



Second seminar on
**“Organic Food and Farming research
in Europe”**

How to improve trans-national cooperation

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Consolidated report

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(BASED ON INFORMATION PROVIDED FOR THE SEMINAR BY 27 COUNTRIES)

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I. Introduction

In September 2002, following a request from the Programme Committee members of the “Food quality and safety” (Thematic Priority 5 of the EU 6th Framework Programme of RTD), Directorate E3 of DG Research organised a seminar to assess and discuss the status of Organic Food and Farming (OF&F) research in Europe. The seminar was held in Brussels and brought together scientists and policy-makers from across the continent, with the main aim to start the process of developing transnational co-operation in Europe.

One of the main conclusions of the 2002 seminar was that Organic Farming, when better supported and driven by research, could contribute significantly to the overall objectives of the Common Agricultural Policy of the EU, such as the reduction of overproduction, the development of multifunctional agriculture, efficient resource management and the maintenance of, or even increase in, biodiversity, animal welfare and food quality.

Two years after the first event, a second seminar is organised by DG RTD to provide another opportunity for National representatives from all over Europe to discuss the latest developments in Organic Food and Farming research in their countries. The seminar will also try to assess if the situation has improved since then and whether the cooperation between countries has evolved during this last period.

The present consolidated report is the result of the analysis of individual country reports prepared by national representatives, nominated by the Members and Associated states in collaboration with the Programme Committee members. Of the 32 countries contacted, 27 have provided a national report with up-dated information in form of answers to five pre-defined questions.

The aim of this report is to give an overview of the overall current situation in OF&F research in Europe, and provide suggestions and recommendations for further research and transnational cooperation, which will be discussed at the seminar.

Compared to the situation described in 2002, the current report shows that interesting developments took place in some countries and that, in general, more transboundary cooperation can be observed between researchers. However, this increased cooperation appears to be mainly characterised by the participation in projects funded at European level, such as, among others, the ERA-Net action CORE Organic – Coordination of European Transnational Research in Organic Food and Farming, started on October 1st 2004, and the Integrated Project “Quality Low Input Food” started in 2003.

II. Current research activities

In **Austria**, organic farming remains a high priority topic at national level (Ministry of Agriculture, Forestry, Environment and Water Management). There is a full range of research programmes covering the whole production cycle in all the areas.

In **Belgium** there is a regional level organisation of agriculture and related research activities. Research is performed in the areas of plant and animal production, mostly in the optimisation of technologies.

Bulgaria has just recently regulated organic farming at state level. Specific research activities have not yet developed, but some existing research is important for organic farming (mainly in plant and animal genetic resources). There are some international projects aiming at exploring possibilities, promoting and facilitating development of organic farming in the country. Organic farming is also one of the priorities within Bulgarian Governmental program.

In **Cyprus** there are research activities in the field of plant production, pest management and the use of compost.

In **Czech republic**, research on Organic Food and Farming has been an integral part of the “National Research Programme” supported by the Ministry of Agriculture. For the future, organic food and farming research is included in the “Research Programme of the Ministry of Agriculture 2005 - 2009” Thematic area 1 - Production and processing of agro-products: Sub-area “Organic farming and bio-food”.

Denmark has a full range of research programmes covering the whole production cycle in all the areas with a stable research budget over several years. The programmes are carried out by Danish Research Centre for Organic Farming (DARCOF). DARCOF is also involved in several trans-national projects and is the coordinator in the ERA-net action CORE Organic.

In **Estonia** the majority of organic farming research is part of a few general agricultural research projects in the field of plant protection, cropping systems optimisation and plant breeding.

In **Finland**, research in organic agriculture is supported mainly by MAF, mainly through financing MTT Agrifood Research Finland, while another part is coming from the own budgets of institutes involved in the projects. The Academy of Finland and Tekes - the National Technology Agency - have also supported research in organic farming, but only in a small number of projects. The Finnish Research Network on Organic Agri-Food Systems (ReNOAF) was established in 2001, with the aim to promote interaction between researchers and to develop joint research projects.

In **France**, organic farming research has been strengthened significantly in the last years following the official recognition of organic farming at state level in 1996. A co-ordination platform has been set up by the General Teaching and Research Department (DGER) of the Ministry of Agriculture and Fisheries, consisting of INRA (National Institute for Agronomic Research), ACTA (Union of Agriculture Technical Centre), ACTIA (Union of Food Technical Centre) and ITAB (Technical Institute for OF). This platform is supporting the DGER in co-ordination of research, development and teaching programmes. Funding for organic farming research is provided by the Ministries of Research and of Agriculture, but also regional councils and other funding bodies are involved. Among the tasks of the INRA Internal Committee on Organic Farming, it is also included the development of a research programme, aiming at building a consistent and reliable network (shared information, definitions of objectives and methods, research incentives, evaluation and transfer of results). INRA launched 4 research programmes during the past years, supporting 19 projects, mostly focused on production technical issues. For the future, INRA intends to develop topics as organic food quality (taste, nutritional quality and safety), overall social issues as environmental impact of OF and management of conversion.

Germany is another country with a full range of research programmes covering the whole production cycle in all the areas, as well as quality and marketing issues. A number of research institutions and scientists are involved in organic research. Research is funded both on national and "Laender"-level,

however the main public support is provided by the „Federal Organic Farming Scheme“ (FOFS), which started in 2002-2003 and will be continued until 2007. New invitations to tender in several areas of expertise have been published in 2003 by the Office for the FOFS, which is a part of the Federal Agency for Agriculture and Food (BLE), and announced new invitations to tender in several areas of expertise (for example horticulture, plant production, animal welfare, livestock breeding, socio-scientific research, marketing, processing and quality of organic food).

In **Hungary**, research in organic farming is carried out in two universities, two institutes and two other organisations. Research projects in the last two years have dealt with plant production optimisation and processing, as well as seed production standards and seed treatment.

In **Ireland**, an organic farming research programme has been conducted by Teagasc, the Irish Agriculture and Food Development Authority since 1989, covering organic livestock production systems (beef and sheep) and, later, organic dairy systems and organic crop production. Currently there is no active research programme but a new one is anticipated.

In **Italy**, organic food and farming research is carried out by several research centres and 16 universities. Research projects cover a wide range of areas. Researchers are organised in working groups that meet to exchange experience. There is also a national network of organic food and farming researchers called Research group in Organic Farming (GRAB-It). Besides funding research programmes, MIPAF (Ministry of Agricultural and Forestry Policies) has sponsored a “National Information System on organic farming”, a broad informative system on organic farming supporting a multi-sectorial website www.sinab.it (started in 2003).

In **Latvia** there are smaller research projects in animal production (food / products quality, feeding) and in seed production, to support the small but growing organic sector.

In **Lithuania** a special scientific research programme in organic agriculture was established and supported by the Ministry of Agriculture in 1997, with Lithuanian University of Agriculture as the leading and coordinating organisation. In the last years, the interest in the organic research programmes among scientists from different institutes has been growing. The research programme comprises Plant production technology, Quality of organic production (cereals), Management and economy and Animal husbandry (cattle feeding.)

In **Luxembourg**, possibilities for organic farming research activities exist within the general national research program.

In **Malta**, small studies on comparison of organic and conventional production are carried out.

In **Norway** the Ministry of Agriculture has included organic farming in the *Prioritised Areas of Agricultural Research* as one out of eight topics to be funded in the next three years. The Research Council of Norway is working towards establishing a national strategic plan involving all areas of organic research. Current research projects cover the areas of Animal Science, Soil and environmental research, Plant production, Plant protection and Economy.

In **the Netherlands** organic farming research has been one of the important tools to reach national goal of 5% total cultivated area in organic production in 2010. As a result, the organic farming research value in the period 1999 – 2003 has tripled. Currently there are about 150 projects running. In 2004, a new policy has been proposed with a 10 % of the total cultivated area under organic farming by 2010 and a 5 % market share of organic products by 2007. There will be a shift from knowledge development to knowledge dissemination in the coming period (development, dissemination, distribution, extension, demonstration, and implementation).

In **Poland**, there are seven universities, one academy and one research institute involved in organic farming research. Research areas are plant and seed production, plant protection, soil and fertilization, food quality, marketing.

In **Romania** there is no specific programme for organic farming research. Project proposals can apply for funds from the National Research Programs coordinated by the Ministry of Education and Research and from Management Unit for Services in Agriculture by competition.

Slovenia has a growing organic sector (5 % utilised agricultural area in 2004) and organic farming research activities mainly in the areas of marketing, policy, seed production, plant production technology (pumpkin, fruit) and animal husbandry. There is no specific research programme for organic farming and the major part of organic research is included with a certain percentage in multidisciplinary projects. The research in organic farming is mainly supported by Ministry of Education, Science and Sport.

Spain has a range of organic farming research activities funded at both national and regional level. Transnational EU projects are also developed. The Spanish Society for Organic Farming (SEAE, <http://www.agroecologia.net>) organises scientific events to facilitate exchange of information. There is no specific programme for research in Organic Food and Farming at national level. However, the National Plan of Research, Development and Innovation of the Ministry of Education and Science for the years 2004-2007 includes several priorities related to organic food and farming. The Andalusian Organic Farming Plan has a specific research programme in organic agriculture.

In **Sweden**, the government has a goal of 20 % of the arable land and 10 % of the number of animals in dairy, cattle and lamb in organic production by the year 2005, and financial support to research in organic farming is an important tool to achieve it. Priority research areas are identified by The Centre for Sustainable Agriculture at the Swedish University of Agricultural Sciences, which is also responsible for the coordination of the 3-year programme within organic production funded by Swedish Research Council Formas-SE. Currently, there are 9 prioritised areas of research in Swedish organic production and consumption. There is a full range of research programmes covering the whole production cycle in all the areas, including aspects of food quality, market development and information.

Switzerland has a long tradition in organic farming research and one of the leading European organic farming research centres, FiBL. Main funding is provided by the state. National research priorities and realised projects cover a wide range of areas from production to food quality, marketing and socio-economic topics. Switzerland is also involved in numerous trans-national research projects, especially within the European Community Framework Programmes.

Organic farming in **Turkey** started in 1984-85 as a consequence of the growing organic market in Europe and it was first limited to 8 products, followed by a gradual increase in both the area (103.000 ha in 2003) and product variety. The production is carried out by mainly by Turkish companies that contract with the farmers for the requested crop. The increase of production and its diversity increased also the demand for research support. Current research has been carried out mostly in plant production optimisation. The Ministry of Agriculture and Rural Affairs accepts organic agriculture as a priority and aims to develop organic agriculture and align related Turkish legislation with the EU regulations.

In the **UK** a continued strong growth in the organic food sector is foreseen. The proportion of organic food supplied by UK farmers has increased (from 30% in July 2002 to 44% by July 2004). The DEFRA's (UK Department for Environment, Food and Rural Affairs) expenditure on organic farming R&D has stabilised at around £2.2 million per year. There are 5 key scientific objectives of DEFRA's investment in organic farming research and development, based on three policy objectives. DEFRA is also sponsor of the LINK mechanism which is aimed at furthering government objectives in the R&D partnership between the private sector and academia. As part of the Organic Action Plan, the UK Government committed to set aside £5 million over the next 5 years for LINK research on Organic Farming.

III. Main research centres and leading scientists

The details of main research centres active in organic food and farming research and leading researchers are presented in Annex I.

In **Austria**, in addition to existing capacities, two regional organic research centres will be established: an experimental farm of 143 ha close to Vienna, to serve as the infrastructure for the “Research Network on Agrobiological and Organic Farming”, and another regional cluster to be established in Gumpenstein in the Federal Research Institute for Agriculture in Alpine Regions, with focus on organic farming in alpine areas.

In **Belgium**, the most important research centre is PCBT and some other institutions are involved in a lesser extent.

In **Cyprus** research activities are concentrated in the Agricultural Research Institute (ARI).

In **Czech republic**, a new institute, the **Bioinstitut**, was established in 2004 by Palacky University Olomouc, in collaboration with PRO-BIO – Czech Association of Organic Farmers and FiBL from Switzerland. The main activity of Bioinstitut is research in organic food and farming, its coordination at national level, consultancy for organic farmers and training.

Denmark's main institution in organic farming research is the Danish Research Centre for Organic Farming (DARCOF).

Estonia has five public institutions and one private organisation involved in organic research.

Main organic farming research institutions in **Finland** are the MTT Agrifood Research Finland and two universities, and two more organisations are involved.

In **France**, besides INRA (National Institute for Agronomic Research) and ITAB (Technical Institute for Organic Farming, with 4 research centres and 21 regional technical centres – a professional network of organic farmers' associations), there are several other institutes involved in organic farming research.

In **Germany** there are several universities and both public and private institutes, as well as some private institutes and associations involved in organic farming research. Some of the institutes are specialised in organic farming (e. g. Faculty of Organic Agricultural Sciences at the University Kassel-Witzenhausen, Institute for Organic Farming at FAL, Institute of Organic Agriculture at the University Bonn, Institute for Biodynamic Farming in Darmstadt, FiBL Germany).

In **Hungary**, research in organic farming is carried out in two universities, two institutes and two other organisations.

Irish organic farming research centres are Johnstown Castle Research Centre and Oakpark Research Centre.

In **Italy**, organic food and farming research is carried out by many research centres (national and regional / local institutes) and 16 universities.

In **Latvia** research in Organic farming is carried out in the university and on further 4 locations.

The leading institution in organic farming research in **Lithuania** is the University of Agriculture, where also the first Agroecological center in Lithuania and Baltic countries was established in 1995.

In **The Netherlands** the majority of organic farming research is carried out in Wageningen; but there are also other centres, such as the Louis Bolk Institute.

The leading institutes in organic farming research in **Norway** are The Norwegian Crop Research Institute and the National Centre for Ecological Agriculture. In addition, 9 other research institutes are involved in organic farming research.

Slovenia has one private institute devoted to organic farming and organic farming research is also carried out at two universities (Ljubljana and Maribor) and at Slovenian Agriculture Institute.

In **Spain** different centres from the Spanish University Network, from National Research Centres as Consejo Superior de Investigaciones Científicas (C.S.I.C.) and Instituto Nacional de Investigaciones Agrarias (I.N.I.A.), are carrying out research in organic farming. Some Regional Research Centres are also active in doing research in this field.

SLU, the Swedish University of Agricultural Sciences, is the main research centre involved in organic agriculture in **Sweden**, hosting approx. 75% of the total publicly funded research in organic farming.

In **Switzerland** the most important center for organic farming research is the Research Institute of Organic Farming (FiBL), a private trust active in organic farming research and dissemination since 1973, with an overall budget of 10 Million € and 110 scientific and technical staff. FiBL has branch offices in Germany and Austria (FiBL Germany, FiBL Austria) with independent national budgets. Furthermore, there are Agroscope Centres comprising 5 Federal Agricultural Research Stations (increasingly involved in organic research since 2000). 3 specialised bio-dynamic research centres are also present, without public funding.

In **Turkey** organic farming research is performed by several universities and research institutes, but mainly in Izmir (Ege University Faculty of Agriculture).

In the **UK** there are 17 organisations (universities, research centres and others) carrying out organic farming research.

IV. Current and planned publicly funded research and allocated budget

Current research topics and / or projects are presented in more detail in Annex I.

Several European countries have a special funding programme, or funding line, devoted to organic farming, for example **Austria, Denmark, France, Germany, Italy, the Netherlands, Sweden, Switzerland, UK**, where, as a consequence, also the organic farming research has developed to a larger extent.

Some countries have no specific programme or call for organic research projects and the majority of organic farming research remains incorporated in more generic projects with a certain share (10 – 50%) devoted to organic farming; this is the situation in **Estonia, Latvia, Malta, Slovenia**.

In other countries, purely organic farming research projects can be funded through general research programmes for agricultural and other sciences.

In **Estonia** the expenditure for organic research is largely incorporated in projects where organic farming makes out a 20 – 50% share of the project.

In **Finland**, research in organic agriculture is supported mainly by MAF while other funds are made available from the own budgets of institutes involved in the projects.

The main agencies funding organic farming research in **France** are INRA (funds from the Ministry of research) and ACTA (funds from the ministry of agriculture), but also regional councils and other funding bodies are present.

Total amount of publicly funded research in **Germany** is difficult to calculate, due to the federal structure. However, the main source of public financial support for organic farming research is provided by the FOFS, with approx. € 20 million for research and development projects; approx. 175 R&D projects are realised. FOFS will be continued from 2004 to 2007, and € 7 million per year will be used to support R&D projects and accelerate transfer of knowledge between scientists, consultants and farmers. In 2003 the Office for the FOFS announced new invitations to tender to realise approx. 130 innovative projects in the scheme period beyond 2003.

