



Issue 1, September 2009

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Editorial

Welcome to the first issue of the ICT-AGRI Newsletter. The purpose of this first newsletter is to introduce the ICT-AGRI ERA-NET. The newsletter is intended to supplement our website which is now 'live' at www.ict-agri.eu.

Why ICT-AGRI? Global demands for bio-products (food, feed, bio fuels, biomaterials, etc) as well as public requests concerning environment, ethical requirements and animal welfare are increasing.

Worldwide there is a growing need for the development of innovative technologies applicable for biological systems. Information and Communication Technologies (ICT) and Robotics have the possibility to take into account natural variability in biological systems and therefore reducing the negative impacts on the environment of the agricultural production.

But productivity and profitability in agriculture also have to increase to meet the increasing demand for food worldwide and tackle the challenges mentioned above. We therefore need to develop and utilise new technologies.

The overall aim of the ICT-AGRI ERA-NET is to launch new common calls and improve the coordination of research programmes within ICT and robotics in agricultural and environmental areas.

The ICT-AGRI ERA-NET is horizontal in relation to the European Commission's 7th Framework for Research. The ERA-NET addresses the three themes: Theme 2 (Food, Agriculture, Fisheries and Biotechnology), Theme 3 (ICT) and Theme 6 (Environment including Climate Change).

In this way ICT-AGRI is unique. Only few of the already established ERA-NETs have been cross-thematic.

I am looking forward collaborating with our ICT-AGRI partners and other stakeholders in the coming years.

It is my hope that we with the start of this ERA-NET will create a strong network that will take part in joint activities and contribute to building and maintaining the capacity of the European Research Area within ICT and Robotics.

Niels Gøtke, Coordinator of ICT-AGRI



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Update from ICT-AGRI

About ICT-AGRI

ICT-AGRI is the acronym for the network which has the full title "Coordination of European Research within ICT and Robotics in Agriculture and Related Environmental Issues".

ICT-AGRI began 1 May 2009 and will be running for 51 months.

The ICT-AGRI network is funded by the European Commission's ERA-NET scheme under the 7th Framework Programme for Research and receive community funding of € 2.3 million.

The Project Consortium is comprised by 18 partners and 12 observer organisations covering 20 countries. This ensures



An example of a test field robot © Ferv Photo Library

a unique platform for building and maintaining international collaborations and networks.

"This ERA-NET is unique because it's cross-thematic nature is building bridges between disciplines and research areas not commonly joining forces."

Aim and objectives of ICT-AGRI

The overall aim of ICT-AGRI is to strengthen and coordinate the European research in and to develop a common European research agenda and launch common calls within the areas of ICT and robotics in the agricultural and environmental sector.

The ERA-Net will announce research calls that will be based on funds from the partici-

pating countries' national research programmes. The first call is expected to be launched in 2010.

The purpose is to pool fragmented human and financial resources in order to improve both the efficiency and the effectiveness of Europe's research efforts.

ICT-AGRI will help coordinating European research in ICT and robotics and develop common research agenda based on shared priorities.

More specifically the objectives of the ERA-NET ICT-AGRI are:

- Mapping and analysis of existing research and future needs
- Development of instruments and procedures for trans-national funding activities
- Development of strategic trans-national research agenda and programmes
- Establishing and maintaining of international collaborations and networks

New technologies are rapidly emerging and will be capable of revolutionizing farming in the near future. ICT-AGRI is supporting the development and implementation of these new technologies for a competitive, sustainable and environmentally friendly agriculture.

ICT-AGRI research call 2010

As part of developing a framework for coordination of trans-national research, the ICT-AGRI network will announce a joint research call in 2010.

It is hoped that this call will involve several of the ICT-AGRI partner organisations so that the financial and administrative resources can be pooled to make the best use of the funding available.

In this way duplication of research will be avoided and a critical mass for the research consortia will be ensured.

Topics and funding

The topics for the first call will be discussed at a workshop which is held in Ghent, Belgium on 14-15 October 2009 and finally decided at a Governing Board meeting in November 2009.

The funding scheme to finance the call will be determined by the partner organisations participating in the call. See fact box for more information on funding schemes.

More information on the first joint ICT-AGRI call will be announced on the ICT-AGRI website and in the next ICT-AGRI Newsletter.

Fact box: Funding schemes

- **Real common pot**
 - National funds are pooled with no borders
 - Joint calls on common topics
- **Virtual common pot**
 - National funds are restricted to the country providing the funds
- **Non-competitive common pot**
 - National funds are utilised in the country providing the funds
 - Partners are each responsible for their own funding

About the European Research Area

Why and what is the ERA-Net scheme?

