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A national platform to foster research cooperation. 100 research topics.

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Key words: organic, research, food system, France

Abstract

In order to mobilize the French research potential to develop organic farming, a multidisciplinary team of 15 researchers and stakeholders was established. Their collaborative work consisted of identifying and bringing together the needs of the organic sector and translating them into research topics for key areas. They thus drafted the first French framework program for research and innovation in organic farming. The first part of this paper presents the conceptual framework of the organic food system and the importance of improving methods for evaluating its multiple performances. It then presents 100 research topics structured into 6 themes that cover the entire organic food system.

This work confirms the relevance of such team arrangements to be in line with sector challenges and opportunities. After this first benchmark, the role of FROG, this French organic platform, is to mobilize stakeholders to define the organic food system to be designed in the future, and ultimately to increase the number of research projects dedicated to its achievement.

Introduction

Despite a significant potential in both farming and research, France has not yet been sufficiently involved in answering calls for research projects dedicated to the development of organic food and farming (Gall *et al.* 2009). This can be attributed to a lack of collective mobilization and to the small size or dispersion of research teams involved in the organic field. This paper presents the French approach that sought to compensate for this shortcoming, drawing on the example of European technology platforms.

Two facilitators from ITAB1 and INRA2 brought together a team of volunteers made up of researchers and stakeholders. For a year and a half they have worked collaboratively to meet the needs, that have already been identified but partially and scattered. They completed them with consultations and translated them into research topics. They then drafted a strategic research agenda. This document aims at suggesting topics to funders who draw up calls for projects both in France and at the European level as well as to inspire the teams of researchers likely to contribute to build projects.

Material and methods: gathering people and translating needs in research topics

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The first stage consisted of bringing together 15 researchers and stakeholders with various fields of knowledge and skills, from different institutions and disciplines. They were able to convert existing needs into research topics in the many dimensions of the organic farming and food system.

Then, the few national priorities already proposed by the CSAB, the national organic scientific committee (Meynard and Cresson 2011), or in Ambition Bio 2017, a national action plan (MAAF 2013) and the European research topics presented by the Technological Platform for organic food and farming (TPOrganics 2014) were used as knowledge synthesis and guidelines.

The work of gathering and synthesizing the needs thus far identified in various institutions was started in 2015. It was updated in light of knowledge of individual experts and on the state of the art literature in various scientific fields. If the needs are known by the actors, they are usually not explicitly written down and rarely translated into research topics. Their very detailed accuracy also needed to be incorporated. It was thus completed by territorial or thematic consultations. They were done on purpose or during existing events like scientific conferences.

Those two tasks showed the scope of the work to be carried out and the interest that the platform could bring to those actors in return. Indexes have been designed to enable them to retrieve the research topics relevant with the detailed needs provided.

Main outcomes: A national platform and 100 research topics

All the needs translated into research topics were organized and presented in the first national strategic agenda for organic research in France (Le Pichon *et al.* 2017).

FROG: a French technological platform to foster organic research projects

The methodology and the first two drafts of the strategic agenda were discussed three times with the CSAB scientists. The final draft and the process was agreed by the research committee of Ambition bio in 2016.

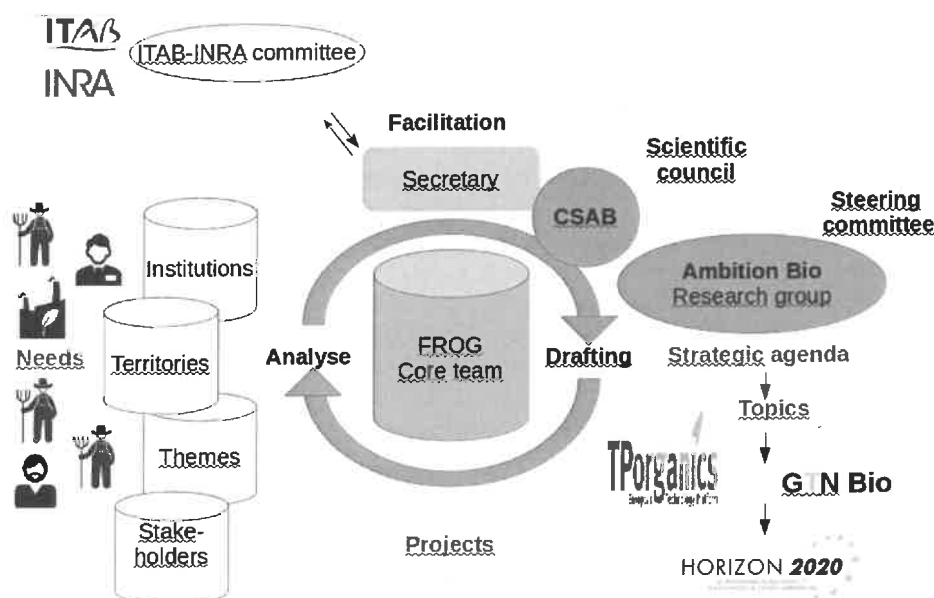


Figure 1. Frog process and governance

This strategic agenda is intended to be operational for two main targets. The first is made up of French and European funders to provide them with topics relevant for their research projects calls. The second target is to encourage researchers to build and propose projects. Regular updating of

this program should also facilitate dialogue between all stakeholders involved in organic food and farming development to highlight sector needs and research topics.