Main public source of funding for organic farming research in **Hungary** has been up to now the Ministry of Education.

Currently, there is no new research activity in organic research in **Ireland**. However, the next organic farming research programme is anticipated to start soon.

In **Italy** the open call for organic farming research projects in 2002 was connected to the Organic farming national plan and led to financing of several projects for a total amount of € 4 million in year 2003. Moreover, other research actions related to organic food and farming are financed also as part of projects not specifically focused on OF&F.

In **Latvia** some organic farming research projects have been funded by the Latvian Council of Sciences, Ministry of Agriculture and Ministry of Education and Science.

The **Lithuanian** Ministry of Agriculture funded organic research activities with a total of only 46.340 EUR in 2004 (6,33 % of total funding for applied research programs in agriculture, food and aquaculture). Part of the projects is in the special program for Organic Agriculture, another part is in other applied research programs. Another group of research programs is carried out with the financial support of the University and Institutes.

In **The Netherlands** organic farming research projects are commissioned by the Ministry of Agriculture, Nature and Food Quality.

Norway is funding organic farming research through The Research Council of Norway. In addition, research funding established through an agreement between farmers' organization and the Government is available.

In **Slovenia** organic farming research is funded mainly as percentage within different multidisciplinary projects.

In **Spain**, organic food and farming research is funded by the National Research Programme from the Ministry of Education and Science and regional funds. Although no specific national programme for organic farming research exists, the National Plan of Research, Development and Innovation of the Ministry of Education and Science of Spain 2004-2007 has several priorities addressing organic food and farming issues. At regional level, the Andalusian Organic Farming Plan will devote about 1,8 millions of € during the period 2002-2006.

The public funding for organic farming research in **Sweden** makes out about 10 % of the total financial funding for agricultural research (forestry excluded). It is provided mainly by the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas-SE), a governmental research-funding agency funded by 4 ministries. The funding sources for organic farming research in 2004 are: Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, Formas, 2,5 mio €; The National Veterinary Institute (SVA), 0,2 mio €; National Food Administration (SLV), 0,2 mio €; Swedish Board of Agriculture (SJV), 1,4 mio €; The Unit of Applied Field Research (SLU), 0,8 mio €; Centre for sustainable agriculture, (CUL, SLU), 0,6 mio €. Another 0.2 to 0.6 million € per year is provided by the private funding agency Ekhaga Foundation.

The major state funding specific to organic farming research in **Switzerland** is granted by the Federal Office for Agriculture, and additional funds are made available by the Federal Veterinary Office, the Swiss Agency for the Environment, Forests and Landscape, as well as other federal and regional authorities. In addition, the Federal Office for Education and Science is funding FiBL with 800,000 € for its participation in projects of the 5th and 6th EU-Framework Programme.

Public funding in **Turkey** for research proposals on organic agriculture on competitive basis is provided by the State Planning Organization, Turkish Scientific and Technical Research Council, and University Research Funds.

DEFRA has been the main public sponsor for organic farming research in the **UK**. With the new LINK mechanism aimed at furthering government objectives in the R&D partnership between the private sector and academia, the UK Government will set aside £5 million over the next 5 years for LINK research on Organic Farming.

Table 1: Funding of OF research in European states

Country	Funding description (in EUR)	Total funding (EUR/year)
Austria	From 580.000 in 2000 to 1.224.000 in 2003 ²	ca. 1 mio/year
Belgium		
Bulgaria	no data	
Cyprus	100.000 EUR	
Denmark	DARCOF II 2000-2005: approx. 30 million € DARCOF III 2005-2009: minimum 27 million € The Organic fond and other sources: 1-2 million € per year	7 mio / year
Estonia	117.000 in 2004	0,1 mio / year
Finland		2,5 mio / year
France		7 mio / year
Germany	FOFS I 2002-2003: 20 mio €; FOFS II 2004-2007: 7 mio € / year (regional and Laender-level funding not included)	7-10 mio / year
Hungary	cca. 2,9 mio EUR in years 2002-2003	
Ireland	no data	
Italy	4 mio EUR in 2003 (comprises only funds under a specific OFF call, so total national funding for OFF research is higher)	
Latvia	approx. 0,1 million € in 2004	0,1 mio / year
Lithuania	46.340 € in 2004	0,046 mio / year
Luxembourg	Not OF projects only - not possible to estimate	
Malta	2.400 EUR in 2004	
Norway		3 mio / year
Poland		0,27 mio / year
Slovenia	Not OF projects only - not possible to estimate	
Spain	Not OF projects only - not possible to estimate at National scale. Andalusian Organic Farming Plan, 0,36 million/year	
Sweden	6 – 6,5 mio € in 2003 and 5,9 mio € in 2004 (Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, Formas, 2,5 mio €; The National Veterinary Institute (SVA), 0,2 mio €; National Food Administration (SLV), 0,2 mio €; Swedish Board of Agriculture (SJV), 1,4 mio €; The Unit of Applied Field Research (SLU), 0,8 mio €; Centre for sustainable agriculture, (CUL, SLU), 0,6 mio €).	Approx. 6 mio / year
Switzerland	- Federal Office for Agriculture: 7 million € / year (via permanent staff of Agroscope Centers and grant to FiBL). - Federal Veterinary Office: 350,000 € / year (grant to FiBL). - Swiss Agency for Environment, Forests and Landscape and other federal and regional authorities: 150,000 € / year (grants to FiBL).	7,5 mio / year
The Netherlands	current (2004) spending	13 mio / year
Turkey	no data (several projects with a value 10.000 – 60.000 € per project)	
U.K.		2,2 mio GBP/year

² comprises only funding of the Ministry of Agriculture, Forestry, Environment and Water Management, but other national or regional sources are also available

V. Trans-national collaborative research programmes

The below overview of current trans-national organic farming research projects is based on information provided in the countries reports. Therefore, it is not comprehensive of all the projects and all the countries. A short description of each project is provided according to the compiled information from the countries' reports. More details can be found in Annex I.

Table 2: Participation of countries in current trans-national organic farming research projects

Country	CORE Organic	BERAS	Blight MOP	CHANNEL	CONDOR	EISOM	EUCEEOPF	ORG. REVISION	ORGANIC HACCP	ORGANICS	ORGIN	OMIARD	QLIF	REPCO	SAFO	SIMOCA	WECOF	Other projects
Austria	X			X		X	X	X	X		X	X	X		X			
Belgium						X												
Bulgaria				X														
Cyprus				X					X	X								2
Czech Republic				X			X			X			X					
Denmark	X							X			X		X	X	X			2
Estonia		X		X			X								X			
Finland	X	X			X							X	X					
France	X											X	X					1
Germany	X	X	X	X	X	X	X	X			X	X	X	X	X		X	
Hungary				X														
Ireland																		na
Italy				X		X	X				X	X				X	X	1
Latvia		X		X														
Lithuania		X		X														3
Luxembourg																		na
Malta		X		X														
Norway	X		X	X														na
Poland				X		X	X			X			X			X		
Romania				X														
Slovakia				X						X								
Slovenia				X		X	X				X				X			
Spain															X		X	*
Sweden	X		X															
Switzerland	X		X			X	X	X			X	X	X	X	X			6
The Netherlands	X		X			X		X		X	X		X	X				
Turkey													X					2
UK	X		X		X							X	X		X			*

* other projects listed (see Annex I)

CORE Organic – Coordination of European Transnational Research in Organic Food and Farming, coordinator, Denmark. (<http://www.core-organic.org/>)

BERAS - Baltic Ecological Recycling Agriculture and Society (INTERREG III B project, coordinator Sweden) (<http://www.jdb.se/beras/>)

Blight MOP - Development of a systems approach for the management of late blight in EU-organic potato production. Coordinator UK.

CHANNEL - “Opening Channels of Communication between the Associated Candidate Countries and the EU in Ecological Farming”, EU 6th Framework Programme SSA project, started in November 2004. Coordinator Hungary, with 24 participants from EU countries.

CONDOR – Consumer Decision Making on Organic Products. Coordinator UK (<http://www.surrey.ac.uk/SHS/condor.html>).

EISfOM - European Concerted Action (CA) to build up a framework for reporting valid and reliable data for relevant production and market data about the European organic sector in order to meet the needs of policy makers, farmers, processors, wholesalers and other actors involved in organic markets. (<http://www.eisfom.org>). Coordinator UK.

EU-CEE-OFP – Further development of organic farming policy in EUROPE, with special reference to EU enlargement. (<http://www.irs.aber.ac.uk/EUCEEOFPP/index.html>)

ORGANIC REVISION - The overall objective of this research project is to provide recommendations for development of the EU regulation for organic agriculture. It started in March 2004. Coordinator DK. (<http://www.organic-revision.org>)

OMIARD - Organic Marketing Initiatives and Rural Development This project examines all aspects of the marketing of organic produce in the EU to develop strategies to satisfy environmentally and ethically conscious consumer, and support the development of new jobs in rural areas. Coordinator UK) (in conclusion in 2004) (www.irs.aber.ac.uk/omiard).

ORGANIC HACCP - Recommendations for improved procedures for securing consumer oriented food safety and quality of certified organic foods from plough to plate (<http://www.organichaccp.org/OrganicHACCP.asp>).

ORGANICS - Platform for research and development of organic field vegetable production in pre and post accession countries. A Dutch initiative supported by the Dutch ministry of agriculture; includes participants from Poland, Slovak Republic, Cyprus and Czech Republic.

ORGANIC INPUTS EVALUATION - European Concerted Action (CA). The action, funded in the 5th Res. Framework Programme aims to harmonise and standardise procedures for evaluation of plant protection products, fertilizers and soil conditioners for use in organic agriculture. (<http://www.organicinputs.org/>). Coordinator DK.

QLIF - Quality Low Input Food - Integrated Project within the 6th FP. The goal of the project is to improve quality, food safety and reduce costs in organic and "low input" food production systems. The project began in March 2004. Coordinator, UK, it involves 31 European partners within different research disciplines (<http://www.qlif.org/about/about.html>).

REPCO. Replacement of copper fungicides in organic agriculture. Coordinator, NL,

SAFO - Sustaining Animal Health and Food Safety in Organic Farming. The objective is to improve food safety and sustain animal health in organic farming. This is done among other things through establishment of a network for exchange and discussion of research. Coordinator DK. (<http://www.safonetwork.org/index.html>)

SIMOCA (www.simoca.org) Setting up and implementation of sustainable and multifunctional rural development model, based on organic production (2003-2005).

WECOF (<http://www.wecof.uni-bonn.de/>) "Strategies of Weed Control in Organic Farming Project (2001-2004). Coordinator DE.

VI. Recommendations for future priority research in Organic Food & Farming and for more trans-national cooperation

The countries that responded on the question about the areas with a scope for co-ordination of national programmes at a European level have stated the high importance of trans-national collaboration for the quality of organic farming research and its results. Many have stated their expectations that ERA-Net CORE ORGANIC will play an important role in the future co-ordination of organic farming research on European level and will help to overcome isolated activities in the European countries.

The countries were asked to identify research areas with a scope for co-ordination of national programmes at a European level to overcome fragmentation. Many countries have named specific priority research areas; the answers are presented in Table 3.

Other recommendations of individual countries are the following:

Being actively involved in ERA-Net CORE ORGANIC, **Austria** sees the need for research cooperation based on infrastructures in different European countries. Austria believes that specific research needs in improved organic crop breeding and management on a regional scale should be recognized for supporting transnational, regional collaborations between countries that have similar production features like climatic and soil conditions.

Italy states that it is important to overcome fragmentation both in the research approach and in the research content, as in organic farming research often a single factor is investigated and thus a specific knowledge is gained but it does not take into account the system complexity.

Italy therefore proposes:

- To investigate effects of the OF technique by means of a multidisciplinary and overall approach to get complete knowledge, to make comparable information with other cultivation techniques (overall system study), guaranteeing both short and long term experimental approaches.
- The issues related to coexistence of different cultivation systems based on large-scale studies should also be tackled at European level.
- Furthermore, there is a need for sustainability evaluation of organic food and farming approach according to different environmental conditions and farming organization (i.e. size, specialization and diversification production degree, link between animal and plant production, etc.).
- Studies on the whole production chain to safeguard consumers and guarantee the product quality. Particularly in relation to the methods to make easier and convenient evaluation and control of the OF products, also in relation to rules and laws in force.

Sweden emphasizes the importance of participatory learning and action research in organic farming and believes that this research area could develop faster with coordination of experiences from the other European countries.

Switzerland draws attention to the "excellent list of future research priorities of the organic industry developed by the IFOAM-EU group", (see Annex II) and supports the priorities set by "this important stakeholder of the organic industry, comprising organic farmers, processors, traders and R&D organisations".

The IFOAM-EU Regional Group paper entitled **Implementation of the Research Priorities in European Organic Farming** is enclosed as **Annex II**.

Table 3: Research areas with a scope for co-ordination at European level, according to indications provided by some countries

Specific issues											Details	
Marketing	Animal production	Animal breeding	Crop production	Seed production, selection of suitable varieties	Soil, fertilization	Ecology, biodiversity, landscape management	Animal health / welfare	Socio-economics and consumers	Pest/weed/disease control	Processing		Quality aspects & quality control
Austria											Dry-land farming Specific crops of regional importance Integration of ecological principles within landscape design and management Development of appropriate soil assessment methods Livestock and breeding	
Belgium											Development mechanical weed control techniques Pest management in organic vegetable and fruit production Health care in animal production	
Cyprus											Biological control of pest and diseases Organic fertilizer (compost) production Selection of varieties suitable for organic production	
Czech republic											Improvement of quality of products, increase of consumer confidence in OF products, development of new products Co-existence and GMOs Development of organic food markets, marketing OF products Improvement of animal health and welfare Innovation of animal breeding technologies on organic farms Agro-biodiversity, multifunct. and rural dev. (econom., social) Ethical aspects in OF Impact of OF on environment	
Denmark											Rural development Biodiversity Leaching of N, consumer behaviour and marketing	
Estonia											Promotion of organic farming Crop production studies (natural means in plant protection, promotion natural enemies in crop rotation etc).	
Finland											Animal welfare and behaviour Animal feeding experiments in different climates Long-term experiments incl. green / other manure, improvement of soil fertility and nutrient losses Research methods, analyses and analysers, which are specific in organic agri-food research	
France											Research in genetics and improvement of varieties in crop production and animal production Markets and consumers Crop diseases Soil, management of fertilization	
Germany											Communication systems for improved transfer of knowledge / information/problems between researchers, agricultural advisory, producers, processors and consumers Animal breeding by using origin genetic resources Animal health, animal feeding Economy and food safety demands; quality problems Food processing, food technology Plant protection	
Ireland											Parasite control in cattle and especially in sheep Organic control of liver fluke	
Italy											Overall system study of organic farming systems Coexistence of different cultivation systems based on large-scale studies Sustainability evaluation of OFF approach Whole production chain studies to guarantee product quality	

Marketing	Animal production	Animal breeding	Crop production	Seed production, selection of suitable varieties	Soil, fertilization	Ecology, biodiversity, landscape management	Animal health / welfare	Socio-economics and consumers	Pest/weed/disease control	Processing	Quality aspects & quality control	Coexistence and GMOs	Details
Latvia													Seed production for organic farming. Organic food quality Risk factors for organic farming & food from GM crops Soil health and link with plant health in organic and low input farming systems
Lithuania													Organic seed growing and selection of varieties Quality of the production and environment (new methods for the investigations) Farm economy Market research New technologies of plant and animal production
Luxembourg													Traceability GMO Drinking water
Malta													Marketing of organic product/ awareness of the EU logo Use of different plant protection methods to combat plant disease
Poland													Selection of resistant plant cultivars and animal breeds Optimization of the fertilization and plant protection Optimization of animal raising and healthcare Methods of food processing based on OF standards Quality of raw materials and food products from OF Impact of organic fodder consumption on the animal health Impact of organic food consumption on human health Methods of organic food promotion / consumers
Slovenia													Fruit production Seed production Animal welfare farming Conservation of plant and animal genetic resources Policy and marketing
Spain													see Annex II
Sweden													Biological diversity and ecosystem services Multifunctional agriculture Resource dependence and vulnerability of cropping systems Quality and health effects of foodstuff Institutional framework Driving forces, obstacles and means of control in the conversion to organic farming
Switzerland													Soil health and link with plant health in organic and low input farming systems Effectiveness and efficiency of different breeding concepts for crops for low input and organic systems Effectiveness and efficiency of different breeding concepts for livestock for low input and organic systems Further developing of holistic concepts for livestock health Psychological and sociological attitudes of consumers and different market actors in dealing with organic food Food processing technology for organic foods in order to support innovations of SME Organic/low input farming, soil fertility and biodiversity Organic/low input farming and nutrient losses & recycling
The Netherlands													Food & feed quality & safety ((myco)toxins, heavy metals, residues) Desirable food characteristics with respect to health Simplification of legislation Consistence in certification legislation Impact of OF on rural environment, regional aspects Function of OF at the periphery of urban conglomerates
Turkey													Organic seed production Development of effective, safe, cheap and local inputs Evaluation of genetic resources for resistance

VII. Action plans for Organic Food and Farming

The countries' answers on the question about the existence of the national Action Plans for Organic Food and Farming show that the majority of countries have already elaborated Action Plans and are implementing them. In many countries, Action Plans are important for the improvement of funding possibilities for organic farming research. In some countries, the results of organic farming research are being used for further development of the Action Plans.