ICT-AGRI is funded by the European Commission's ERA-NET scheme under the 7th Framework Programme for research.

Starting with the European Framework Programme 6 for research, the European Commission introduced the ERA-Net scheme.

The three letters E.R.A. stand for "European Research Area" and include the intention to create a European internal market for research, restructuring the European research fabric and the development of a European research policy.

The ERA networks have been created to develop, support and strengthen the cooperation and coordination

of research programmes in the EU at the trans-national level by facilitating practical initiatives to coordinate regional, national and European research programmes and agendas in specific fields.

In the Framework Programme 7 for research the ERA-NET scheme was reinforced by broadening and deepening the scope and activities towards mutual opening of programmes.

The ERA provides attractive conditions and also effective and efficient governance for research and investments in the R&D sectors in Europe.

You can read more about ERA-Nets here: <http://ec.europa.eu/>

Why ERA-NET?



European Research Area

- ⇒ **Achieving critical mass**
- ⇒ **Better use of resources**
- ⇒ **Join forces to provide common answers to common problems**
- ⇒ **Addressing global issues**
- ⇒ **Developing common approaches**
- ⇒ **Avoiding overlap and duplication of research**
- ⇒ **Exchange good practices**
- ⇒ **Build expertise**
- ⇒ **Access to expertise**

...and this will help to reduce the fragmentation of research efforts made at national level in Europe.

ICT-AGRI Work Packages

Work Package 1	Work Package 2	Work Package 3	Work Package 4	Work Package 5
Coordination, Management & Dissemination	Mapping and Analysis of Existing Research and Future Needs	Developing Instruments and Procedures for Transnational Funding Activities	Developing a Strategic Transnational Research Agenda and Programme	Establishing and Maintaining Linkages to other Networks and Disciplines
WP Leader: Denmark (DFIA) WP Deputy: Germany (BLE)	WP Leader: Belgium (EV-ILVD) WP Deputy: Malta (MCST)	WP Leader: Israel (MARD) WP Deputy: Greece (GRNET)	WP Leader: Germany (BLEV), WP Deputy: Switzerland (FDAG)	WP Leader: Italy (MiPAAF) WP Deputy: Latvia (LAS)
Objectives:	Objectives:	Objectives:	Objectives:	Objectives:
<ul style="list-style-type: none"> • Overall coordination and management of the ERA-NET • Support partners and overview progress • Reporting to the Commission • Ensure communication and dissemination of results 	<ul style="list-style-type: none"> • Mapping of current funding and research programmes • Compare and contrast programmes • Setting up database on national programmes • Identify common trends, research gaps and emerging needs 	<ul style="list-style-type: none"> • Develop instruments, mechanisms and procedures for joint calls • Implement joint research calls • Monitoring of projects • Evaluate impact of joint calls and refine the instruments and procedures 	<ul style="list-style-type: none"> • Develop and coordinate a transnational strategic research agenda • Prioritise research areas and topics • Provide foresight scenarios • Review and evaluation of decision-making process in national programmes 	<ul style="list-style-type: none"> • Collaboration with external stakeholders • Establish and maintain linkage with relevant networks • Evaluate best practises • Develop a framework for long-term networks and disciplines

Communication & Dissemination

Routes of Communication by Carina Madsen

Internal and external communication as well as dissemination of project progress and results are important and integral aspects of ICT-AGRI. Therefore a project website has now been launched and a recognisable project logo developed.

The main stakeholders of ICT-AGRI are funding organisations, researchers and knowledge users. The use of different communication tools and communication routes will help to ensure the network is reaching the intended audience.

ICT-AGRI website

The ICT-AGRI website www.ict-agri.eu has now gone 'live' and the project logo has already become the easy recognisable identity of the ICT-AGRI ERA-NET.

The website provides project partners and stakeholders up-to-date information on project progress, upcoming events and project publications – not to mention that call documents, including application material, will be announced at the website.

The website will be an important tool for information exchange throughout the project both as internal information resource for project partners, but also for effective external communication to interested stakeholders.



On the website you will find:

- Project Information
- News & Newsletters
- Publications and Reports
- Presentations & Posters
- Call Information & Application Material
- Meetings & Events
- Knowledge Bank
- Glossary
- Links Collection
- Members Forum



ICT-AGRI logo

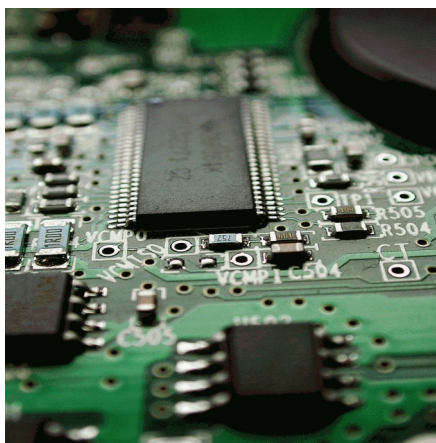
The idea behind the ICT-AGRI logo is to combine the organic and environmental theme with the technological aspects of the cross-thematic network. This is demonstrated by a leaf made up by soldering connections. The logo will help giving the network a 'corporate' identity.

