

Introduction

The importance of support to coordination of the European organic research

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Europe has been among the global leaders in research and innovation in high-quality food from organic agriculture serving the dual purpose of responding to consumers' demand in high-value markets and responding to national and EU agri-environmental and rural development policies. There has been — and still is — a great need for research and innovation in organic food and farming because of its relatively recent development and because it is an alternative, which is very knowledge-intensive: a knowledge that cannot always be covered by results from mainstream agricultural research. In order to follow the principles of organic agriculture as laid out in, for example, Council Regulation (EC) No 834/2007 ⁽¹⁾ (e.g. 'the appropriate design and management of biological processes based on ecological systems using natural resources which are internal to the system'), it is necessary to further develop the research-based knowledge on agro-ecological methods and on careful processing in practice. Moreover, research is needed to assess the degree to which organic agriculture complies with the principles and — in a wider perspective — delivers on the promises regarding important societal goals (e.g. reducing externalities).

However, research resources directly targeting organic agriculture and food are scarce in most Member States and the research environments are often relatively small with a risk of too little and too narrow expertise and slow capacity-building. Therefore, there is potential for improved efficiency of the use of research funds in organic agriculture across European countries and research environments by improving the coordination of the research work. There are, especially, two important examples of such European coordination efforts within organic research, the ERA-NET 'CORE Organic' and the IP 'QLIF'.

The two projects (both described in more detail later in this publication) differ in important aspects but they also share characteristics, which makes it relevant to consider a combination of such funding modus for future research programming. The ERA-NET is a tool for the exchange of views on national research needs and priorities between funding bodies in several EU countries and seeks areas of mutual interest for funding of

1 Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products, OJ L 189, 20.7.2007, p. 1.

transnational research involving scientists from a number of institutions with complementary competences. The European Commission supports the coordination costs of the participating funding bodies but the definition of call areas and selection and monitoring of research projects is the responsibility of the ERA-NET partners.

The Integrated Project (IP) was a tool (in the sixth framework programme) for the funding of very large research projects which allowed the build-up of a critical mass of scientists covering a complex set of linked research questions through the integration of research groups within and across several countries. As described later in this publication, 31 scientific and industry partners participated in QLIF (2004–09) covering the complex interactions between production methods, yields, product quality, food safety and consumers' expectations for a range of crop and livestock products. Moreover, the IP QLIF also included funds dedicated to an open call for sub-projects based on topics to be defined by the QualityLowInputFood (QLIF) partners during the first part of the research period and administered by the project coordinator. This way, another five partners became involved (partly focusing on environmental assessment methods).

Thus, by this mechanism, the EC outsourced part of the project administration from their work programme and allowed for a combination of research and innovation answering to topics predefined by the EC and potentially addressing emerging specific research ideas with greater speed. In the case of QLIF — the only IP within the organic research area — the result has been a long list of results with significant relevant and potential impact on the sector in terms of development potential and wider credibility including an impressive list of scientific publications and — probably — with relatively limited administration costs for the EC compared to the outcome.

The main objective of the Core Organic ERA-NET was 'To enhance the quality, relevance and utilisation of resources in research in organic farming and food systems and its contribution to the development and integrity of the organic sector', which was to be achieved by reducing the fragmentation and the risks of duplication in organic research across European countries. Starting with so-called funding bodies from 11 countries (see list in the detailed description later), Core I (2004–07) pursued an ambition of agreeing on topics, terms and funds for a joint call within the first three years and building on a mapping of national research programmes and priorities. This was achieved successfully and the eight so-called pilot projects ran from 2007–10 covering topics in animal health management, product quality and food safety and health aspects of organic food. The topics reflected priorities of the national partners with most projects combining partners from northern and southern Europe (e.g. sharing research experience in serving organic food serving to young people and in developing a health management tool for organic pig

production) and others being more geographically focused (e.g. northern European countries using complementary expertise in researching the salutary effects of milk under different feeding regimes).

While each research partner in these transnational projects formally referred to their national funding body, the ERA-NET members decided that in order to secure efficient project coordination and enhance dissemination and impact, it was necessary to set up a more centralised coordination at the programme level. Therefore, the ERA-NET coordinator took on the role as the main entry point for the projects and subsequently coordinated the assessment of progress and results/deliverables across the countries involved. This approach has been carried on into the second phase ERA-NET, Core Organic II (2010–13), which followed a period of collaboration in the network of funding bodies without funding from the EC.