Table 5: Overview of the existence of the national Action plans for Organic Food and Farming

Country	Action plan & status	comments
Austria	yes	AP 2001-2002, AP 2003-2004, AP 2005-2006 (in preparation)
Belgium	yes (Flanders)	2 nd AP, in Flanders region
Cyprus	no	
Czech Republic	yes	Action Plan of the Czech Republic for Development of Organic Farming until 2010, adopted March 2004
Denmark	yes	1 st AP in 1995, 2 nd AP in 1999, followed by several specific Part strategies
Estonia	draft	
Finland	yes	target 15% of total arable area organic until 2010
France	yes	1 st AP ("PPDAB")1997-2002; 2 nd AP based on the "rapport Saddier" published in 2003
Germany	no, but similar (FOFS)	Federal Organic Farming Scheme (2001) running in 2002-2003 with 70 mio EUR, to continue beyond 2003
Hungary	no	
Ireland	yes	
Italy	yes	ORGANIC FARMING NATIONAL PLAN (January 2002, Italian Ministry of Agriculture)
Latvia	yes	incorporated in the Action Plan for Rural Area
Lithuania	yes	2002, Ministry of Agriculture; 5 % of agricultural land organic by 2006
Luxembourg	no	a task force to adapt actions of the Eur. AP to LUX
Malta	yes	August 2004
Norway	yes	last AP in 2003
Poland	no	
Romania		general strategy for development of OF
Slovenia	draft	
Spain	yes	2004-2007, 1 regional AP 2002 - 2006
Sweden	yes	2001; 20 % organically farmed arable land and 10 % of organic animals by 2005.
Switzerland	no	Support Scheme for Organic Farmers from 1992 (support to conversion and maintenance, support to marketing)
The Netherlands	yes	a policy document by the Ministry of Agriculture; 1 st in 2001, 2 nd in 2004
Turkey	draft	national strategy and AP by MARA (agric. ministry), 2004
U.K.	yes	England AP, 2002; Wales AP

Annex I. Current and planned publicly funded research, main research centres/researchers

Austria	
<p>Project title; Project leader; Funding body / duration</p> <p>Nitrogen losses due to leaching and beneficial effects on subsequent cereals crops of forage and green manure legumes in organic farming under site conditions of the Pannonical region in Eastern Austria ; Institut für ökologischen Landbau der Universität für Bodenkultur (Univ.-Prof. Dr. Bernhard FREYER); BMLFUW Projekt 1232 (2000 - 2004)</p> <p>Nitrogen uptake and yield of intercropping and their impact on yield and quality of the following crop and nitrate content in soil under the conditions of organic farming in the pannonican climate region ; Institut für ökologischen Landbau der Universität für Bodenkultur (Univ.-Prof. Dr. Bernhard FREYER); BMLFUW Projekt 1246 (2002 - 2005)</p> <p>Comparison of the economic performance of farming systems using the accounting data of the year 2000 ; Institut für Agrarökonomik der Universität für Bodenkultur Wien (Univ.-Prof. Dipl.-Ing. Dr. Walter SCHNEEBERGER); BMLFUW Projekt 1268 (2001 - 2004)</p> <p>Farmers' local knowledge on wild plant species used for veterinary medicine and fodder; Institut für ökologischen Landbau der Universität für Bodenkultur (Dr. Christian R. VOGL); BMLFUW Projekt 1272 (2003 - 2006)</p> <p>Establishment of an online database recording components and organisms, which are on a risk of genetic engineering, with special emphasis on organic farming ; Infoxgen – Arbeits-gemeinschaft transparente Nahrungsmittel e.V. (Mag. Alexandra HOZZANK); BMLFUW Projekt 1277 (2002 - 2004)</p> <p>Optimisation of field and grain pea cropping and utilisation in organic farming under the climatic conditions of the pannonican region; Institut für ökologischen Landbau der Universität für Bodenkultur (Univ.-Prof. Dr. Bernhard FREYER); BMLFUW Projekt 1290 (2002 - 2005)</p> <p>Basic principles for breeding, multiplication and variety testing for organic agriculture. ; Ludwig Boltzmann Institut für Biologischen Landbau und angewandte Ökologie (Dr. Wilfried HARTL); BMLFUW Projekt 1315 (2004 - 2008)</p> <p>Investigations about the occurrence of the dock leaf-beetle and its potential for biological control of the broad-leaved dock ; Ludwig Boltzmann Institut für Biologischen Landbau und Angewandte Ökologie (Dr. Bernhard KROMP); BMLFUW Projekt 1318 (2003 - 2007)</p> <p>MUBIL - Monitoring the conversion on Organic Farming; Institut für ökologischen Landbau der Universität für Bodenkultur (Univ.-Prof. Dr. Bernhard FREYER); BMLFUW Projekt 1321 (2003 - 2006)</p> <p>Organic farmers´ attitudes and behaviour in the course of time; Universität für Bodenkultur, Department</p>	<p>1.1 University Institutes</p> <p>1.1.1 University of Natural Resources and Applied Life Sciences, Vienna</p> <p><i>Department of Sustainable Agricultural Systems</i> Institute for Organic Farming (iföl) Head: Univ.Prof. Dipl.-Agr.Biol. Dr.Ing. Bernhard FREYER Gregor Mendel-Straße 33 A-1180 Wien, Austria Phone: +43-1-47654-3751 Fax: +43-1-47654-3792 E-mail: bernhard.freyer@boku.ac.at</p> <p><i>Department of Sustainable Agricultural Systems</i> Head of Department: ao.Univ.Prof. Dipl.-Ing. Dr. Werner ZOLLITSCH Division of Livestock Sciences Gregor-Mendel-Straße 33 A-1180 Wien, Austria Phone: +43-1-47654-3250 Fax: +43-1-47654-3254 E-mail: werner.zollitsch@boku.ac.at</p> <p><i>Department of Economics and Social Sciences</i> Institute of Agricultural and Forestry Economics Univ.Prof. DI Dr. Walter SCHNEEBERGER Feistmantelstrasse 4 A-1180 Wien, Austria Phone: +43-1-47654-3551 Fax: +43-1-47654-3592 E-mail: walter.schneeberger@boku.ac.at</p> <p><i>Department of Applied Plant Sciences and Plant Biotechnology</i> Institut of Horticulture and Viticulture Univ.-Prof. Dr. Karoline Jezik</p>

<p>Wirtschafts- und Sozialwissenschaften (Univ.-Prof. DI Dr. Stefan VOGEL); BMLFUW Projekt 1394 (2004 - 2007)</p> <p>Research on biological control of the quarantine pest insect <i>Helicoverpa armigera</i> (syn.: <i>Heliothis armigera</i>) with egg parasitoids of the genus <i>Trichogramma</i>; biohelp - biologischer Pflanzenschutz Nützlings- produktions - Handels- und Beratungs GmbH (Dr. Michael GROSS); BMLFUW Projekt 1424 (2004 – 2007)</p> <p>The quality of seeds and marketing of winter-wheat in organic farming; Bundesanstalt für alpenländische Land-wirtschaft (DI Waltraud HEIN); Projekt BAL 032321 (2003 - 2006)</p> <p>Improvement of organic viticulture under Austrian conditions; Höhere Bundeslehranstalt und Bundesamt für Wein- und Obstbau (Dr. Ferdinand REGNER); Projekt BWO 042213 (2004 - 2008)</p> <p>Effect of fertilisation and cultivation on yield and quality of crops during a crop rotation and their environmental influence in organic farming; Bundesanstalt für alpenländische Land-wirtschaft (DI Waltraud HEIN); Projekt BAL 042327 (2004 - 2007)</p> <p>Investigations concerning the biological control of the Ramularia Leaf Blight of barley; Bundesanstalt für alpenländische Land-wirtschaft (Dr. Herbert HUSS); Projekt BAL 042328 (2004 - 2006)</p> <p>Strategies for fighting the dwarf bunt (<i>Tilletia controversa</i>) in organic farming; Bundesanstalt für alpenländische Land-wirtschaft (Dr. Herbert HUSS); Projekt BAL 042329 (2004 - 2006)</p> <p>Investigations about the biological control of the broad-leaved dock (<i>Rumex obtusifolius</i> L.) in grassland; Bundesanstalt für alpenländische Landwirtschaft (Dr. Andreas BOHNER); Projekt BAL 042960 (2004 - 2006)</p> <p>Organic farming: Nutrient availability and leaching due to the application of compost; Bundesamt für Wasserwirtschaft (DI Franz FEICHTINGER); Projekt BAW 52258 (2001 - 2004)</p> <p>Compost in organic farming; Bundesanstalt für alpenländische Landwirtschaft (Dr. Karl BUCHGRABER); Projekt BAL 033411 (2003 - 2004)</p> <p>Maize in organic farming; Bundesanstalt für alpenländische Landwirtschaft (Ing. Josef MAYRHAUSER); Projekt BAL 033417 (2003 - 2004)</p> <p>Dwarf bunt (<i>Tilletia controversa</i>) in organic farming; Bundesanstalt für alpenländische Landwirtschaft (Dr. Herbert HUSS); Projekt BAL 033422 (2003 - 2004)</p> <p>The suitability of different types of potatoes in organic farming in alpine regions; Bundesanstalt für alpenländische Landwirtschaft (DI Waltraud HEIN); Projekt BAL 033426 (2003 - 2004)</p> <p>Strategies for sustainable reduction of pest organisms for quality and yield safety in organic production of pea (<i>Pisum sativum</i>), Indian vetch (<i>Lathyrus sativus</i>) and common vetch (<i>Vicia sativa</i>); Ludwig Boltzmann Institut für Biologischen Landbau und Angewandte Ökologie (Dr. Bernhard KROMP); BMLFUW Projekt 1395 (2004 – 2007)</p> <p>The effect of organic farming on ground-breeding birds, brown hare, and crop diversity, in open cereal farming landscapes. Problems and practical solutions; Distelverein - Verein zur Erhaltung und Förderung ländlicher Lebensräume (Mag. Dr. Julia Kelemen-Finan); BMLFUW Projekt 1400 (planned)</p> <p>Criteria and guiding principles for a holistic quality management concept in (organic) agriculture; Institut für ökologischen Landbau der Universität für Bodenkultur (Dr. Christian R. Vogl); BMLFUW</p>	<p>Gregor Mendelstr. 33 A-1180 Wien, Austria Phone: +43-1-47654-3400 Fax: +43-1-47654-3449 E-mail: gertrude.sima@boku.ac.at</p> <p>1.1.2. University of Veterinary Medicine Vienna Department of Veterinary Public Health and Food Sciences Institute of Animal Husbandry and Animal Welfare Head: Univ.Prof. Dr. Josef TROXLER Veterinärplatz 1 A-1210 Wien, Austria Phone: +43-1-25077-4901 Fax: +43-1-25077-4990 E-mail: josef.troxler@vu-wien.ac.at</p> <p>1.1.3. University of Innsbruck Centre for Mountain Agriculture Dr. Markus SCHERMER Technikerstr. 13 A-6020 Innsbruck Phone: +43-512-507- 5690 Fax: +43-512-507-2806 E-mail: markus.schermer@uibk.at.ac</p> <p>1.2 Private Research Institutes Ludwig Boltzmann Institute for Biological Agriculture and Applied Ecology Head: ao.Univ.Prof. Dr. Ludwig MAURER Rinnböckstraße 15 A-1110 Wien, Austria Phone: +43-1-7951497940 Fax: +43-1-795147393 E-mail: boltzmbioland@aon.at</p> <p>1.3 Federal Research Institutes 1.3.1 Federal Research Institute for Agriculture in Alpine Regions Abteilung Biologischer Landbau Head: Dr. Gerhard PLAKOLM Abteilung Biologische Nutztierhaltung Head: Dr. Leopold PODSTATZKY-LICHTENSTEIN</p>
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<p>Projekt 1417 (planned)</p> <p>Acquisition of moving behaviours of the larvae of click beetle (wireworm), as well as investigation of the influence of the pre-crops to the harm-held back of the larvae; Institut für ökologischen Landbau der Universität für Bodenkultur (Univ.-Prof. Dr. Bernhard FREYER); BMLFUW Projekt 1432 (planned)</p>	<p>Aussenstelle WELS Austraße 10, A - 4601 Wels/Thalheim Phone: +43-7242-47012 Fax: +43-7242-47011-15 E-mail: gerhard.plakolm@bal.bmlfuw.gv.at E-mail: leopold.podstatzky@bal.bmlfuw.gv.at</p> <p>1.3.2 Federal Institute for Less-Favoured and Mountainous Areas Head: Dr. Josef KRAMMER Dr. Michael GROIER Marxergasse 2 A - 1030 Wien Tel.: +43-1- 504 88 69-19 Fax.:+43-1-504 88 69-39 E-mail: michael.groier@babf.bmlfuw.gv.at</p> <p>1.3.3 Federal College and Office for Viticulture and Pomology Head: Dipl.-Ing. Karl VOGL Dr. Ferdinand Regner Wienerstraße 74 A – 3400 Klosterneuburg Phone: +43-2243-37911 Fax: +43-2243-26705 E-mail: direktion@hblawo.bmlfuw.gv.at E-mail: ferdinand.regner@hblawo.bmlfuw.gv.at</p> <p>1.4 Network of organic agriculture organisations in Austria BIO AUSTRIA Wien DI Reinhard GESSL Research, Innovation and Knowledge Management Theresianumgasse 11/1 A-1040 Wien Phone: +43-1-403 70 50 Fax: +43-1-403 40 70 191 E-mail: innovation@bio-austria.at</p>
<p>Belgium</p>	
<p>The Flemish government gives a yearly contribution (about 50.000 €) to PCBT, the main research centre for organic farming in Flanders</p>	<p>PCBT Ir. Lieven Delanote Ieperseweg 87, 8800 Rumebeke (Belgium)</p>

