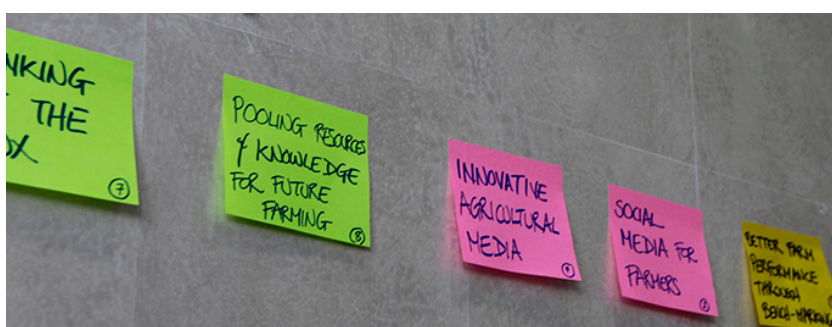
- The big research-based knowledge that flows from institutes to farmers is undeniably important, but it must be complemented by local knowledge and usually must be adapted to the circumstances / context of individual farms
- Farmer groups are very effective for peer-to-peer learning and can also be incubators of innovation, but they need a skilled and credible facilitator and in some cases also support / guidance from a researcher
- "Time is money" for farmers and they will be reluctant to participate in group meetings unless there is the possibility of real benefit
- An important asset for the functioning of a new group is that the farmers face the same kind of problems and are all open to receive feedback from their colleagues
- The role of the group facilitator is not to tell the farmers what to do. Their role is to stimulate interaction between the farmers in the group, to understand the flow and guide the discussion towards problem solving, to moderate questions and answers and to highlight lessons learnt
- It is very useful if the facilitator is familiar with the subject of the discussion and result-oriented. He/she should be sufficiently able to understand which approach is more practical and easy to apply. Through this capacity the facilitator will get more respect from the group, which helps his/her functioning. Note that not all advisors/researchers are good facilitators. Some farmers may also be good facilitators. The key is to have "open eyes and ears" for all members of the group.
- Many farmers come to appreciate interactive group discussions because of the potential to get concrete, practical answers to their problems. But remember that this approach is most effective for those farmers that are open minded and actively seeking knowledge
- Be patient - time is needed for open communication and trust to be built between the members of a group. Allow 1-3 years for a new group to become well established and operating smoothly. The process will speed up when members of the group stop seeing neighbouring farmers as competitors, but as people who struggle with the same problems and questions!
- All group meetings must be well-prepared. Badly organised meetings quickly lose participants and credibility
- A paradigm shift commonly occurs in groups when the participants move from being "advice takers" to become "active builders of solutions" and start to share all kinds of information, knowledge and skills with each other
- Most farmer groups begin with a focus on practical problems and practical solutions, but it is also important to stimulate farmers to be more aware of their future because their world is changing
- Good advice "created by farmers for farmers" spreads quickly
- Be aware that group-based learning and innovation often work best at a local level, where language and culture are common. However, farmers may want to travel long distances to participate in a group of particular interest. In these cases, a few first face-to-face meetings can build trust, and then be followed by a web-based platform, social media etc. which can help them to keep in touch without excessive travel cost
- Farmer groups can attract various sources of funding, especially when associated with innovation – be creative!

Effective communication with on-line, streaming videos

Agricultural journalism is changing and new / alternative media are being used to communicate information for, and about, farmers. In particular, there has been a big increase in the use of on-line streaming videos, such as Youtube, which are proving very useful to address the information gaps that commonly exist between i) research and practice, and ii) farmers and consumers.