Newsletter

The **ICT-AGRI Newsletter** will be published two to three times a year and will be available in hard copy on request and it will be posted on the ICT-AGRI website.

The purpose of the newsletter is to keep stakeholders up-to-date with the progress of ICT-AGRI and to inform about topical issues. We are inviting partners and stakeholders to provide input to the **ICT-AGRI Newsletter**.

Visit our website www.ict-agri.eu and sign-up to the newsletter to ensure you are among the first to receive the latest ICT-AGRI news and updates.



Article

Towards smart management and regulation in agriculture by Iver Thyssen

The perspective of advanced technology in agriculture is to regain care of details in farming. European farming is increasingly becoming industrialised with larger farm units, bigger machines, more chemicals, more no-risk management and less manual work.

The intimate knowledge by farmers and farm workers about animals and fields are long gone. Productivity was improved, but agriculture became a threat to the environment and the safety of food. Society reacted by imposing regulation on the use of chemicals (fertilisers, pesticides, and medicine) to protect nature, soil, water and food safety.

However, neither agricultural management nor environmental regulation is particularly smart or intelligent. Chemicals are widely applied after general rules, which are easy to administer and ensure against failure. Regulations are also expressed in general rules, which are easy to understand and apply; maximum allowance of fertilisers and

pesticides is calculated on the farm level with no control of the distribution over the farm land. Under these circumstances, regulated chemical levels have to be low to achieve the desired effects, which in turn reduce agricultural productivity.

By today's technology we can know and control every action applied to every single spot in the farm land and every single farm animal.

We can use advanced sensors to measure the current state of animals and land. We can move digital data from any place to any other place and use or manipulate data by regulation authorities, farmers, and robots.

By putting all these technologies together, we can create a new, smart way of managing and regulating agriculture to the benefit of farmers as well as the environment

- The intimate knowledge farmers and farm workers had about animals and fields are long gone -

There is, however, often a long way from knowing which technologies can solve a problem to actually have solutions working in practise. The technologies need to be adapted to the specific needs and conditions in agriculture, where the impacts from weather and rough climate in animal houses often cause unexpected difficulties. Agricultural machines may need to be basically modified to be able to utilise advanced technologies. The technologies are depending on communication within and between tractor and implement, and also on communication with the farmers management system; this requires a great deal of standardisation for a successful integration of products from different producers. Investors in development and users need to have realistic expectations of a reasonable economic return, and farmers and authorities need to be mentally ready for a reliance of the advanced technologies.

It is obvious that ICT and precision farming is only slowly becoming an integrated part of farming and farm management. This issue has been discussed for more than 15 years; the messages from farmers are that the problems have not come much closer to a solution. ICT applications for agriculture are not capable of meeting the real needs of farmers, data cannot be moved easily from one application to another, and different formats often make reuse of data impossible. A few farmers have attempted to run their business with heavy use of ICT and technologies depending on ICT, but often they end up by concluding that costs and troubleshooting do not match the benefits.

So, using the new technologies to create a new, smart way of managing and regulating agriculture is no trivial task. Solutions must be safe, user friendly and economically feasible for all the many parties in agriculture, agro-industry and agricultural regulation. But an ambitious perspective is useful to keep us on track towards future exploitation of technological innovations.



Meetings

ICT-AGRI Kick-Off Meeting in Copenhagen, 4-6 May 2009

Partners, observers and other interested stakeholders spend 3 days in Copenhagen marking the launch of the new ERA-Net ICT-AGRI.

No less than 16 nationalities were represented at the kick-off meeting held 4-6 May 2009 in Copenhagen.

The majority of participants were partner and observer organisations, as well as the Commission and other stakeholders such as representatives of several European Technological Platforms participated actively in the meeting.

The meeting served as a platform to present the visions and ambitions for ICT-AGRI. Participants had the opportunity to discuss the future plans, work package content and practical issues.

In two working groups the tasks of mapping national research and how to reach

and collaborate with central stakeholders were discussed.