<p>Development of a database for organic seed, PCBT-CLO-BLIVO, 2004, 64.600 €</p> <p>Soil maintenance in organic fruit production”, ALT/PCBT, 2003-2004, 69.500 €</p> <p>Integration of control systems, Bioforum, 46.000 € (from September 2004 onwards).</p> <p>Interreg projects : border-crossing know-how exchange with the neighbouring countries (France and Holland), PCBT, 2002-2005, 103.640 €</p> <p>Innovations on mechanical weed control, PCBT, 2004-2005, 75.000 €</p> <p>Implementation of the use of organic seeds, PCBT-PCG, 2004-2005, 75.000 €</p> <p>Sustainable organic sheltered cultures, PCG-PCBT, 2003-2004, 63.500 €</p> <p>Research & Development for a methodology for optimizing mechanical weed control techniques, Royal University Leuven, 226.500 €</p> <p>Trials since 1979 with the aim to determine the value of compost as a fertilizer for grazed pasture The Section of Agricultural Systems of the CRA-W (Mr D. Stilmant)</p> <p>Identification of tillage techniques for the most efficient utilization of legumes in the rotation cycle in organic farming reduction of the impact of potato blight in organic farming and the identification of suitable varieties, VETAB project (Interreg III: Walloon Region – Flanders – France)</p> <p>“How does organic farming contribute to sustainable production and consumption : the case of beef ?”, U.Lg. (SEED), The Section of Agricultural Systems, financed within the framework of the Sustainable Development Support Plan as part of Belgian federal scientific policy</p> <p>Disease and pest prevention, promoting biological control and environmentally friendly pesticides Department of Biological Control and Plant Gen. Res. of the CRA-W (Mr M. Cavelier and Mr M. Lateur)</p> <p>Methodological research optimizing apple disease control under Organic Production System, in collaboration with Flemish and North France Organic Farming associations.</p> <p>Use of Systemic Induced Resistance in apple growing.</p> <p>Methodological studies for breeding commercial apple varieties with polygenic resistance to scab and other cryptogamic disease.</p> <p>Valorisation of regional fruit tree genetic resources for processing use and for nurseries.</p> <p>Breeding of winter wheat and spelt.</p> <p>The determination of the variety characteristics of winter wheat and spelt wheat with a view to formulate recommendations for farmers, and</p> <p>A study of nitrogen fertilisation of winter wheat by top dressing with poultry manure in spring. The Department of Crop Production of the CRA-W (Mr M. Frankinet and Mr J.-P. Destain)</p> <p><i>Other projects are described in the the country reports</i></p>	<p>T. + 32 (0) 51 26 14 07, F +32 (0) 51 24 00 20 povlt.pcbt@west-vlaanderen.be, www.pcbt.be</p> <p>AMS Vincent Samborski Leuvenseplein 4, bur. 7.4, 1000 Brussels Tel : 02/553.63.74</p> <p>Walloon Agricultural Research Centre (CRA-W) in Gembloux (Mr D. Stilmant, Mr M. Cavelier, Mr M. Lateur, Mr M. Frankinet, Mr J.-P. Destain) Gembloux University Faculty of Agronomic Sciences (F.U.S.A.Gx), (Prof. M. Culot) Veterinary Faculty of the University of Liège (U.Lg.) Faculty of Bio-engineering, Agronomy and Environment of the Catholic University of Louvain (U.C.L.).</p>
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Bulgaria	
	<p>Agroecological centre at Agricultural University str."Mendeleev"12, 4000 Plovdiv, Bulgaria Tel.: +359 32 61 26 Manager - eng. Agr. Tanja Kouzarova, tel.: +359 32 448 360</p> <p>Institute of soil science "Nikola Poushkarov"(ISS) 7, Shosse Bankya str. Box 1369, 1080 Sofia, Bulgaria Assoc. Prof. Totka Mitova e-mail: tmitova@hotmail.com</p> <p>Institute for Mountain Stockbreeding and Agriculture Str. "Vassil Levski" 281, 5600 Troyan, Bulgaria Dr. Marin Todorov Tel.: +359 670 22 802, e-mail: mmt@abv.bg</p> <p>AgroBioInstitute Blvd. Dragan Tsankov 8, Sofia 1164, Bulgaria Dr. Mariana Vlahova Tel: +359 2 963 64 13, email: mvlahova@abi.bg</p>
Cyprus	
<p>Organic Production of: Potatoes, Tomatoes, Leafy Vegetables</p> <p>Biological Control of Insects and Weeds</p> <p>Sustainable Farming Systems</p> <p>Compost Production and Evaluation</p> <p>Resistance of Crops Grown Organically</p>	<p>Agricultural Research Institute (ARI)</p> <p>Main researchers:</p> <p>Dr Ioannis Papastylianou, Farming Systems Specialist, Head Department of Vegetables and Ornamentals, e-mail: papastyl@arinet.ari.gov.cy</p> <p>Dr Nicos Ioannou, Plant protection and soil solarization specialist</p> <p>Head Department of Plant Protection</p> <p>Mr Sofocles Gregoriou, Potato Specialist</p> <p>Mr Nicos Vouzounis, Weed Control Specialist</p> <p>Mr Menelaos Stravrinides, Biological Control of insects</p> <p>Ms Stefanie Zarifi, Studies on Organical control of <i>Phytophthora infestans</i></p> <p>Dr Maria Jerzykiewicz, Compost production</p> <p>Dr Gordon Couper, Biological role of compost in crop production</p>

Czech republic

Organic food and farming research is involved in sub-programmes “Quality and Safe Nutrition” and “Use of Natural Resources”: 15 projects in 2004.

Bioinstitut (specifically for organic farming; est. in 2004 by Palacky University Olomouc, PRO-BIO – Czech Association of Organic Farmers and FiBL Switzerland)
Contacts: Dr. Borivoj Sarapatka, Ing. Jiri Urban

Others:

Czech University of Agriculture, Prague: Doc. Ing. Ondrej Sarec, PhD, Doc. Ing. Jan Vasak, PhD; Prof. Jiri Balik, PhD; ing. Ludek Tyser, PhD; Dr. Frantisek Kumhala

Mendel University of Agriculture, Brno: Doc. Ing. Kristina Petrikova, PhD; Prof. Iva Zivelova, PhD

University of Southern Bohemia, Faculty of Agriculture, Ceske Budejovice: Ing. Jana Kalinova, PhD; doc. Ing. Jan Moudry, PhD

Institute of Chemical Technology, Prague: Prof. Jana Hajslova, PhD

Research Institute of Agricultural Economics, Prague: Doc. Ing. Tomas Doucha, PhD

Research Institute of Crop Production, Prague: Dr. Alois Honek, PhD; doc. Dr. Frantisek Kocourek, PhD

Research Institute of Animal Production, Prague: Ing. Vera Matlova

Research Institute for Fodder Plants, Troubsko: Dr. Jan Nedelnik, PhD

Research Inst. for Cattle Breeding, Rapotin: Ing. Jan Pozdisek, PhD; Dr. Oto Hanus, PhD

Oseva PRO: Ing. Jiri Havel, PhD; Ing. Bohumir Cagas, PhD

Potato Research Inst., Havlickuv Brod: Ing. Ervin Hausvater, PhD

Research and Breeding inst. of Pomology, Holovousy: Ing. Miroslav Lansky;

Research inst. of Agricultural Engineering, Prague: Doc. Ing. Josef Hula, PhD; Ing. Antonin Jelinek, PhD

Agritec, Sumperk: Ing. Miroslav Hochman

Food Research Institute, Prague: Ing. Dana Gabrovska

PRO-BIO, Stare Mesto: Ing. Martin Hutar

Denmark

Danish Research Centre for Organic Farming (DARCOF)

Chief scientist Erik Steen Kristensen

Project Leaders DARCOF II 2001-2005 and project titles:

Crop production and the environment

Kristian Thorup-Kristensen *Organic production of cucumber and tomato*

Hanne Lindhard Pedersen *Sustainable production systems for apples*

Jørgen Aagaard Axelsen	<i>Nitrogen dynamics, crop production and biodiversity in organic crop rotations</i>
Bent T. Christensen	<i>Enhanced bread wheat production</i>
Erik Steen Jensen	<i>Production of grain legumes and cereals for animal feed</i>
Jesper Rasmussen	<i>Cultivation in ridges and mixed cropping</i>
Per Schjønning	<i>Soil quality in organic farming</i>
Bo Melander	<i>Management of perennial weed species in organic farming</i>
Martin Heide Jørgensen	<i>Band heating for intra-row weed control</i>
Kristian Thorup-Kristensen	<i>Organic vegetable cultivation methods and use of catch crops</i>
Birte Boelt	<i>Cultivation of organic clover and grass seed</i>
Susanne Elmholt	<i>Preventing mycotoxin problems</i>
Per Ambus	<i>Dinitrogen fixation and nitrous oxide losses in grass-clover pastures</i>
John Hockenhull	<i>Control of scab in organic apple growing</i>
Jørgen Eriksen	<i>Nitrate leaching from dairy farming</i>
Ole Hørbye Jacobsen	<i>Regional groundwater protection by optimised organic farming systems</i>
Animal husbandry and health	
Troels Kristensen	<i>Organic dairy production systems</i>
Jacob Holm Nielsen	<i>Production of organic milk of high quality considering the future demands for use of organically produced feed and natural vitamins</i>
Stig Milan Thamsborg	<i>Production of steers and use of bioactive forages</i>
Mette Vaarst	<i>Health and welfare for organic calves</i>
Frank Møller Aarestrup	<i>Use of antimicrobials and occurrence of resistance in organic cattle herds</i>
Poul Sørensen	<i>Research in poultry production systems</i>
Martin Tang Sørensen	<i>Improved pig feed and feeding strategies</i>
Jan Tind Sørensen	<i>Health management in organic pig production</i>
John E. Hermansen	<i>New systems in organic pig production</i>
Dorte Lau Baggesen	<i>Bacterial infection risk associated with outdoor organic pig production with special reference to Salmonella and Campylobacter infection</i> <i>Production of raw milk cheese from organic milk</i>
Agriculture and society	
Mette Wier	<i>Consumer demand for organic food</i>
Søren E. Frandsen	<i>Analyses of the future development of organic farming</i>
Jacob Magid	<i>Closing the rural-urban nutrient cycle</i>
Kirsten Brandt	<i>Organic food and health - a multigeneration animal experiment</i>
Jesper Fredshavn	<i>Nature quality in organic farming</i>
Mogens Lund	<i>Future supply and marketing strategies in the Danish organic food-sector</i>
Katherine O'Doherty Jensen	<i>Distribution channels for organic foods and consumer trust</i>

Thorkild Nielsen	<i>Organic agriculture in social entirety - principles versus practices</i>
Research facilities	
Jørgen E. Olesen	<i>Experimental units for research in organic farming systems</i>
Coordination and synergy	
Erik Steen Kristensen	<i>Coordination and synergy</i>
Seed production and development	
Bent J. Nielsen	<i>Healthy seed for organic production of cereals and legumes</i>
Hanne Østergaard	<i>Characteristics of spring barley varieties for organic farming</i>
Gösta Kjellsson	<i>Tool for protection against contamination by GMO</i>
Birgit Jensen	<i>Grain legumes for organic farming - improved disease resistance, weed competitive ability and feed quality</i>
Birte Boelt	<i>Vegetable and forage seed - development of an organic, GMO-free seed production</i>
Estonia	
<p>Studies in organic crop rotation (long-term, started in 2003)</p> <p>Topics incorporated with a certain % of organic focus in general agricultural research projects:</p> <p>Development of environmentally friendly plant protection technology (50% organic) (2004-2008)</p> <p>Productivity of grasslands in different environmental conditions (20% organic) (2003-2007)</p> <p>Study on different cropping systems for optimizing practical solutions (25% organic) (2003-2007)</p> <p>Improvement of choice of horticultural varieties and cultivation technologies (25% organic) (2003 –2007)</p> <p>Breeding of new varieties for sustainable agriculture (25% organic) (2003-2007)</p>	<p>Agricultural Research Centre (ARC)</p> <p>Jõgeva Plant Breeding Institute (JPBI)</p> <p>Estonian Agricultural University (EAU)</p> <p>Estonian Research Institute for Agriculture (ERIA)</p> <p>Estonian Agricultural University Polli Horticultural Institute (EAUPHI)</p> <p>Olustvere School of Service and Rural Economics (OSSRE)</p>
Finland	
<p>In 2003, The Finnish Ministry of Agriculture and Forestry (MAF) started a three-year Research Programme on Organic Farming, with 15 projects carried out under the topics:</p> <p><i>Quality and risks of organic food;</i></p> <p><i>Consumer oriented product development;</i></p> <p><i>Maintenance of soil fertility; Safe recycling of organic waste;</i></p> <p><i>Improved production of organic milk and meat;</i></p>	<p>Research centres:</p> <p>MTT Agrifood Research Finland, Ecological Production</p> <p>Helsinki University, Mikkeli Institute for Rural Research and Training</p> <p>University of Joensuu</p> <p>VTT, Helsinki</p> <p>Consumer Research Center, Helsinki</p> <p>Topics and leading researchers:</p>

<p><i>Animal welfare and organic farming;</i> <i>Local food systems; and Role of organic farming in multifunctional and pluriactive agriculture.</i></p> <p>The annual budget for this programme is about MEUR 1.1 from MAF and an estimate of another MEUR 1.1 is coming from the own budgets of Institutes involved in these projects.</p> <p>All projects under organic food and farming in Finland can be found at web site http://www.agronet.fi/luotu/eng/index.htm</p>	<p><u>Natural Resources, Economy and Society</u></p> <p>Laura Seppänen (sociology), Helsinki University, Mikkeli Institute for Rural Research and Training, laura.seppanen@helsinki.fi</p> <p>Jyrki Aakkula (environment economy), Helsinki University, Mikkeli Institute for Rural Research and Training, jyrki.aakkula@helsinki.fi</p> <p>Kauko Koikkalainen (farm economy), MTT Agrifood Research Finland, kauko.koikkalainen@mtt.fi</p> <p>Tuija Mononen (society), University of Joensuu, tuija.mononen@joensuu.fi</p> <p><u>Food and Markets</u></p> <p>Anne Arvola (consumer decision making), VTT anne.arvola@vtt.fi</p> <p>Johanna Mäkelä (consumer decision making, local food), Consumer Research Center, johanna.makela@crc.fi</p> <p>Jouni Kujala (markets), Helsinki University, Mikkeli Institute for Rural Research and Training, jouni.kujala@helsinki.fi</p> <p>Sari Forsman (SME), MTT Agrifood Research Finland, sari.forsman@mtt.fi</p> <p><u>Animal Production</u></p> <p>Ulla Holma (animal welfare), Helsinki University, Mikkeli Institute for Rural Research and Training, ulla.holma@helsinki.fi</p> <p>Kristiina Dredge (animal health), Helsinki University, kristiina.dredge@helsinki.fi</p> <p>Eeva Kuusela (animal feeding, cattle), University of Joensuu eeva.kuusela@joensuu.fi</p> <p>Kirsi Partanen (feeding of pigs), MTT Agrifood Research Finland, kirsi.partanen@mtt.fi</p> <p><u>Plant production, technology</u></p> <p>Anne Nissinen (plant production), MTT Agrifood Research Finland, anne.nissinen@mtt.fi</p> <p>Petri Vanhala (weeds), MTT Agrifood Research Finland, petri.vanhala@mtt.fi</p> <p>Timo Lötjönen (technology), MTT Agrifood Research Finland, timo.lotjonen@mtt.fi</p> <p>Winfried Schäfer (technology), MTT Agrifood Research Finland, winfried.schafer@mtt.fi</p> <p>Pirjo Kivijärvi (horticulture), MTT Agrifood Research Finland, pirjo.kivijarvi@mtt.fi</p> <p>Arja Nykänen (grasslands, legumes), MTT Agrifood Research Finland, arja.nykanen@mtt.fi</p>
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	<p><u>Plant and soil systems</u></p> <p>Arja Nykänen (soil chemistry, N-fixation), MTT Agrifood Research Finland, arja.nykanen@mtt.fi</p> <p>Ansa Palojarvi (soil microbiology), MTT Agrifood Research Finland, ansa.palojarvi@mtt.fi</p> <p>Helena Kahiluoto (mychoriza), MTT Agrifood Research Finland, helena.kahiluoto@mtt.fi</p> <p>Pentti Seuri (nutrien and energy balances), MTT Agrifood Research Finland, pentti.seuri@mtt.fi</p>
<p>France</p>	
<p><i>Overview of projects provided in the country report</i></p>	<ul style="list-style-type: none"> • INRA - Institut National de la Recherche Agronomique (National Institute for Agronomic Research) • ITAB - Institut Technique pour l'Agriculture Biologique: M. Calame (chairman), L. Fontaine (managing director), B. Leclerc, M. Jonis, B. Taupier-Létage) • Other Technical Institutes associated within ACTA: apart from ITAB also Arvalis (Crop production) (Ph. Viaux), Institut de l'Elevage (S. Hacala), CTIFL (fruits and vegetables, R. Garcin), Institut Technique du Porc. • ISARA (Engineer school): C. David, Y. Gautronneau, S. Neyrat • GRET (groupe de recherches et d'échanges technologiques), carrying on research on market and consumers (M. François)
<p>Germany</p>	
<p>Multidisciplinary institute:</p> <p>Bundesforschungsanstalt für Landwirtschaft (FAL), Institut für ökologischen Landbau Dr. PD Gerold Rahmann Trenthorst / Wulmenau, D - 23847 Westerau Germany Activities: Federal Research Institute for Organic Agriculture</p> <p>Plant production, plant protection, plant breeding etc.:</p> <p>Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, Fachgebiet Ökologischer Land- und Pflanzenbau Prof. Dr. Jürgen Heß, Dr. Christian Schüler et. al. Nordbahnhofstr. 1a, D - 37213 Witzenhausen Germany Activities: Research and teaching on organic farming; experimental farm Frankenhausen</p> <p>Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, Fachgebiet ökologischer Pflanzenschutz</p>	

Prof. Dr. Maria Finckh, Dr. Helmut Saucke, Dr. Christian Bruns
Nordbahnhofstr. 1a, D - 37231 Witzenhausen Germany

Rheinische Friedrich-Wilhelms-Universität Bonn, Institut für Organischen Landbau

Prof. Dr. Ulrich Köpke, Dr. Guido Haas
Katzenburgweg 3, D - 53115 Bonn Germany
Professur für Organischen Landbau
Prof. Dr. Günter Leithold
Karl-Glöckner-Str. 21 C, D - 35394 Gießen Germany

