



Report

***LIFT research project
Webinar on ecological agriculture in Puy-de-Dôme, France
December 1, 2020
organized by INRAE and VetAgro Sup***

1. Presentation of the LIFT project

The LIFT project (acronym for "Low-Input Farming and Territories") is a research project funded by the European Commission with a budget of 5 million Euros as part of the Horizon 2020 program (H2020). It started in May 2018 and will end in April 2022.

The project, coordinated by Laure Latruffe (INRAE), is implemented by 17 teams in 13 European Union countries. In France, the participating researchers belong to the research units SMART-LERECO in Rennes, CESAER in Dijon, Territoires in Clermont-Ferrand and GREThA in Bordeaux.

The objectives of the LIFT project are:

- Understand how socio-economic and political factors influence the development of ecological agriculture;
- Evaluate the performance and sustainability of this type of agriculture in economic (income and employment), environmental (pollution, biodiversity, landscape) and social (working conditions) terms;
- Propose novel private arrangements and public policy instruments to promote the development of ecological agriculture.

The LIFT project takes into account different agricultural systems and different scales (farm, group of farms and territory level).

"Ecological" approaches in the LIFT project are defined as environmentally friendly and/or low-input practices. No particular type of agriculture is privileged in particular: the LIFT project covers a continuum from the least ecological (most conventional) to the most ecological type. Existing nomenclatures, such as, for example, organic, agro-ecological, integrated agriculture, are used. In addition, new ecological types are created according to the degree of ecological practices (number of practices, level of intensity) with the aim of comparing these different types.

The project includes about thirty case studies in the European Union, geographically defined (country, region, sub-region, catchment area, employment area, municipality...) and covering all agricultural productions and various contexts. The case studies in France are Puy-de-Dôme (beef cattle, dairy cattle, sheep, field crops), Ille-et-Vilaine (pig farming, dairy farming) and Sarthe (field crops, mixed farming and livestock).

The project is based on existing data (information on agricultural practices, accounting and structural data at farm level, territorial data), but also produces new information through a survey of 1,500 farmers in 18 case studies, qualitative interviews of farmers and other stakeholders, and round tables with local stakeholders.

Surveys to stakeholders carried out in summer/fall 2020 and whose results were presented during this webinar were intended to help us conduct an analysis at the territorial level on the following question: **Can ecological agriculture contribute to achieving sustainability objectives in a territory?**

More specifically, three opinion surveys were conducted to stakeholders in Puy-de-Dôme. The results and discussion during the webinar (in which 29 people participated) are described below. Two surveys focused on the **socio-economic impacts of ecological agriculture** (section 2). A third survey based on **sustainability objectives will serve as a basis for an analysis of indicators and drivers** (section 3).

2. What are the socio-economic impacts of ecological agriculture in Puy-de-Dôme?

2.1. Presentation of the results of two opinion surveys

The issue given to the participants of the two surveys presented below was to imagine the impacts on the economy of Puy-de-Dôme (a NUTS3-region in France), within ten years, of a more or less important and more or less spread (or grouped in groups of farms, what we call "clusters") adoption of ecological practices in agriculture. Both surveys were aimed at respondents who were familiar with the agricultural sector in Puy-de-Dôme (industry, education and research, local government, local authorities, extension, etc.).

2.1.1. Survey with ranking of statements

This first survey consisted of ranking 26 statements in a pyramid-shaped grid into a continuum from the highest to the lowest likelihood of occurrence within ten years. This survey method, the "Q Methodology", allows to identify groups of respondents who chose a similar response pattern. **In the case of our survey on the socio-economic impacts of ecological practices in agriculture in Puy-de-Dôme, we were able to distinguish the following two groups** among the 16 respondents.

- The first group would rather envisage a scenario of rupture with current production systems: a more economically resilient agriculture, supported by a strong consumer demand for local products, as well as a strong transition towards an ecological agriculture providing important ecosystem services (water, soil, hedgerows) and low deterioration of the current rural landscapes. Farmers in this scenario would have more varied tasks, requiring new skills, and would be closely linked to other ecological farms.
- The second group would rather envision a scenario of continuity with a low ecologization of practices and without systemic change: a continuation of the 10% of ecological agriculture already achieved without significant development. This would be due to the complex skills required by ecological systems – which require more specialized employees rather than family members and migrant labour, and with techniques, such as mob/strip grazing, requiring a lot of work time. This could also be a result of low consumer demand for ecological agriculture products due to the coming economic crises. Despite the limited ecosystem services provided by agriculture, rural areas would nevertheless become more attractive to residents and users.

2.1.2. Survey with open-ended questions in three rounds

This second survey was complementary to the first survey described above, and sought to reach a consensus among the different stakeholders of the expert panel. The questions were open-ended and the survey was conducted in three rounds, using the "Delphi method". After each round, respondents received a summary of anonymized responses from all respondents (twelve in total).