Due to the already high number of French research institutions, it has been decided not to formalize this platform as a legal structure. It is open to all good willing and no membership is required. The core team (the 15 original researchers and stakeholders) has given the name FROG (standing for French Research Organic Group), to this technological platform.

Strategic agenda : 1st part - a conceptual framework for research

The first part of the strategic agenda presents a conceptual framework on which research for organic food and farming should be based.

- The organic food system (OFS), prototype of a sustainable food system

In keeping with the transformative ambition of its founding project, organic farming is considered here as a food system (IPES Food 2015). This concept covers several dimensions: production, food and health, environment, socio-economy, politics. These multiple dimensions are embedded in various public policies, foremost in the European regulation.

- Rethinking performance, a methodological challenge

The articulation of those dimensions, their implementation and the evaluation of their cross-impacts are complex. Indeed, the evaluation modes of multiple performances are often inadequate and focused on immediate needs to the detriment of a longer-term vision favouring a re-design of systems or trade-offs in transition trajectories.

- Define systems targeted over the long term

The systemic approach is one of the strengths that make OFS a particularly interesting research object as a prototype of a sustainable food system (Bellon and Penvern 2014). It is therefore essential to guide the research, that the stakeholders define the systems they target for the future, either with prospective scenarios (Le Pichon 2015) or in the definition of a vision (Organic 3.0).

Strategic agenda : 2nd part - 100 research topics

The second part of the strategic agenda brings together 100 research topics relating to the multi-performances of the food system according to six major themes (A to F).

- (A) Multi-performance analysis: new metrics are needed for the assessment of the food system, from processes of living being in agroecosystems to food processing and finished product, with their consequences in terms of cross-assessment between performances;
- (F) The impacts of regulations, policies and public actions: it encompasses both the ones explicitly dedicated to organic farming and those indirectly affecting its development;
- (B) Productive performances :analyzing and improving existing farming and agri-food systems, and re-designing them at different levels;
- (C) Nutritional and health performances: addressing the relationship between food quality and agricultural systems, and the impacts of the food system on the health of farmers and citizens;
- (D) Environmental performances: for different compartments (soil, water ...) or stakes (energy and waste, ecosystem services, indicators of environmental quality accounting for interactions between compartments); and
- (E) Economic, social and territorial performances: from the farmers quality of life to the consumption patterns.

Each theme is divided into research topics (a hundred in total). Each elementary topic is presented in three sections (specific challenge, scope, expected impacts).

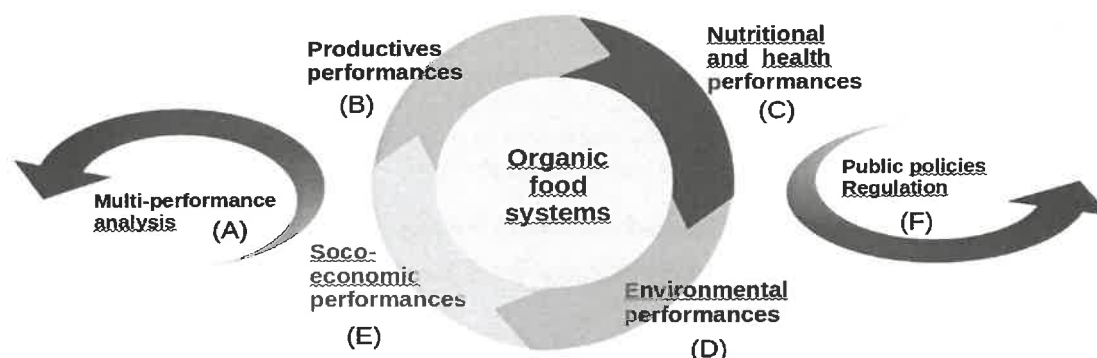


Figure 2. The multi-performances of Organic Food System and the levers of its evolution

Discussion

Identifying and describing 100 research topics was necessary to cover all the needs identified for developing the entire organic food system. This should encourage a large number of researchers in a variety of disciplines. But it is also necessary to select priorities in particular to propose shorter lists to funders. The FROG platform is now confronted with four new challenges:

1. How and with whom to prioritize topics;
2. How to keep topics up-to-date and mobilize all stakeholders;
3. How to encourage researchers to respond to calls for projects when the topics are selected;
4. How to ensure that the system approach is privileged after dividing everything into 100 topics.

Several options are being considered including exchanges with other technological platforms in Europe, on-line stakeholder consultations and partnerships to mobilize researchers in each institution.

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Innovative Research for Organic 3.0

Volume 2

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at the Organic World Congress 2017

November 9-11 in Delhi, India

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