Biologische Bundesanstalt für Land- und Forstwirtschaft, Institut für integrierten Pflanzenschutz
PD Dr. habil. Stefan Kühne, Dr. Marga Jahn et. al.
Stahnsdorfer Damm 81, D - 14532 Kleinmachnow Germany
Activities: Research for biological plant protection

Institut für Biologisch-Dynamische Forschung (IBDF) e.V.
Dr. Johannes König, Dr. Hartmut Spieß, Dr. Georg Eysel, Dr. Joachim Raupp
Brandschneise 5, D - 64295 Darmstadt Germany
Activities: Research on bio-dynamic and organic agriculture, publications

Getreidezüchtungsforschung Darzau, Gesellschaft für goetheanistische Forschung e.V.
Dr. Karl-Josef Müller
Darzau Hof, D - 29490 Neu Darchau, Germany
Activities: Research on breeding of organic cereals

Animal husbandry, animal feeding, livestock breeding, animal health etc.:

Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, Fachgebiet Tierernährung und Tiergesundheit
Prof. Dr. Albert Sundrum, Dr. Christian Krutzinna
Nordbahnhofstr. 1a, D - 37213 Witzenhausen Germany
Activities: Research on organic animal husbandry

Universität Kassel, Fachbereich Ökologische Agrarwissenschaften, Fachgebiet Nutztierethologie und Tierhaltung
Prof. Dr. Ute Knieriem, Dr. Bernhard Hörning
Nordbahnhofstr. 1a, D - 37213 Witzenhausen Germany

Fachhochschule Osnabrück, Studiengang Landwirtschaft, Fachgebiet Umweltschonende Tierproduktion
Prof. Dr. Robby Andersson
Am Krümpel 31, D - 49090 Osnabrück Germany
Activities: Research on Organic Animal Husbandry

Farm economics, rural development, marketing, policy areas etc.:

Bundesforschungsanstalt für Landwirtschaft (FAL), Institut für Betriebswirtschaft
Dr. Hiltrud Nieberg
Bundesallee 50
38116 Braunschweig

Activities: economic research on production systems, agrarian structures, policy areas, modelling and statistics

Universität Kassel; Fachbereich Ökologische Agrarwissenschaften, Fachgebiet Agrar- und Lebensmittelmarketing

Prof. Dr. Ulrich Hamm, Prof. Dr. Bernd Wirthgen

Steinstraße 19, D - 37213 Witzenhausen Germany

Activities: Research on marketing issues

Universität Hohenheim, Fachgebiet Produktionstheorie und Ressourcenökonomik im Agrarbereich

Prof. Dr. Stephan Dabbert

Schloß-Osthof-Süd/Schwerzstrasse, D - 70593 Stuttgart Germany

Activities: Organic Farming Policies and economical issues, production theories, modelling

Universität Hamburg, Institut für Allgemeine Botanik, Forschungsschwerpunkt Biotechnik, Gesellschaft und Umwelt (FSP BIOGUM)

Dr. Heike Kuhnert

Ohnhorststr. 18, D - 22609 Hamburg Germany

Activities: marketing, political strategies, consumer behavior

Consumer protection, human nutrition, organic food quality, food analysis etc.:

Universität Kassel; Fachbereich Ökologische Agrarwissenschaften, Fachgebiet Ökologische Lebensmittelqualität und Ernährungskultur

Prof. Dr. Angelika Meier-Ploeger, Dr. Johannes Kahl

Nordbahnhofstr. 1a, D - 37213 Witzenhausen Germany

Activities: Research and teaching on quality and ecology in food production

Viniculture etc.:

Forschungsanstalt Geisenheim, Fachbereich Weinbau / Getränketechnologie, Institut für Biologie, Fachgebiet Phytomedizin

Prof. Dr. Beate Berkelmann-Loehnertz

Von-Lade-Str. 1, D - 65366 Geisenheim Germany

Activities: plant protection in viniculture, vine diseases

Practical research, scientific services, transfer of knowledge etc.:

FiBL Deutschland e. V., Forschungsinstitut für biologischen Landbau

Dr. Robert Hermanowski

Galvanistrasse 28, D - 60486 Frankfurt/Main Germany

Activities: Publications, Internet services, research on safety and retraceability in agricultural value added

Stiftung Ökologie & Landbau (SÖL)

Dr. Uli Zerger

Weinstraße Süd 51, D - 67089 Bad Dürkheim Germany

Activities: Publications, Archive, Research, Coordination of the Scientific Conference in the German language region

Arbeitsgruppe der Versuchsansteller im ökologischen Landbau, c/o Sächsische Landesanstalt für Landwirtschaft

Dr. sc. agr. Hartmut Kolbe

Gustav-Kühn-Str. 8, D - 04159 Leipzig Germany

Activities: Coordination of organic farming research at the level of the federal states

Öko-Institut Freiburg e.V.- Biodiversität, Ernährung und Landwirtschaft (BE&L)
 Ruth Brauner
 Binzengrün 34a, D - 79114 Freiburg Germany
 Activities: research and studies on biodiversity, food and agriculture

Hungary

Type of public funding, title of the project, coordinator, allocated budget

Technical R&D project 2003: Working out certification standards and data bank of organic sowing seeds – questing for crop varieties suitable for organic production; Biokontroll Hungária Kht., 174.000 €

National R&D Project 2002: New organic and economic production of white mustard seed and its further utilization; Bay Zoltán Foundation for Applied Research, 1.007.000 €

National R&D Project 2002: Research of cereals suitable for organic farming

Agricultural Research Institute of the Hungarian Academy of Sciences

808.000 €

National R&D Project 2002: Developing high quality and competitive production and processing techniques of organic medical and comestible plants to producing medicines, complementary dietetic feedingstuffs and cosmetics; University of Szeged, Faculty of Pharmacy Institute of Pharmacognosy, 806.000 €

Hungarian Scientific Research Fund: Possibilities of seed treatments in organic farming; Budapest Corvinus University, Faculty of Horticultural Sciences, Department of Ecological and Sustainable Production Systems, 28.972 €

Technical R&D project 2002: Organic vegetable production; Virágoskút Kft., 121.000 €

Feeding and defining of feed intake of hen breeds suitable for organic production; Institute for Small Animal Research, Gödöllő, 8.060 € (Min. of Agric.)

Institute for Small Animal Research, Gödöllő; Dr. István Szalay

University of Debrecen, Centre of Agricultural Sciences; Dr. István Gonda, Dr. György Zsirai

Research Institute for Fisheries, Aquaculture and Irrigation, Szarvas; Dr. László Váradi

Budapest Corvinus University, Faculty of Horticultural Sciences, Department of Ecological and Sustainable Production Systems, Budapest; Dr. László Radics

Szent István University, Faculty of Agricultural and Environmental Sciences, Gödöllő; Dr. József Ángyán, Dr. Miklós Mézes

“Hortseed” Seed Producing and Service Ltd, Mezőkovácsháza; Dr. Sándor Varga

Bay Zoltán Foundation for Applied Research; Dr. Péter Biacs

National Food Safety Office, Research Institute of Agrobotany, Tápiószele; Dr. László Holly

Agricultural Research Institute of the Hungarian Academy of Sciences, Martonvásár

Cereal Research Co., Szeged; Dr. Attila Barnóczki

Ireland

Johnstown Castle Research Centre: organic livestock production systems (beef and sheep), organic dairy systems
 Oakpark Research Centre: organic crop production

Italy

Quality indicators in organic farming products, 890.000,00 EUR, 2000, concluded
Pest and disease management in organic farming, 620.000,00 EUR, 1998, concluded
Developing organic fertilization systems, 100.000,00 EUR, 1998, concluded
Organic animal production in Italy: current situation and perspectives, 194.000,00 EUR, 200 - 2004
Sustainable, traceable and safe organic olive oil production, 2003 - 2005
New production system for industrial crop: sugar beet and tomato, 2003 - 2005
High quality production for organic hazelnut, 2003 - 2005
Economic, environmental and health sustainability in organic farming, 2003 - 2006
High quality production in fruit and vegetables for fresh and processed product, 2003 - 2005
Genetic and crop improvement for organic cereals – wheat, barley, oats, 2003 - 2005
Bioactive substances in organic farming chain, 2003 - 2005

Research centres related to Ministry of agricultural and forestry policies carrying out OF research

National Council of Agriculture Research (CRA*, <http://www.entecra.it>): Institute of agronomy; Institute for study and preservation of soil; Institute for plant nutrition; Institute for agricultural zoology; Institute for plant pathology; Institute for agricultural engineering; Institute for exploitation of agricultural products; Office for agro-ecology; Institute for apiculture (beekeeping); Institute for cereal crops; Institute for industrial crops; Institute for flowers; Institute for vegetable crops; Institute for citrus crops; Institute for olive-tree; Institute for olive-oil processing; Institute for wine-growing; Institute for wine processing; Institute for fruit-tree; Institute for forestry management; Institute for forestry; Institute for poplar-tree; Institute for forage crops; Institute for husbandry; Institute for dairy-products
* Some other institutes belong to CRA, but they are not involved in OFF.

National Research Institute for food and human nutrition (<http://www.inran.it>)

National Institute of agricultural economy (<http://www.inea.it>)

Universities:

Università degli Studi di ANCONA <http://www.unian.it>
Università degli Studi di BARI <http://www.uniba.it>
Università degli Studi della BASILICATA <http://www.unibas.it>
Università degli Studi di BOLOGNA <http://www.unibo.it/>
Università degli Studi di FIRENZE <http://www.unifi.it>
Università Cattolica del Sacro Cuore (PIACENZA) <http://www.unicatt.it>
Università degli Studi del MOLISE <http://www.unimol.it>
Università degli Studi di NAPOLI "Federico II" <http://www.unina.it>
Università degli Studi di PADOVA <http://www.unipd.it>
Università degli Studi di PALERMO <http://www.unipa.it/>
Università degli Studi di PERUGIA <http://www.unipg.it>
Università di PISA <http://www.unipi.it> and <http://www.agr.unipi.it>
Università degli Studi MEDITERRANEA di REGGIO CALABRIA <http://www.unirc.it/>
Università degli Studi di TORINO <http://www.unito.it> and <http://www.agraria.unito.it>
Università degli Studi della TUSCIA <http://www.unitus.it>

	<p>Università degli Studi di UDINE http://www.uniud.it</p> <p>Agricultural Science Department of Sant'Anna School of Advances Studies in Pisa (http://www.sssup.it)</p> <p><u>Other National Institutions</u></p> <p>IAMB (Institute for Mediterranean Agronomy of Bari): International Centre related to Ministry for Foreign Affairs (http://www.iamb.it)</p> <p>ENEA (National Body for New Technology Energy and Environment): Research Centre related to Ministry of Environment (http://www.enea.it)</p> <p><u>Regional or local research centres</u></p> <p>1) Laimburg Centre (Bolzano Province) http://www.laimburg.it</p> <p>2) Institute in San Michele all'Adige (Trento Province) http://www.ismaa.it/</p> <p>3) Research Centre for Fruit and Vegetable production - CRPV (Emilia Romagna Region) http://www.crpv.it/</p> <p>4) Research Centre for Animal Production - CRPA (Emilia Romagna Region) http://www.crupa.it/home/it/</p> <p>Researchers network</p> <p>GRAB-It network (Research group in Organic Farming) chaired by Prof. Raffaele Zanolì of Univeristy of Ancona.</p>
Latvia	
<p>Research projects financed by Latvian Council of Sciences:</p> <p>Evaluation of quality of organic milk and milk products: 13.500 EUR. 2004 -2006.</p> <p>Investigation of soil pathogens in organic agriculture for large scale production: 19.400 EUR. 2004 -2006.</p> <p>Research projects financed by Ministry of Agriculture (subsidies):</p> <p>Seed production in organic farms: 12.000 EUR.2004, to continue.</p> <p>Market oriented projects financed by Ministry of Education and Science:</p> <p>Evaluation of influence of botanical food additives on productivity and quality of organic poultry: 27.000 EUR. 2004.</p> <p>Influence of welfare elements on meat quality of meat bulls and their crossings in the organic farms: 27.500 EUR. 2004.</p>	<p>1) Latvia University of Agriculture. Leading scientists: Prof. Inara Turka, Dr.habil.agr., Dr.agr., Asoc. prof. Dzidra Kreismane, Dr.biol., Asoc. prof. Biruta Bankina, Dr.ing., Asoc. prof. Inga Ciprovica,</p> <p>2) Research and study farm „Vecauce” at Latvia University of Agriculture. Leading scientists: Asoc. prof. Zinta Gaile, Dr.agr.</p> <p>3) Research Centre „Sibra” at Latvia University of Agriculture. Leading scientists: Prof. Aleksandrs Jemeljanovs, Dr.vet.med., Janis Nudiens, Dr. vet.med., Ira Vitina, Dr.vet.med.</p> <p>4) State Priekuli Breeding Station. Leading scientists: Ilze Skrabule, Dr.agr., Livija. Zarina, Dr. agr.</p> <p>5) State Stende Breeding Station. Leading Scientists: Vija Stradina, Dr.agr.</p>

Lithuania	
<p>Projects, supported by the Ministry of Agriculture:</p> <ol style="list-style-type: none"> 1. Plant production technology (alternative plant protection measures, seed growing system, breeds and varieties of cereals, leguminous crops and grasses, technological measures in organic orchards and etc.) 2. Quality of organic production (cereals) 3. Management and economy (investigation of organic grain demand, strategy of development organic dairy production, evaluation of economy of organic fishery production). 4. Animal husbandry.(recommendation for cattle feeding.) <p>Projects carried out by own funds of the University and the Institutes:</p> <p><i>Lithuanian Institute of Agriculture:</i> Investigation of plant production and grassland in different soils in organic agriculture Economic, environmental and quality aspects of organic production Effect of mulches on weediness and soil fertility in organic horticulture Weed control theoretical background and technology optimization in organic agriculture Optimization of agroecosystem in organic agriculture Long term effect of organic farming on agroecosystem</p> <p><i>Lithuanian Institute of Agricultural Economy:</i> Economics of organic farming</p> <p><i>Lithuanian Institute of Husbandry:</i> Investigations of ecological pigs raising technologies Investigations of environmental problems on poultry farms</p>	<p>Lithuanian University of Agriculture Lithuanian Institute of Agriculture Lithuanian Veterinary Academy Lithuanian Institute of Horticulture Lithuanian Institute of Agrarian Economy Lithuanian Institute of Animal Husbandry</p>
Luxembourg	
<p>The National Research Fund (FNR, www.fnr.lu) has launched a multiannual research programme covering the following areas:</p> <ul style="list-style-type: none"> - traceability of foods (including genetically modified organisms - GMOs); - chemical and microbiological quality of foods (including drinking water); - impact on human health and consumer protection. 	<ul style="list-style-type: none"> - CRP-Santé (www.crp-sante.lu); several laboratories - Laboratoire National de Santé (www.crp-sante.lu); Dr Claude Muller - CRP-Gabriel Lippmann (www.crppl.lu), Dr Lucien Hoffmann