The social programme took the participants on a picturesque boat tour through the Copenhagen inner harbour and idyllic canals seeing various historical sites, churches, castles and also the new architecturally interesting and impressive buildings that has been built in recent years. After the return to solid ground a dinner was enjoyed in the magical gardens of Tivoli.

The kick-off meeting marked a successful start to ICT-AGRI and paved the way for close and fruitful European collaborations in the coming years in the area of ICT, agriculture and environmental issues.



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Network Management Group Meeting in Bonn, 22-23 June 2009

Members of the Network Management Group meet for two productive days in the former German capital Bonn. A workshop on mapping and how to select the topics for the first call was agreed during the meeting.

The ICT-AGRI German partner Federal Agency for Agriculture and Food (BLE) hosted the second ICT-AGRI Network Management meeting at their offices in Bonn on 22-23 June 2009. The BLE offices is situated on the river Rhine at Bonn-Mehlen and surrounded by the Seven Mountains (Siebengebirge). The hall where the meeting was held was used by the Americans as residence after World War II and the BLE offices used to house the American embassy.

Opening speeches

The opening speech of the meeting was given by Dr. Robert Kloos, President of the Federal Agency for Agriculture and Food (DE). He welcomed the participants and highlighted how important the ICT-AGRI collaborations are for the European agricultural and ICT sector.

Prof. Stefan Böttinger, president of VDI-MEG (DE) continued the meeting with a very interesting presentation on how new technologies will have an impact on the agricultural sector and ways of using and integrating robots and bio-sensors in the agriculture.

Workshop on mapping and first call topics

The mapping exercise is well under way and a workshop is planned for October 2009. The workshop will be hosted by EV-ILVO at their offices in Ghent, Belgium.

Mapping and the identification of the topics for the first ICT-AGRI research call will be the main focus of the workshop.

External experts will be invited to this event to provide their input for call topics. The first call is planned to be announced in 2010.

The next Network Management Group meeting is planned for November 2009.



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Meetings

ICT-AGRI at JIAC2009 in Wageningen, 6-8 July 2009



JIAC2009 – a joint international conference on precision agriculture, precision livestock farming and ICT in agriculture.

The conference took place 6-8 July 2009 in Wageningen in The Netherlands and had around 400 participants.

The conference aimed at bringing together delegates from science, policy and industry to discuss

subjects such as innovations and cross-thematic issues of precision agriculture.

Among the participants were the ICT-AGRI colleagues Vicotor Alchanatis, Avital Bechar, Robert Kaufmann, Michel Berducat, Nikos Manouselis and Iver Thysen.

ICT-AGRI was introduced at the conference through presentations and in the poster section of the programme.

The conference was a good opportunity to introduce the ERA-NET to a wider audience and has contributed to making ICT-AGRI known, in particular, in the scientific community.

The poster and presentation can be download on: www.ict-agri.eu

www.ict-agri.eu

Coordination of European Research within ICT and Robotics in Agriculture and Related Environmental Issues
2009 - 2013

**Strengthen European research in ICT and robotics for agriculture
Improve profitability and environment by ICT and automation**

<p>Common European Research Agenda</p> <ul style="list-style-type: none"> ❖ Mapping of current funding and research ❖ Identification of future needs ❖ Agreement on Research Agenda <p>Common European Research Calls</p> <ul style="list-style-type: none"> ❖ Financing from national programmes ❖ Pilot call in 2010 ❖ Common calls in 2011 and 2012 <p>Stakeholder Network</p> <ul style="list-style-type: none"> ❖ Strengthen R&D collaboration ❖ Find partners for common projects ❖ Network organisation after this ERA-NET 	<p>Partners</p> <p>DK Ministry of Food, Agriculture and Fisheries</p> <p>EE Ministry of the Environment</p> <p>FI Ministry of Agriculture of the Finnish Community</p> <p>FR CEMAGREF</p> <p>DE Federal Agency for Agriculture and Food</p> <p>Federal Ministry of Food, Agriculture and Consumer Protection</p> <p>GR Greek Research and Technology Network</p> <p>IL Ministry of Agriculture & Rural Development</p> <p>IT Ministry of Agricultural, Food and Forestry Policies</p> <p>LV Latvian Academy of Sciences</p> <p>MT Malta Council for Science and Technology</p> <p>CH Swiss Federal Office for Agriculture</p> <p>TR Ministry of Agriculture and Rural Affairs</p> <p>Scientific and Technological Research Council of Turkey</p> <p>NL Netherlands Organisation for Applied Scientific Research</p> <p>IE Agriculture and Food Development Authority</p> <p>ES Region of Murcia Agency of Development</p>
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 Danish Food Industry Agency, Ministry of Food, Agriculture and Fisheries
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Up-coming Meetings

Workshop on ICT mapping and identification of topics for first call

On 14-15 October 2009 a workshop on mapping current ICT research and preparation of joint trans-national call 2010 will be held in Ghent, Belgium.