In Core Organic II, the focus has been to organise joint calls based on a thorough and mutually agreed understanding of the main challenges for the European organic sector and translated into research and development needs based on a combination of national priorities and inspiration from the pan-European Technology Platform, TPOrganics. Thus, the first call was launched within six months from the official start of Core II and the second call, a year later. Both calls built on a high level of internal organisation with clearly divided responsibilities among partners for, for example, synthesising ideas and preparing call texts, coordinating actual calls, proposal evaluation and the selection of projects, follow-up on ongoing projects and a number of more strategically focused tasks. Because of the large number of partners (24 from 21 countries), the funding bodies decided to divide each call into two to three main themes with a separate call board to be responsible for formulating the call topics and select projects for funding. This would better accommodate a situation where only a subset of the partners would support research in a specific thematic area.

An important effect of the organisation of the ERA-NET has been an exchange of identified research needs, which has been very fruitful and inspirational. This is proven by the fact that many partners have ended up co-funding projects within topics, which they had not originally identified as important but were inspired to join due to the joint discussions between partners in general and in the call boards. This is linked to another benefit of the ERA-NET: the exchange of practices for identification of research needs and involvement of stakeholders and the liaison with other transnational bodies such as TPOrganics and the Mediterranean network for organic research, which are official observers at Core Organic meetings.

There are several good examples of Core Organic research results of importance for the European organic sector, and with potential use also

in non-organic agriculture. Thus, in a project including 11 partners from eight countries, the scientists developed important new approaches to securing pig health and welfare including a HACCP-based tool. Another advantage is that the ERA-NET funding mechanism also allows for continuity. For example, these HACCP tools will be employed and further refined in a new research and development project funded under Core Organic II — after going through the same independent assessment and selection process as all other proposals. The next ambition in the Core Organic II ERA-NET is to prepare for a call using a real common pot (where funds are pooled across national partners) and to secure long-term collaboration, including follow-up, on the funded projects, which obviously lasts longer than it takes to organise the calls themselves.

In the broader perspective, the reasons for the need for coordination of research in organic food and farming are: (i) **important topics are transnational** (e.g. climate mitigation and adaptation, livestock disease management, social and environmental assessment of food chains and improved transparency of food products and chemical footprints of organic products); and (ii) some **topics need large research efforts** (e.g. eco-functional intensification, breeding varieties for low-input farming systems, automation, sensors, ICT, health aspects of organic food and organic processing methods).

The large research initiatives described here have significantly contributed to creating a critical mass of capable scientists who — together with other stakeholders — can contribute to the further innovation in organic agriculture and food systems based on an understanding of the organic ideas and principles and with a critical and development oriented approach. A combination of the two mechanisms, the ERA-NET and a revised form of 'Integrated projects' could improve synergy between national and EU funding, for example in the form of ERA-NET+, where the Commission supports a transnational call with supplementary funding for a mutually agreed topic.

In the future, new mechanisms for handling larger goal-oriented funds from the EU, and possibly integrating these funds with transnational funding over a certain time frame, could be a method to seek more coherence in the European Research Area and create significant funds for tackling the important and large research challenges.

In conclusion, there seems to be a great need and potential to further develop a modus operandi for research and innovation programming and support, which can secure a proper integration of research and development needs identified by EU Member States and via other channels, such as Technology Platforms and EC organised bodies and 'think tanks', as well as organising joint funding, administration and dissemination processes. This is especially important when research and development

funds are scarce in comparison with the important challenges facing Europe.

Foresights of the future of food and farming towards 2050 highlight the need for an integrated approach linking the development of diets and sustainable agriculture in order to address challenges with climate, scarcity of resources and environmental concerns and securing a balance in land use and crop-livestock production. This calls for further innovation in food systems with potential for the integration of consumers' demand for healthy and high-quality food with environmental and animal friendly agriculture.

Strategic development of organic agriculture by research and innovation with a high degree of stakeholder participation can provide solutions and models for creating such synergies between goals of sustainable agriculture for food security and high-quality diets, reducing climate impact, securing high biodiversity and water quality and maintaining rural livelihoods.