Malta	
Comparisons in productivity between organic and conventional crops marketing	Dr George Attard, Director Institute of Agriculture, University of Malta MSD 06, Malta Tel (+356) 2340 2321/2, Fax: (+356) 2134 6519
Norway	
<p>Animal Science:</p> <ul style="list-style-type: none"> - Production and marketing of organic sheep – meat - Norsk Kjøtt (The norwegian cooperative) - Organic production of meat (cattle) - The Agricultural University of Norway - Feed management and nutrition of dairy cows in organic farming given new political rules for organic farming - The Agricultural University of Norway - Organic milk production in northern parts of Norway – The Norwegian crop research institute <p>Soil and environmental research:</p> <ul style="list-style-type: none"> - The supply of Zn, Mn and Cu within organic food and grain production in southeastern parts of Norway - Research Institute and National Centre for Ecological Agriculture - Mineral content in plants and mineral supply for ruminants in organic agriculture – focus on S supply - Research Institute and National Centre for Ecological Agriculture <p>Plant production:</p> <ul style="list-style-type: none"> - The significance of S supply on fixation of nitrogen in organic fields containing a clover/grass mix - Research Institute and National Centre for Ecological Agriculture - Mineralization of carbon and nitrogen after plowing of organic meadows - The Norwegian crop research institute - Optimizing the biological fixation of nitrogen in forage production - The Norwegian crop research institute - The use of white clover containing pasture for dairy cows The Norwegian crop research institute - Diversity among soilbacteria and the occurrence of selected functional genes under different climatic conditions – The University of Tromsø - Development of organic methods in seed production – Felleskjøpet Øst Vest (Cooperative) - Organic cropping systems for higher and more stable cereal yields - The Norwegian crop research 	<p><u>The Agricultural University of Norway</u></p> <p>Associate Professor Ulrik Tutein Brenøe, Dep. of Animal and Aquacultural Sciences, P.O.Box 5003, 1432 Ås, e-mail: ulrik.brenoe@nlh.no, tlf.: 64 94 80 11. Subject: Dairy cow production systems</p> <p>Research Scientist Erling Thuen, Dep. of Animal and Aquacultural Sciences, P.O.Box 5003, 1432 Ås, e-mail: erling.thuen@nlh.no, tlf.: 64 94 80 37. Subject: Dairy cow production systems</p> <p>Associate Professor Jan Berg, Dep. of Animal and Aquacultural Sciences, P.O.Box 5003, 1432 Ås, e-mail: jan.berg@nlh.no, phone.: 64 94 80 24. Subject: Beef cattle production systems</p> <p>Professor Steinar Tveitnes, Dep. of Plant and Environmental Sciences, P.O.Box 5003, 1432 Ås, e-mail: steinar.tveitnes@nlh.no, tlf.: 64 94 82 22. Subject: Plant nutrition</p> <p>Associate Professor Marina Azzaroli Bleken, Dep. of Plant and Environmental Sciences, P.O.Box 5003, 1432 Ås, e-mail: geir.lieblein@nlh.no, tlf.: 64 94 79 24 Subject: Farming systems, crop modelling, nitrogen flows in farming and food systems</p> <p>Associate Professor Geir Lieblein, Dep. of Plant and Environmental Sciences, P.O.Box 5003, 1432 Ås, e-mail: geir.lieblein@nlh.no, tlf.: 64 94 78 13 Subject: Farming and food systems</p> <p>Professor Tor Arvid Breland, Dep. of Plant and Environmental Sciences, P.O.Box 5003, 1432 Ås, e-mail: tor.arvid.breland@nlh.no, tlf.: 64 94 77 33 Subject: Farming systems, soil biology</p> <p><u>The Norwegian Crop Research Institute</u></p> <p>Dr. Lars Olav Brandsæter, Weed science</p> <p>Dr. Anne Kjersti Bakken, Cropping systems and soil science</p>

<p>institute</p> <ul style="list-style-type: none"> - Repeated clover subcropping as a strategy for commercial organic grain production - The Norwegian crop research institute - Is Fusarium-mould and mycotoxins a problem in organic grainproduction? – National Veterinary Institute - Organic production of glasshouse vegetables - The Norwegian crop research institute - Optimal crop rotation for safe organic vegetable production - The Norwegian crop research institute - Organically grown vegetables: Quality (bacterial status) and the risk for transfer of pathogenic bacteria – National Veterinary Institute <p>Plant protection:</p> <ul style="list-style-type: none"> - Developing a plant protection method to protect strawberries (<i>Fragaria xananassa</i>) against damage from <i>Antonomus rubi</i> - Research Institute and National Centre for Ecological Agriculture - Plant protection in organic fruitproduction. - The Norwegian crop research institute - Control of apple fruit moth (<i>Agyresthia conjugela</i> Zeller) by attractive volatiles emitted from rowan (<i>Sorbus aucuparia</i> L.) - The Norwegian crop research institute - Using fungi and virus to control pests in fruitproduction - The Norwegian crop research institute - Criteria to achieve optimal use of harrowing against weeds - The Norwegian crop research institute - Developing a plant protection method to avoid damage from <i>Hylobius abietis</i> - The Norwegian crop research institute <p>Economy:</p> <ul style="list-style-type: none"> - Risk and risk factors in organic strawberry production - Norwegian Agricultural Economics Research Institute 	<p>Dr. Ragnar Eltun, Cropping systems and environmental tasks</p> <p>Dr. Gustav Fytro, Soil science</p> <p>Dr. Birgitte Henriksen, Plant diseases</p> <p>Dr. Trond. M. Henriksen, Soil microbiology</p> <p>Dr. Arne Hemansen, Plant diseases</p> <p>Prof. Dr. Trond Hofsvang, Pest management</p> <p>Dr. Gunnhild Jaastad, Pest management</p> <p>Dr. Ingeborg Klingen, Biological pest control</p> <p>Dr. Tor Lunnan, Forage crops</p> <p>Dr. Lars Nesheim, Forage crops</p> <p>Prof. Dr. Hugh Riley, Soil science</p> <p>Dr. Dag Røen, Hard fruit production</p> <p>Dr. Randi Seljåsen, Vegetable production</p> <p>Dr. Anita Sønsteby, Soft fruit production</p> <p>Dr. Michel Verheul, Green house production</p> <p>Dr. Trygve Aamlid, Seeds production</p> <p><u>The Norwegian Centre for Soil and Environmental Research</u></p> <p>Dr. Arne Grønlund, Soil quality and soil resources</p> <p><u>The University of Tromsø</u></p> <p>Dr. Mette Svenning, microbial activity in legumes</p> <p><u>Research Institute and National Centre for Ecological Agriculture</u></p> <p>Sissel Hansen, soil nutrients and fertilisation</p> <p>Atle Wibe, biocontrol of insects</p> <p>Aksel Døving, production of berries</p> <p>Håvard Steinshamn, nutrient efficiency in animal husbandry</p> <p>Theo Ruissen, plant protection</p> <p>Anne-Kristin Løes, nutrient availability and management</p> <p>Espen Govasmark, micronutrients in soil and feed products</p>
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Poland

I. Agricultural and Technical University in Bydgoszcz

A. Plant protection in organic farming (3.000 Euro / year)

1. Evaluation of phytosanitary conditions of roots and stem base of winter wheat and susceptibility of its selected varieties to necrosis diseases;
2. Occurrence of Fusarium fungus on the ears and grain of winter wheat;
3. Evaluation of phytosanitary conditions of potato tubers;
4. Analysis of fungal community in the soil under potato and winter wheat cultivation;
5. Identification of genetic variability of Bipolaris sorokiniana isolates extracted from spring barley.

B. Seed material in organic farming (700 Euro / year)

Usefulness of selected vegetables (carrot, onion, red beet, parsley, small radish) for seed production;

II. Agricultural University in Lublin

1. Natural, agricultural and economic conditions of crop production in organic farming;
 2. Ecological methods of weed control in organic farming;
 3. Cultivation of sugar beet in organic farming;
 4. Ecological methods of fertilization of grass-clover mixtures;
- Total budget for organic research in 2004 (30.000 Euro/year)

III. Agricultural University in Poznan

1. Yields of potato and tuber quality in different farming systems (organic, conventional, integrated) (6.000 Euro/per year);
2. Influence of different farming systems (organic, conventional, integrated) on production and economic aspects of selected crops (winter wheat, spring barley, pea) (8.000 Euro/per year)

IV. Agricultural University in Wroclaw

1. Influence of seed density and direction of seed on yielding of naked oats;
 2. Influence of intercrops on quality of light soil during conversion of organic farm;
- Total budget for organic research in 2004 (10.000 Euro/year)

V. Institute of Soil Science and Plant Cultivation in Pulawy

1. Selection of winter wheat varieties best adapted for cultivation in organic farming (7.000 Euro / year);
2. Nitrogen losses and its management (7.000 Euro / year);

I. Agricultural and Technical University in Bydgoszcz

1. prof. dr hab. Czeslaw Sadowski,
2. dr inż. Anna Baturó,
3. mgr inż. Aleksander Łukanowski,
4. mgr inż. Leszek Lenc,
5. dr inż. Jan Klepin (Secondary Agricultural School in Chojnice)

II. Agricultural University in Lublin

1. Prof. dr hab. Andrzej Borowy
2. Prof. dr hab. Eugeniusz Grela
3. dr hab. Jerzy Szymona

IV. Agricultural University in Poznan

1. dr hab. Franciszek Borówczak;

IV. Agricultural University in Wroclaw

1. dr Roman Śniady

VII. Institute of Soil Science and Plant Cultivation in Pulawy

1. prof. dr hab. Jan Kuś;
1. prof. dr hab. Irena Duer;
2. prof. Ewa Solarska;
3. dr Beata Feledyn-Szewczyk;
4. dr Jerzy Kopiński;
5. dr Krzysztof Jończyk;
6. dr Jarosław Stalenga;

VIII. Research Institute of Vegetable Crops in Skierniewice

1. dr inż. Anna Szafirowska;

VII. Sea Academy in Gdynia

2. dr hab. Maria Śmiechowska,

<p>3. Weed infestation of winter wheat and seed bank in the soil (7.000 Euro / year);</p> <p>4. Biodiversity and activity of microorganisms responsible for N and C transformation in soil (7.000 Euro / year);</p> <p>5. Application of PCR technique to identify the fungi responsible for development of different diseases of winter wheat (7.000 Euro / year);</p> <p>VI. Research Institute of Vegetable Crops in Skierniewice</p> <p>1. Technology of cultivation of vegetables for consumption and for seed production taking into account their biological value (100.000 Euro/per year)</p> <p>VII. Sea Academy in Gdynia</p> <p>1. Food quality in organic farming (15.000 Euro / year);</p> <p>2. Quality of soil in organic farms (1.500 Euro / year);</p> <p>3. Evaluation of ecological awareness of consumers buying organic food (1.500 Euro / year);</p> <p>VIII. Warmia and Mazury University in Olsztyn</p> <p>1. Selection of winter wheat varieties best adapted for cultivation in organic farming 3.000 Euro / year;</p> <p>2. Optimization of fertilization of sugar beet 2.000 Euro / year;</p> <p>3. Crop production technology, nutrient value and technological quality of spelt wheat (<i>Triticum spelta</i>) 8.000 Euro / year;</p> <p>4. Problems of conversion in organic farming 8.000 Euro / year.</p> <p>IX. Warsaw Agricultural University / SGGW</p> <p>a. comparison of nutritive, sensory and storage value of raw crops and products from organic and conventional production (apples, tomatoes, potatoes, paprika and apple preserves) – University research money – 7.200 Euro / year</p> <ul style="list-style-type: none"> • comparative evaluation of the agricultural landscape in organic and conventional farms– University research money – 1.000 Euro / year • research studies in marketing and development of the organic food market– 2.500 Euro / year 	<p>3. mgr inż. Joanna Newerli-Guz</p> <p>VIII. Warmia and Mazury University in Olsztyn</p> <p>1. prof. dr hab. Józef Tyburski,</p> <p>4. dr K. Żuk-Gołaszewska,</p> <p>5. dr hab. M. Wiwart,</p> <p>6. dr K. Majewska,</p> <p>7. dr Tadeusz Sadowski</p> <p>IX. Warsaw Agricultural University / SGGW</p> <p>2. dr hab. Ewa Rembiałkowska</p> <p>3. dr hab. Krystyna Gutkowska, prof. SGGW</p> <p>4. dr inż. Sylwia Żakowska – Biemans</p>
<p>Romania</p>	
	<p>Academy of Agricultural Science and Forestry: several institutes and research stations. Main centre: Institute of Agricultural Research and Development Fundulea</p> <p>Universities of Agricultural Sciences and Veterinary Medicine in Bucharest, Cluj - Napoca, Iasi, Timisoara</p> <p>Institute of Food Bioresources</p>

<p>Slovenia</p> <p>Ministry of Education, Science and Sport funds:</p> <p>Targeted Research Programmes Development of new techniques for pumpkins growing acceptable for organic farming. Prof.Dr. Franc Bavec, University of Maribor, Agriculture faculty (36 months). Organic Milk Production. Dr. Nezika Petric, University of Ljubljana, Biotechnical faculty (12 months). Optimisation of market chain for organic farming products and fruits and vegetable – models for Pomurje (North-east part of Slovenia). Tatjana Buzeti, Zavod za zdravstveno varstvo (36 months).</p> <p>Basic and applied projects Organic apple production, HEAD Stopar Matej, 1.1.2003 - 31.12.2005</p> <p>There are several other projects that partly include also organic food and farming research: <i>eight 5 years research programmes, two Targeted Research Programmes and 2 Basic and applied projects</i> (see Annex II – Country reports).</p>	<p>Institute for Sustainable Development Anamarija Slabe; anamarija.slabe@itr.si Private institute specialised in organic farming (policy, market, consumers; seed production)</p> <p>Slovenian Agriculture Institute, Hacquetova, 1000 Ljubljana, Slovenia, http://www.kis.si; Dr. Matej Stopar; Matej.stopar@kis.si (</p> <p>University of Ljubljana, Biotechnical Faculty, http://www.bf.uni-lj.si 1.Agronomy Department, Team for Fruit Growing, Jamnikarjeva 101, 1000 Ljubljana Dr. Franci Stampar, franci.stampar@bf.uni-lj.si</p> <p>2.Institute of Animal Breeding, Groblje 3, 1230 Domzale, Slovenia: Prof. Dr. Joze Osterc; joze.osterc@bfro.uni-lj.si Assist.Prof.Dr. Silvester Zgur: silvo.zgur@bfro.uni-lj.si</p> <p>3.Institute of Dairying, Groblje 3, 1230 Domzale, Slovenia Prof. Dr. Irena Rogelj: irena.rogelj@bfro.uni-lj.si</p> <p>University of Maribor, Faculty of Agriculture: http://www.uni-mb.si 1.Plant production and processing: Dr. Franc Bavec: Franci.bavec@uni-mb.si (wheat, maize, fertilisation, nitrogen, neglected/new crops, amaranth, organic farming) Prof. Dr Bozidar Kranjcic; fk@uni-mb.si)</p> <p>University of Ljubljana, Veterinary Faculty: http://www.vf.uni-lj.si Prof. Dr. Milan Pogacnik: Milan.Pogacnik@vf.uni-lj.si Prof. Dr. Vojteh Cestnik: Vojteh.Cestnik@vf.uni-lj.si</p>
<p>Spain</p> <p>Organic farming research financed by the National Research Programmes 2000-2004:</p> <ul style="list-style-type: none"> - Celia Maqueda Porras (Instituto de Recursos Naturales y Agrobiología, Consejo Superior de Investigaciones Científicas), and Juan Carlos Ruiz Porras (Centro de Investigación y Formación Agraria Las Torres-Tomegil, Junta de Andalucía). “Evolution of soil fertility parameters in farms transformed into organic farming. Incidence in crops” 148 000 euros. - Maria Lourdes Vázquez Oderiz (Facultad de Ciencias de Lugo, Universidad de Santiago de Compostela). “Comparative study of sensorial and physicochemical characteristics of ecological vegetal products, in fresh and after treatment of different industrial processes, against conventional products” 57 500 euros. - Antonio Bello Pérez (Centro de Ciencias Medioambientales, Consejo Superior de Investigaciones Científicas. “Ecological aspects of biofumigation in agricultural soils” 64 400 euros. - Ana María Aldanondo Ochoa (Dep. de Gestión de Empresa, Universidad Pública de Navarra). “Evaluation of the economical and environmental efficiency of OF”. 36 800 euros. 	