The workshop is arranged by Work Package (WP) 2 and 3. The workshop is hosted by the WP2 leader EV-ILVO. The workshop has two themes related to the tasks in WP2 and WP3.

Mapping

An important task for ICT-AGRI is to map current European research. National research programmes within the area of ICT and robotics in agriculture are often very broad and fragmented as either in the agriculture or horticulture or IT focused programmes.

To get an overview of relevant research programmes a two-step mapping approach has been agreed. In the first step starting in October 2009 information about national research programmes

will be collected and the preliminary results of this will be presented at the Ghent workshop. The second step will be a questionnaire survey targeting researcher working in the field.

Through the Ghent workshop the more specific scope and area covered by ICT-AGRI will be discussed. The expected outcome is a list of recommendations for the mapping of the research area relevant to ICT-AGRI.

Topics for joint call 2010

A main feature of ICT-AGRI is to implement calls for joint research projects funded by transnational common pots.

The instruments and procedures for the transnational funding will developed and the first ICT-AGRI call is expected to be launched in 2010.

The topics for the call 2010 will be based on a expert consultation during the Ghent workshop.

Meeting Calendar 2009

14-15 October 2009, Ghent, Belgium

Workshop on ICT Mapping and identification of topics for call

19-20 November 2009, Malta

Network Management Group & Governing Board meeting

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The ICT-AGRI Secretariat is situated at the Danish Food Industry Agency, Ministry of Food, Agriculture and Fisheries in Copenhagen, Denmark.

The secretariat has the overall responsibility and day-to-day management of the project.



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Left to right: Niels Gätke (Coordinator), Per Mogensen (Financial Administrator), Carina Madsen (Project Manager) and Iver Thyssen (Scientific Advisor).

ICT-AGRI Partners & Observers

There are 18 partners and 12 observer organisation directly involved in the ICT-AGRI ERA-NET covering 20 countries.

Partners

1. Ministry of Food, Agriculture and Fisheries, Danish Food Industry Agency (DFIA), Denmark
2. Ministry of the Environment, Danish Environmental Protection Agency (DEPA), Denmark
3. Ministry of Agriculture of the Flemish Community, Institute for Agricultural and Fisheries Research (EV-ILVO), Belgium
4. Ministry of Agriculture and Forestry (MMM), Finland
5. CEMAGREF Technical Centres Development (CEMAGREF), France
6. Federal Agency for Agriculture and Food (BLE), Germany
7. Federal Ministry of Food, Agriculture and Consumer Protection (BLEV), Germany
8. Greek Research and Technology Network (GRNET), Greece
9. Ministry of Agriculture and Rural Development (MARD), Israel
10. Ministry of Agriculture, Food and Forestry Policies (MiPAAF), Italy
11. Latvian Academy of Sciences (LAS), Latvia
12. Malta Council for Science and Technology (MCST), Malta
13. Swiss Federal Office for Agriculture (FOAG), Switzerland
14. Ministry of Agriculture and Rural Affairs, General Directorate of Agricultural Research (GDAR), Turkey
15. Scientific and Technological Research Council of Turkey (TÜBİTAK), Turkey
16. Netherlands Organisation for Applied Scientific Research (TNO), Netherlands
17. Agriculture and Food Development Authority (TEAGASC), Ireland
18. Region of Murcia Agency of Development (INFO Murcia), Spain

Observers

1. Leibniz-Institute for Agricultural Engineering Potsdam-Bornim (ATB), Germany
2. National Institute for Agricultural Research (INRA DARESE), France
3. Food and Agricultural Organization of the United Nations (FAO), Italy
4. Region of Lombardia (ROL), Italy
5. Cities on Internet Association (COIA), Poland
6. Romanian Academy of Agricultural and Forestry Sciences (ASA), Romania
7. Soil Science and Conservation Research Institute (SSCRI), Slovakia
8. Instituto Tecnológico Agrario de Castilla Y Leon (ITACYL), Spain
9. LEITAT Technological Center (LEITAT), Spain
10. Swedish Institute of Agricultural and Environmental Engineering (JTI), Sweden
11. Federal Department for Economic Affairs (DEA), Switzerland
12. Department for Environment, Food and Rural Affairs

Next issue, December 2009:

- Progress report from ICT-AGRI
- Introduction to IPR
- ICT-AGRI Call 2010
- Report from the Ghent workshop
- Opinion from an ETP