Some hot tips from workshop participants for making effective use of Youtube were:

- Your goal should define the medium and the format used. Youtube videos are a great tool for communicating more complex / detailed information. Use other tools for other purposes e.g. Facebook is a good promotional tool
- Limit your videos to one topic and make them as short as possible (maximum of 3 minutes)
- Ensure that the people in your videos are authentic, know what they are talking about and communicate “face to face” with the viewer. Farmers are always the best, especially those who are proud of their farms, products and ideas and want to present them to a broader audience
- Remember that people watching your videos want to be entertained as well as informed
- Videos should be good quality with clear sound and good editing
- Discourage the use of over-complicated language, keep things clear and simple
- Take care to avoid mistakes and communicating the wrong information – you will quickly lose credibility
- Choose a good title / teaser for your video in order to attract people
- Tag your videos well
- Links to YouTube videos should not be included in a normal printed document. Use hyperlinks in an electronic format (e.g. PDF file or e-newsletter) if you want to link to Youtube from a text-based document
- Remember that you are building a community of users / viewers. Be patient and realistic, it will take time and you will not reach everybody



Practical use of social media by farmers

Social media, such as Twitter, Facebook, Pinterest and Snapchat, are increasingly used by farmers to share ideas, discuss pressing issues, debate hot topics or simply to connect with people who they may not otherwise have access to (e.g. European level organisations).

Social media are easily available and accessible on any electronic device, such as smartphone or laptop. However, in order to make full and effective use of the different media available, participants in the workshop agreed that it is advisable to think about a few things in advance:

- Try to choose the most appropriate social media channels for your specific needs / interests. There is a difference between private and professional use
- Engaging with social media is time-consuming for farmers. Try to create real benefits (e.g. access to new knowledge) for them
- Explore what is already in place and see what additional things you can create
- Be clear who your target audience is. For example, do you plan to use social media as part of your business? Will you use it for advertising, developing a brand and/or building a reputation?
- Identify the needs of your target audience
- Where appropriate encourage a quick response on questions. For example, with Snapchat you can take pictures of a disease or pest and ask what specific disease it is and how to solve it.
- Use a catchy hashtag, it really helps to get attention and focus communication
- One advantage of social media is that you can create specific discussion sessions during specific times of the week, but to be effective these times should be chosen very carefully
- Don't expect everyone to contribute to discussions. Some people will simply participate to gather information or get exposed to new ideas, opinions and perspectives
- Establish some basic rules for the behaviour of your audience. Consider using some form of moderation if necessary
- Farmers learn with their eyes. Make use of visual "eye catchers" to attract attention, but always ensure there is related content behind these for people that want to dig deeper
- On-line videos are a powerful tool to combine with social media and appeal especially to younger people
- Always be aware of the risks of social media, especially posting comments / information that you might regret afterwards
- Be aware of the changing rules of social media providers

7. Further reading

Presentations on 3 December, 2015

- [Welcome](#) - Mr Gerry Boyle, Director Teagasc, Ireland
- [Agricultural knowledge systems and interactive innovation](#) - Ms Inge van Oost, Directorate-General Agriculture and Rural Development, European Commission
- [How can advice and knowledge be better organised to support farmers?](#) - Ms Katrin Prager, The James Hutton Institute, UK
- [How can National Rural Networks fit into the existing AKIS and help organise knowledge flows](#) - Mr Pawel Szabelak, Polish Ministry of Agriculture and Rural Development

Presentations on 4 December, 2015

- [Speech](#) - Commissioner Mr Phil Hogan
- [Delivering an integrated package of knowledge, information, advice and training tools](#) - Mr Tom Kelly, Teagasc, Ireland

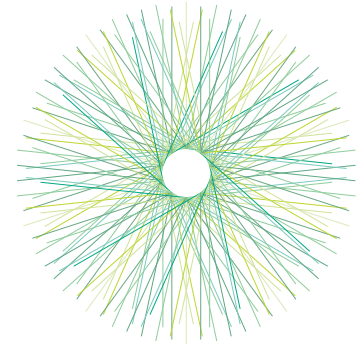
Seminar documents

- [Participants list](#)
- [Final programme](#)
- [CVs of the speakers](#)
- [PROAKIS poster session](#) (Day 1)
- [Success stories presented in the parallel discussions](#) (Day 2)

More information

All publications available at the seminar are also downloadable from the EIP-AGRI website

- [EIP-AGRI brochures](#)
- [EIP-AGRI factsheets](#)



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AGRICULTURE & INNOVATION



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

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

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

- the EU Research and Innovation framework, Horizon 2020
- the EU Rural Development Policy

funded by  European Commission



Join the EIP-AGRI Network & Register via www.eip-agri.eu

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