- M^a Jesús Pascual Villalobos (Instituto Murciano de Investigación y Desarrollo Agroalimentario, Comunidad Murciana). “Use of essential oils to control storage pests of ecological rice (Calasparra)”. 20 975 euros.
- Juan Piñeiro Andino (Centro de Investigaciones Agrarias de Mabegondo, Junta de Galicia), Antonio Martínez Martínez (Servicio Regional de Investigación y Desarrollo Agroalimentario, Asturias), Isabel Albizu Beitia (Instituto Vasco de Investigación y Desarrollo Agrario, Gobierno Vasco), and Jesús M^a Mangado Urdaiz. (Instituto Técnico de Gestión Agrícola y Ganadera, Comunidad Foral de Navarra). “Fodder conventional and ecological rotations in the humid Spain” 52 092 euros.
- Antonio de Vega García (Universidad de Zaragoza, Facultad de Veterinaria). “Valoration of barley as grazing resource to sheep in arid areas”.175 495 euros.
- Koldo Osoro Otaduy (Servicio Regional de Investigación y Desarrollo Agroalimentario, Asturias). “Study of strategies of pasture for development of sustainable systems on animal production to increase biodiversity. 276 000 euros.
- M^a Pilar de Frutos Fernández (Estación Agrícola Experimental, Consejo Superior de Investigaciones Científicas) and M^a Jesús Marín Abad (Facultad de Veterinaria, Universidad de León). “Digestive and pathologic aspects of oak leaves (hydrolysable tannins) for feeding cattle, analytical techniques and strategies to avoid poisoning”. 133 000 euros.
- Margarita Joy Torrens (Centro de Investigación y Tecnología Agroalimentaria, Gobierno de Aragón). “Evaluation of sheep production in a system compatible to the ecological agricultural production reglament”. 70 000 euros.
- Eduardo Beriatua (NEIKER) y Pilar Merino (Departamento de Investigación del Gobierno del País Vasco), “Optimization of cattle diet for sustainable and quality production”. . 90 000 euros.
- Francisco Vázquez (Extremadura). “Study on availability and variability of food in the 'montanera' of iberian pig”. .96.000 euros.
- M^a Nazaret García Cuadrado (Extremadura). “Nematode and cestode control in ecological aviculture with phytoterapy”. . 18.400 euros.
- José A. Bernúes Jal (Aragón). “Development of a decisión support system for sustainable management of extensive ruminant livestock systems and to evaluation of politics in highlands” .36.000 euros.
- Margarita Joy Torrens (Aragón). “Uses of lucerne in the diet of lambs and calfs in a system compatible with organic farming reglament”.94.000 euros.
- Isabel Casasús Pueyo (Aragón). “Production and economic effects of the optimal use or natural resources on breeding cattle”.32.600 euros.
- Isabel Casasús Pueyo (Aragón). “Tools for the pasture management of protected natural lands based in the interaction between cattle and vegetation. Study in the Natural Parks of Gorbeia, Izki and Sierra Cañones de Guara.17.200 euros.
- F. Xavier Sans (Departamento de Biología Vegetal, Universidad de Barcelona). “Effects of the intensive agriculture on the biodiversity of irrigated mediterranean agroecosystems and consequences on the insect diversity (Heteropterae) and the invasion resistance. Ministerio de Ciencia y Tecnología. 70.000 euros.
- Antonieta De Cal (Departamento de Protección Vegetal, INIA, Madrid). “ Integrated control of *Monilinia spp.* in stone fruit crop:development of biological fungicides and physicochemical methods”. Ministerios de Educación y Ciencia. 114.000 euros
- Paloma Melgarejo (Departamento de Protección Vegetal, INIA, Madrid). “Development of a biofungicide for integrated control of vascular wilts of horticultural crops” 141.000 euros

Funded by Regional Programmes:

- Soledad Álvarez Sánchez-Arjona (Universidad de Salamanca, Facultad de Ciencias Agrarias y Ambientales).
- Enrique Dapena (Servivio Regional de Investigación y Desarrollo Agroalimentario. Gobierno del Principado de Asturias)
- Gloria Gúzman, Roberto García-Trujillo (Consorcio Centro de Investigación y Formación de Agricultura Ecológica y Desarrollo Sostenible. Junta de Andalucía)
- Ramon M. Masalles, Marta Goula, Lourdes Chamorro y Joan Romanyà (Universidad de Barcelona)
- Clemente Mata, Antonio Manuel Alonso Mielgo (Universidad de Córdoba).
- Julio César Tello, Manuel Jamilena (Universidad de Almería).
- Amelia Martínez Penagos (Gobierno de Cantabria, Centro de Investigación y Formación Agrarias).

- Miguel Ángel Aparicio Tovar, Miguel, Hermoso de Mendoza, Eva María Frontera Carrión, Juana Labrador (Universidad de Extremadura).
- Ángel Bosch Bosch (Consorci Escola Industrial Barcelona, Escuela Superior de Agricultura).
- Ángel Luis Ceular Villace (Universidad de Santiago de Compostela).
- Rosario Fanlo Domínguez (Universidad de Lleida, Dpto. Producción Vegetal y Ciencia Forestal).
- Carmen Ocaña Ocaña (Universidad de Málaga, Dpto. Geografía).
- Itziar Aguirre (Universidad de Sevilla).
- Ramón Meco (Universidad de Castilla-La Mancha, Toledo)
- Concha Fabeiro, Jorge de las Heras (Universidad Castilla-La Mancha, Albacete).
- Fernando Pomares (IVIA. Instituto Valenciano de Investigaciones Agrarias).
- Joaquín Cuadrado (Centro de Capacitación, Experimentación e Investigación Agraria de Albaladejito).
- Marisol Garrido (Universidad Europea).
- Jaume Vadell (Universidad de les Illes Balears).
- Concha Jordà y José Luis Porcuna (Universidad Politécnica de Valencia).
- Eduardo Sevilla Guzmán (Instituto de Sociología y Estudios Campesinos, Universidad de Córdoba).

Sweden

Prioritised areas of research in Swedish organic production and consumption are:

- Optimisation of animal production systems
- Ecology and crop protection in organic cropping systems
- Plant nutrient turnover and nutrient recycling
- Multifunctional agricultural systems
- Food – quality – health
- Large-scale conversion to organic production – driving forces, obstacles and consequences for the market
- Resource dependency of the food systems
- Experimental farms and smaller innovative projects
- Coordination, dialogue, information, international cooperation and initiation

Formas-SE is funding mainly within the following themes: *Animal husbandry of poultry and milk production; The ecology of crop systems and the control of weeds and pathogens without pesticides; Nutrient circulation; Forms of organisation and markets.*

Optimisation of animal production systems:

Prof. Kjell Andersson at the Dept of Animal Breeding and Genetics, SLU, is leading a project, on ecological pig production systems in the area of. The project includes the relation between genotype and environment and conditions for local production of organic fodder.

Dr. Christian Swensson at the Dept of Agricultural Biosystems and Technology, SLU, and Dr. Erling Burstedt and Dr. Jan Bertilsson at the Dept of Animal Environment and Health, SLU, are experts on feeding and production systems for organic milking cows.

Dr. Gunnela Gustafson at the Dept of Animal Environment and Health is an expert on interactions between different animal species and between animal and crop systems.

At the Department of Agricultural Research for Northern Sweden, SLU, Dr. Kjell Martinsson and MSc Lars Ericsson work on local fodder production for milking cows.

Dr. Elisabeth Nadeau at the Department of Animal Environment and Health, SLU, is an expert on vitamin supply to organic milk production.

The National Veterinary Institute and the National Food Administration have been allocated 0.2 million € per year respectively for *forage and infections in connection to nutrient circulating systems* and for improved knowledge in *food safety and nutritional aspects of organic foodstuff*.

Prof. Bo Algers at the same department is an expert on animal husbandry and animal welfare.

Ecology of crop systems:

Dr. Birgitta Rämert and Prof. Jan Bengtsson are leading a cluster of projects at the Dept of Ecology and Crop Production Science, SLU.

Dr. Rämert is an expert on vegetable production and issues of nutrient and pathogen management in relation to green manure.

Prof. Bengtsson is an expert on biological diversity. Prof. Håkan Fogelfors is an expert on weed management.

Several other smaller research projects on crop production, weed and pathogen management in organic farming are based at this department.

Prof. Ingrid Öborn, Prof. Thomas Kätterer and Dr. Sigrun Dahlin work on different aspects of plant nutrient turnover and nutrient recycling in organic farming at the Dept of Soil Sciences, SLU.

Dr. Eva Salomon at the Swedish Institute of Agricultural and Environment Engineering is an expert on manure management in organic farming and is currently working on nutrient management in slaughter pig production systems.

Dr. Lennart Salomonsson at the Centre for sustainable agriculture (CUL), SLU, is an expert in Agroecology and is responsible for the research school *Swedish research School in Organic Farming and Food systems* (SwOFF) with the aim to stimulate interdisciplinary cooperation between doctoral students in organic farming research.

Dr. Christel Cederberg at the Swedish Dairy Association and Dr. Torbjörn Rydberg , Dr. Charlotte Lagerberg and Dr. Johanna Björklund at CUL are experts on resource dependency and sustainable development of the food system.

Food – quality – health:

has a low degree of public funding in Sweden in relation to both conventional and organic farming:

Dr. Bengt Lundegårdh at the Dept of Ecology and Crop Production Science, SLU is an expert on food quality in relation to organic primary production.

Dr. Pia Lindenskog at The Centre for Applied Nutrition (CTN) is an expert on sustainable consumption.

Switzerland

Main priorities of organic farming research:

- Optimizing all aspects of crop production (vegetables, fruit and wine growing, arable crops and grassland).
- Developing novel technologies for the control of pests, diseases and weeds.
- Optimizing organic seed production and breeding varieties in the context of organic farming.
- Developing outdoor systems for livestock.
- Improving animal health by herd management, holistic health approaches and biocontrol remedies (focus: mastitis, parasites).
- Cattle breeding in the context of low input and organic farming systems.
- Macro- and microeconomic aspects of organic farming.
- Scientific background of organic regulations (production, processing, distribution).
- Consumer attitude, market research and statistics.
- Improving organic systems, landscape and resource management.
- Safety and quality of organic food.

The research activities are distributed among the research institutes as follows:

- FiBL, 50 % of all organic research (focus: soil management and plant nutrition, horticultural crop research, organic plant protection and biodiversity, livestock health, livestock breeding and ethology, socio-economics including policy, regulation and markets, food quality).
- Agroscope FAL, 25 % of all organic research (focus: soil management and plant nutrition, grassland and arable crop research, breeding (fodder crops), biodiversity, plant protection and landscape).
- Agroscope RAC, 10 % of all organic research (focus: grassland and arable crop research, breeding (arable crops, wine) and variety testing, horticultural crops (esp. aromatic plants)).
- Agroscope ALP, 5% of all organic research (focus: milk and meat quality/technology/processing).
- Agroscope FAW, 5 % of all organic research (focus: horticultural crops, breeding/variety testing, quality and processing research).
- Agroscope FAT, 5 % of all organic research (focus: Farm management, farm technology).

• **Research Institute of Organic Farming (FiBL)**³, private trust, active in organic farming research and dissemination since 1973. Overall budget in research and knowledge transfer for organic farming: 10 Million €. 110 scientific and technical staff. A list of leading scientists is available from the FiBL Website⁴. Director: Urs Niggli. Responsible for research co-ordination with the 5 state Agroscope centres: Thomas Alföldi. Branch offices in Germany and Austria (FiBL Germany, FiBL Austria) with independent national budgets.

• **Agroscope**⁵ Centres comprising 5 Federal Agricultural Research Stations at Liebefeld-Posieux (ALP, organic co-ordinator is Peter Gallmann), Zürich-Reckenholz (FAL, organic co-ordinator is Fredi Strasser), Tänikon (FAT, organic co-ordinator is Robert Kaufmann), Wädenswil (FAW, organic co-ordinator is Daniel Baumann) and Changins (RAC, organic co-ordinator is Raphaël Charles). Agroscope Centres have become increasingly involved in organic research projects since the year 2000.

- Specialised **bio-dynamic research activities** (not publicly funded):
- Agricultural Department of the Goetheanum,⁶
- Research Institute for Vital Quality, Ursula R. Graf⁷
- Cereal Breeding Group of Peter Kunz⁸

There is national co-ordination between FiBL and Agroscope Centres (Coordinator Padruot Fried).

³ www.fibl.org

⁴ <http://www.fibl.org/english/fibl/team-a-z.php>

⁵ <http://www.agroscope.ch/inde.html>

⁶ <http://www.Landwirtschaftliche-Abteilung.org>

⁷ <http://www.fiv.ch>

The Netherlands

Out of 12 themes available for funding from the Ministry of Agriculture, Nature and Food Quality of the Netherlands, 151 organic farming research and development projects are carried out in 2004 under the following themes:

- 1 *Farming Systems, Farm Management and Farm Economy; 32 projects*
- 2 *Soil and Manure; 12 projects*
- 3 *Living Propagation Material and Resistance Breeding; 13 projects*
- 4 *Plant Protection and Weed Control; 31 projects*
- 5 *Animal Health and Nutrition; 5 projects*
- 7 *Agricultural Chains; 10 projects*
- 8 *Market and Consumer; 12 projects*
- 9 *Food Safety and Food Quality; 5 projects*
- 10 *Man and Society; 5 projects*
- 11 *Policy and Legislation; 12 projects*
- 12 *Innovation Processes and Knowledge Management; 14 projects*

The detailed overview of projects is presented in the country report in Annex II.

1. Agrotechnology & Food Sciences

Agrotechnology & Food Innovations

P.O. Box 17, 6700 AA Wageningen, phone: +31 317 475024, fax: +31 317 475347,
email: info.agrotechnologyandfood@wur.nl,
web address: <http://www.agrotechnologyandfood.wur.nl>

2. Animal Sciences

Animal Sciences Group

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Statutory Research Institutes

RIKILT - Institute of Food Safety

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The Scottish Agricultural College (SAC); Dr Christine Watson
University of Newcastle; Dr Carlo Leifert
University of Plymouth; Prof Rod Blackshaw
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University of Wales Aberystwyth, Institute of Rural Studies; Dr Nic Lampkin
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Current and planned R&D projects in the UK Defra Organic Farming Programme.

A study to develop alternative strategies for the control of potato blight in organically grown crops; University of Aberdeen,
An evaluation of the factors favouring the supply of imported organic food compared to domestic production; EcoStopes Consulting; OF0349
Arbuscular mycorrhizal fungi in organic systems; Warwick HRI; OF0333
Assessing the sustainability of a stockless arable organic rotation; ADAS; OF0318
Benchmarking models for organic agriculture; EFRC; OF0348
Collation and dissemination of information on the performance of vegetable and cereal varieties under organic conditions (COSI); NIAB; OF0345
Control of internal parasites in organic livestock without the use of pharmaceutical anthelmintics (CTE 9904); ADAS; OF0185
Conversion to Organic Field Vegetable Production (Phase 2); HDRA; OF0191
Developing a participatory approach to seed production and varietal selection (CTE0201); EFRC; OF0330
Dissemination network of organic research; Institute of Organic Trainers & Advisers; OF0347

Economic and agronomic feasibility of organic vegetable seed production in the UK, and subsequent seed quality; Warwick HRI; OF0166

Economics of organic farming (extension to OF0190); University of Wales Aberystwyth; OF0189

Economics of organic top fruit production; HDRA; OF0305

Establishment of, and running, a comprehensive organic seed information database and communication network; NIAB; OF0195

Factors influencing biodiversity within organic and conventional systems of arable farming; BTO; OF0165

Generating and evaluating a novel genetic resource in wheat in diverse environments; EFRC; AR0914

IGER; OF0316

Incorporation of conventional animal welfare assessment techniques into organic certification and farming (CTE0202); University of Bristol; OF0314

Optimising the production and utilisation of forage for organic livestock (CTE0202); ADAS; OF0328

Organic farming: technology transfer; ADAS; OF0405

Organic field vegetable production - baseline monitoring of systems with different fertility building strategies; HDRA; OF0332

Organic Produce Value Chain Analysis; University of Wales Cardiff; OF0344

Organic production in the hills and uplands; ADAS; OF0319

Participatory investigation of the management of weeds in organic production systems (CTE0201); HDRA; OF0315

Review of obstacles to meeting the Defra Action Plan targets for organic cereals; ADAS; OF0334

Study of the market for organic vegetables; HDRA; OF0342

Sustainable organic farming - A case study approach; ADAS; OF0322

Sustainable organic hill and upland farming - A collaborative case study approach; ADAS; OF0326

Sustainable organic vegetable systems network; HDRA; OF0340

Testing of OrgPlan conversion planning software; University of Wales Aberystwyth; OF0331

The development of improved guidance on the use of fertility building crops in organic farming (CTE0204); ADAS,

The development of organic milk production systems; IGER; OF0317

The use of homeopathic nosodes in the prevention of mastitis within organic dairy herds; University of Bristol; OF0186

University of Newcastle; OF0167

Using weeds to reduce pest insect numbers in organic vegetable crops - a desk study (CTE0202); Warwick HRI; OF0329

Validation of the HEN model for organic laying hens and assessment of nutrition in organic poultry (CTE0202); ADAS; OF0327

Varieties of field vegetables and potatoes for organic production and marketing; NIAB; OF0304

Varieties of field vegetables and potatoes for organic production and marketing (continuation); NIAB; OF0346

Welfare benchmarking and herd health plans on organic dairy farms; Duchy College; OF0343

Workshop and desk study to appraise technical difficulties associated with organic breeder flocks and organic hatching; ADAS; OF0336

Defra general farming and food R&D projects relevant to organic farming.

A modular modelling framework for biological control in horticultural crops; Warwick HRI; HH2403SX

Biocontrol approaches to aphid control: chemical ecology and natural enemies; East Malling Research; HH3103TTF

Biocontrol of *Varroa jacobsoni* (destructor); Warwick HRI; HH0819SHB

Biology and genetics of durable resistance to biotrophic pathogens of cereals; IGER; AR0712

Combining natural enemies for more effective biological control; Warwick HRI; HH2402SX

Determining the environmental burdens and resource use in the production of agricultural and horticultural commodities. Silsoe Research Institute; IS0205

Habitat diversification and aphid-specific natural enemies in arable ecosystems: optimising crop protection and environmental benefits; RES; AR0318

Integrated of biological control agents for sustainable control of *Allium* white rot; East Malling Research; HH3204SFV

Novel approaches to invertebrate control in horticultural crops - enhancing the efficacy of physical barriers; SAC, Wye College Imperial College London; HH3107TX

Semiochemicals in the management of apple leaf midge; East Malling Research, NRI University of Greenwich; HH3114TTF

The Defra Wheat Genetic Improvement Network; RES; AR0709

The mild-strain concept for the biological control of viruses of field vegetables; Warwick HRI; HH3205SFV

The movement of pests and natural enemies in biocontrol systems; Warwick HRI; HH2401SX

LINK projects relevant to organic farming sponsored by Defra through the organic farming or other research budgets.

3D Farming - making biodiversity work for the farmer; RES; LK0915

Advance automation technologies for sustainable agricultural production; Silsoe Research Institute; LK0928

Better Organic Bread: Integrating Raw Material and Process Requirements for Organic Bread Production; Campden & Chorleywood Food Research Association; LK0960

Breeding for improved resistance to *Septoria tritici*; JIC; LK0913

Controlling soil-borne wheat mosaic virus in the UK by developing resistant wheat cultivars; NIAB; LK0930

Developing new management options for soil-borne pests of organic system; University of Plymouth; LK0951

HDRA; HL0150LOF

Improved crop health and establishment using beneficial micro-organisms; Warwick HRI; HL0167LFV

Improved Resistance to *Septoria* in Superior Varieties (IMPRESSIV); JIC; LK0945

Improving Microbiological Safety & Quality of Ready to Eat Produce; University of Nottingham; FT1019

Improving P supply in organic farming systems; SAC; LK0963

Integrated control for PCN (potato cyst nematodes); Harper Adams Agricultural College, RES, SCRI; LK0918

Integrated control of wheat blossom midge; ADAS; LK0924

Integrated use of soil disinfection and microbial/ organic amendments for the control of soil borne diseases and weeds in sustainable crop production; University of Aberdeen; HL0136LSF

Lupins in Sustainable Agriculture - LISA; IGER; LK0950

Molecular breeding for root rot resistance raspberries suitable for low input growing systems ; SCRI; HL0169LSF

Reduced fusarium ear blight and mycotoxins through improved resistance (REFAM); JIC; LK0932

The incorporation of important traits underlying sustainable development of the oat crop through combining conventional phenotypic selection with molecular marker technologies; IGER; LK0954

Towards a sustainable whole-farm approach to the control of ergot; NIAB; LK0962

Varieties and integrated pest and disease management for organic apple production (LINK); East Malling Research

Annex II: IFOAM EU Regional Group paper on the research priorities in European Organic Farming

IMPLEMENTATION OF THE RESEARCH PRIORITIES IN EUROPEAN ORGANIC FARMING

IFOAM-EU Regional group / November 2004

Foreword

This paper is intended to contribute with some ideas to the discussion for the final list of recommendations for trans-national cooperation in organic food and farming research in Europe. The identified priorities are summarised in table 4.

Introduction

Historically, organic farming or in a larger view organic agriculture has been a bottom-up movement driven by farmers and later on stimulated by state support and market forces. Therefore, applied, more technical oriented research has been and still is, favoured by organic farmers. For the last 30 years, research and extension activities, usually developed over a long-term period, have been carried out by specialized research teams, amongst whom private research stations, founded in Western and Northern European countries, were playing a major role. Only recently, in the last 3 years, in Mediterranean countries organic farming research institutes has been started.

The IFOAM-EU Regional Group (IFOAM-EU RG) and its previous working group, has been regularly discussing and publishing the research priorities for organic farming. This year the IFOAM-EU RG has organised a broad consultation process with several rounds for comments from the EU IFOAM member organizations. As a result some clear priorities areas and cluster lines for the research in organic agriculture were finalized in September 2004. These priorities in 5 different research activity fields should be considered in the following years by the European Commission officials in the further selection of European organic research projects proposals.

In the recently published position paper of the IFOAM-EU RG there are some common general research priorities outlined which are relevant for all the 25 EU countries as well as some special priorities for the new EU members. In this paper some other priorities for Mediterranean conditions are mentioned as well.

In this document, we want to contribute with some ideas to the implementation of the research priorities of organic agriculture, as outlined in our position paper, especially activities which are important for such trans-national cooperation

Main research priorities for organic agriculture in the EU 25.

The highest priority of all the IFOAM-EU Group members is given to the organic plant production, especially the topic on *“soil health and link with plant health in organic and low input farming systems”*. Also the environmental links of *“organic farming and the biodiversity”* and the aspects about quality, health and food security, regarding *“food processing technology for organic foods in order to support innovation on SME”* have a high research priority for all the IFOAM-EURG members.

For the IFOAM-EU organizations from old EU member states another high priority is given to socio economic aspects in particular the topic *“development of attitudes of relevant societal groups and actors towards to organic farming and the consequences for future actions”*. Another further priority on environmental aspects is the topic *“organic (and low input) farming and climate change”*. Also the

livestock production has been seen as a main priority, especially the topics “*improving husbandry systems which respect to animal welfare*”, and “*combining regionality, food origin and organic farming in European agriculture*”.

For the IFOAM-EU organizations from new EU Member states, another second but still high priority is given to environment aspects, on the topic “*organic and low input farming and nutrient losses and recycling*”. Also the research on plant production has been seen as important particularly related to the topic “*support and facilitate the innovation in the field of novel pesticides suited for organic farming*”.

Other priorities of IFOAM-EU organizations in old EU member states were the livestock production aspects, particularly in the topic “*improving animal health, product quality and performance of organic farming an low input livestock systems by breeding*” and also in socio-economic aspects in the topic “*enhancing the health promoting properties of organic food and optimising its organoleptic quality parameters and food quality – actual dietary behaviour - health and public health costs*”. Finally, other research priorities from the organizations of the new EU members are related to socio-economics aspects, particularly the topic “*psychological and sociological attitudes of consumers and different market actors to deal with organic food*”.

3. Relevant issues for the implementation of research priorities

The most relevant issues to take into account for the implementation of the organic farming research priorities are the following:

- a) Involvement of the stakeholders in organic farming research projects;
- b) Identification of common problems and sense of trans-national research;
- c) Organization of research (institutional point of view);
- d) Identification of the organic research needs and possibilities for cooperation;
- e) Ways for public support for trans-national cooperation in organic farming research by the Commission; f) other details and suggestions

3.1 Involvement of the stakeholders in organic farming research projects

In conventional agriculture, many of the results elaborated in fundamental or applied research are often not implemented in farm practices, due to the fact that the conduct of the research reflect strongly a single style of farm, not recognized by farmers. In practice it may be the case that the differences between a regional research station and a practical farm are so different that farmers do not trust the research findings. By contrast, solutions that are developed in practical on-farm collaboration can be adapted much easier to the farmers own agronomic and socio-economic conditions.

Innovations derived from farmers own practical circumstances, contribute to a wider agricultural development. The focus on pioneering farms promotes the development of knowledge and new hypotheses that also general farming in general can support and adapt. Research work performed with farmers, individually or in research groups, stimulates both their creativity and their independence and gives them greater trust in their own process of research and development.

Therefore, farmer’s participation cannot be limited to providing information and to verifying the suitability of scientific technologies or development projects. Researchers have to participate in on-farm projects with farmers in a systematic manner in order to spread active learning methods and make them widely available.

Organic farming development is qualified as bottom-up movement thanks to the role of “pioneer” organic farmers in the establishment and dissemination of new management skills and techniques.

We find it necessary to involve and enhance the stakeholders (producers, processors, marketers, environmentalist groups, importers, advisors and consumers), in all the research steps of the research

process, from the idea generation, to the development of the conceptual framework, the practical validation and implementation as well as the dissemination of the of the research results.

It is preferable to involve as well representatives of European transnational federations of organic organizations but also conventional ones. Local organizations linked to such federations should have the possibility to participate to participate or contribute. The stake holder's participation costs must be budgeted as well in the research proposals.

3.2 Identification of common problems and needs for organic farming

Besides individual differences in farm styles, regional differences are becoming more distinct. There is an urgent need for both simple technical solutions and better understanding of complex interactions. The combination of agronomic monitoring and multi-various multi-coated trials makes it possible to detect relevant practices and to test the feasibility of research approaches under diverse soil and climatic conditions.

Therefore, for the identification of common organic production or processing problems, a participatory approach will be necessary to identify and define common problems and needs.

Regular workshops about research priorities, for both stake holder's representatives and researchers at European level, each 2 or 3 years, with a previous public consultation process per internet at national level must be organized.

To support or facilitate common empirical learning, the farmer's views should have an equal weight in the discussion between the farmers, researchers and extensionists/advisors.

Especially in trans-national cooperation for organic farming research, it must be kept in mind that that in Europe at least 5 different farming systems have to taken into account:

Mixed arable systems (located in temperate climate like Western Europe and United Kingdom, with more than 40 % of fodder crops and cereals);

North and Middle European arable farming systems (e.g. in Denmark, Germany, Netherlands, Switzerland) more intensive and specialized)

Mediterranean arable farming systems (with cereals, like winter what, maize, sunflower and grain legumes, like soa bean, chick peas with irrigation and also, vegetable and fruits growing farm with or without plastics and or/and permanent cultures.

Large-scale arable farming system in Eastern European countries

Northern European and Middle European hill or alpine livestock systems with milk or meat production

For each geographical area some networks of reference muss are identified when discussing possibilities of trans-national cooperation.

To better identify the common problems and needs it will necessary to further develop a central European database with research needs and ongoing research projects with research results, for each country. A good starting point are already the internet sites www.organic-research.com and the "www.orgprints.org"

3.3 Organization of the research: the institutional point of view

Presently there are several research stations, universities and institutes all over Europe conducting organic agriculture trials. However there is a need for improvements of the communications between researches as well as between researchers and practitioners, both at national and trans-national level. Networks are a very efficient tool for stimulating research and dissemination of results in the scientific community as well as among the extensionists/advisors, in spite of the fact that many of the requirements are quite site-specific.

New research methodology needs to be developed through close cooperation among research institutions, to improve a holistic approach in the organic farming research in Europe.

To achieve a consensus and agreement about the meaning of the holistic approach, it is necessary to consider in each organic farming research project proposal the creation of implementing structures which have to consider the inclusion of stakeholder representatives of kind of stakeholders. A better understanding of the holistic approach can be achieved when groups of researchers work at different levels of complexity in parallel, each one with a stakeholders' network of reference.

It is also necessary to make available and organize the dissemination of on-going research results, through a stronger link between scientists and extensionists/advisors.

3.4 Possibilities and need for cooperation in organic farming research

The transfer of research results into organic farming practice or the needs of practitioners into research is organized in very few European countries. A better procedure for the dialogue of researchers, advisors, practitioners and consumers or processors is needed. Some examples from other countries could be taken into account to organize it.

It is necessary to strengthen the existing different national and international organic research networks (for example, the Nordic Platform for Ecological Agriculture Research Network, the two years Scientific Conference in German language, the Grab-IT Network in Italy, the Austrian Research initiative organic agriculture, the scientific conference of the Spanish organic farming Society) and improve the dialogue between scientists. From time to time it will be also necessary to carry out some studies about the research needs in each country.

A leading group representing these different organic research networks must be established to analyse the needs for trans-national cooperation. As starting point, to identify needs and possibilities for cooperation in trans-national organic farming, it is important to establish an European *Organic Science Council* at European level, with a Working Group to organize a national and international dialogue for farmers, advisors, researchers.

3.5 Support for trans-national cooperation in organic farming research by the Commission

The most part of the financial support for organic trans-national research projects, must occur through a dedicated special budget for organic food and farming in the European Research Framework Programmes from the European Commission.

3.6. 7th EU Research framework program

IFOAM EU recommends that in the 7th Framework Research Program a special thematic area with different clusters is foreseen for research in Organic Agriculture. This can be justified by the high multiplication effect of organic farming research for the whole and in particular other forms of low external input agriculture as well as the fact that in most of the countries organic farming research was neglected for a long time.

Reference

IFOAM EU (2004): Future research priorities of Organic Agriculture. IFOAM EU Regional Group position paper. IFOAM EU Regional group office. Brussels, 11p.

Table 4 - Priority areas and cluster lines for research in organic agriculture identified by IFOAM - EU Regional Group (see annex II for details)

(***) High priority; (**) Secondary priority; (*) Third priority

1 RESEARCH IDEAS ADDRESSING ORGANIC PLANT PRODUCTION	Priority
Soil health and link with plant health in organic and low input farming systems	***
Supporting and facilitating the innovation in the field of novel pesticides suited for organic farming	**
Improving the quality, the ecological, technical and economic performance of organic and low-input crop production systems by breeding	**
Prevention and control of pests and diseases in Mediterranean organic agriculture	**
Co-existence and organic farming	*
Developing efficient and economically sound systems of agro-forestry and permaculture under temperate climate conditions	*
2 RESEARCH IDEAS ADDRESSING LIVESTOCK PRODUCTION	
Improving husbandry systems which respect to animal welfare	***
Improving animal health, product quality and performance of organic and low input livestock systems by breeding	**
Comparing and optimising the immune system, the stress tolerance/stress recovery and problems with zoonoses under different environments and under different production/rearing systems	**
Innovation in the field of alternative or complementary medication/veterinary treatments in organic livestock systems	**
Sustainable organic dairy production free of antibiotics	*
Need for and alternatives to synthetic vitamins in organic animal husbandry	*
3 RESEARCH IDEAS ADDRESSING SOCIO-ECONOMIC TOPICS	
Development of attitudes of different relevant societal groups and actors towards organic agriculture and consequences for future actions	***
Combining “regionality”, food-origin and organic farming in European agriculture	**
Psychological and sociological attitudes of consumers and different market actors in dealing with organic food	**
Socio-economic analysis of different forms of co-operation between farms	**
Organic farming and requirements of the Green Box (WTO)	**
Consolidated data on consumer behaviours with regard to organic food (European consumer panel)	*
4 QUALITY, HEALTH AND FOOD SECURITY	
Food processing technology for organic foods in order to support innovation of SME.	***
Enhancing health promoting properties of organic food and optimising its organoleptic quality parameters.	**
Food quality – actual dietary behaviour – health – public health costs.	**
Reducing costs of different standard setting and certification schemes for organic food.	**
Food security and organic food	*
5 ENVIRONMENT	
Organic/low input farming and biodiversity	***
Organic/low input farming and nutrient losses and recycling	**
Organic/low input farming and climate change	***

6 RESEARCH IDEAS ADDRESSING ORGANIC PLANT PRODUCTION	<i>Old ME</i>	<i>New ME</i>
Soil health and link with plant health in organic and low input farming systems	***	***
Supporting and facilitating the innovation in the field of novel pesticides suited for organic farming	*	**
Improving the quality, the ecological, technical and economic performance of organic and low-input crop production systems by breeding	*	*
Prevention and control of pests and diseases in Mediterranean organic agriculture	**	
Co-existence and organic farming	*	
7 RESEARCH IDEAS ADDRESSING LIVESTOCK PRODUCTION		
Improving husbandry systems which respect to animal welfare	***	**
Improving animal health, product quality and performance of organic and low input livestock systems by breeding	**	**
Comparing and optimising the immune system, the stress tolerance/stress recovery and problems with zoonoses under different environments and under different production/rearing systems	**	*
Innovation in the field of alternative or complementary medication/veterinary treatments in organic livestock systems	**	*
Sustainable organic dairy production free of antibiotics	**	
Need for and alternatives to synthetic vitamins in organic animal husbandry	*	
8 RESEARCH IDEAS ADDRESSING SOCIO-ECONOMIC TOPICS		
Development of attitudes of different relevant societal groups and actors towards organic agriculture and consequences for future actions	***	**
Combining “regionality”, food-origin and organic farming in European agriculture	***	*
Psychological and sociological attitudes of consumers and different market actors in dealing with organic food		***
Socio-economic analysis of different forms of co-operation between farms	**	*
Organic farming and requirements of the Green Box (WTO)	**	*
Consolidated data on consumer behaviours with regard to organic food (European consumer panel)		*
9 QUALITY, HEALTH AND FOOD SECURITY		
Food processing technology for organic foods in order to support innovation of SME.	**	***
Enhancing health promoting properties of organic food and optimising its organoleptic quality parameters.	**	*
Food quality – actual dietary behaviour – health – public health costs.	**	*
Reducing costs of different standard setting / certification schemes for organic food.	**	*
Food security and organic food	*	*
10 ENVIRONMENT		
Organic/low input farming and biodiversity	***	***
Organic/low input farming and nutrient losses and recycling	**	***
Organic/low input farming and climate change	***	*