The first round focused on the characteristics of an environmentally friendly farm. The questions in the second and third rounds, which were identical, focused on the socio-economic impacts of ecological farming.

The first two questions sought expert opinion on the most likely scenario for the adoption of ecological practices in Puy-de-Dôme, in terms of adoption rates and spatial distribution. The next questions addressed the impacts of adopting ecological farming systems on the following themes: employment structure (part-time, number of

employees, etc.), the proportion of women among farm heads, the need for skilled labour, wages, the need for migrant labour, contract farming, the quality of life of farmers, the purchase of tractors and other agricultural machineries, relationships between farmers, farm advisory services, supply chains, actors in the food chain, local government, local authorities and the rural environment (population, housing and services to population).

For the majority of respondents, the adoption rate for the Puy-de-Dôme would be rather low and spread across the region. The consensus would seem to be in favor of an adoption rate of around 20-30% rather than 10%, with perhaps higher rates in clusters.

On other issues, experts agree that these ecological systems are more complex compared to conventional systems, and therefore require farmers, agricultural advisers and local government to adopt a more systemic approach. Nevertheless, the experts do not envisage a radical change in the sector (e.g. presence of the same agricultural equipment sellers), but rather an adaptation of all actors involved (e.g. increased role of agricultural equipment co-operatives and agricultural contractors, adaptation of processors to a greater diversity of products) and consumers more involved in the ecological approach. As for the more general consequences on the rural environment, the experts believe that factors other than the adoption of ecological systems have a stronger impact on the evolution of the rural environment.

2.2. Discussion

The low number of respondents was noted by the webinar participants. The distribution list for both surveys included all agricultural sectors and very different respondent profiles. The sample of respondents is not representative, but the qualitative responses from the three-round survey cover a wide range of opinions and perspectives, and the results of the statement ranking survey show that there are different groups of respondents.

Participants reported difficulties in completing the surveys for the following reasons:

- We are at a turning point; we feel a trend but there is not yet a break. The moment of change is therefore difficult to predict.
- Responses could vary from one production to another. Note: Some respondents indicated whether they considered specific productions.
- The questions related to work did not only ask for technical aspects, but also questioned a societal model. The answers given mixed expert opinion with visions of a desired world.

The results of the surveys prompted the following remarks:

- A major challenge is the takeover of farms, especially large ones. The new models will have to make future generations want to get involved.
- Farmers need group work and peer validation when experimenting with new practices. Communication "over the hedge" has a significant effect because farmers are sensitive to the successes of their neighbors. This communication could be done more systematically through clusters in particular. A leader in agricultural practices will have a great impact on a territory, all the more so since there is today a certain mistrust towards the large cooperatives in place and the agricultural sectors are strongly destabilized by climate change.
- Food sovereignty is also a key element to take into account.

3. Indicators to consider and levers to achieve sustainability objectives in Puy-de-Dôme through the development of ecological agriculture

3.1. Presentation of the results of an opinion survey

A list of some 50 objectives was established through a review of the literature and expert opinion. Most were objectives common to all the European case studies in the LIFT project, and a few were specific to Puy-de-Dôme. The objectives related to environmental, social, economic, and institutional capacity sustainability. Stakeholders ranked these objectives according to their importance for Puy-de-Dôme. A total of 15 people participated to this survey.

For Puy-de-Dôme, the sustainability objectives defined as the most important by the respondents are as follows: reducing the vulnerability of farms to external events, adapting the agricultural sector to climate change, sustainable management of water resources in agriculture to deal in particular with water shortage hazards, increasing the autonomy of farms and the potential of agriculture, and improving food security.

3.2. Discussion

Once these sustainability objectives will be identified for Puy-de-Dôme, the LIFT project aims to perform a network analysis based on the causal relationships between levers and objectives. In the presence of macro forces such as climate change, the availability and accessibility of natural resources, global and local demand, the availability of labour, policies (Common Agricultural Policy, environmental policy, land policy, agricultural structural policy), what indicators and levers would be most appropriate to achieve the objectives mentioned in the previous paragraph (3.1)?

For the webinar, participants chose to address the objective of adaptation to climate change. The proposed indicators are:

- Production indicators: sum of food production for humans on a given territory, volume of meat produced, number of calories produced.
- Economic indicators: maintaining sales on average over 5 years, reducing the use of feed not produced in the livestock area.
- Social indicators: maintaining the workforce.
- Environmental indicators: reducing of the share of greenhouse gas (GHG) emissions from agriculture at the macro level.

The following remarks were collected:

- The indicators will have to take into account all the services to the territory, i.e. be multifunctional.
- A change in our diet may be required, so indicators on the number of kg of meat may not be relevant.
- Who are the legitimate people to propose these indicators? A multiple collective, the stakeholders themselves? We must include forestry, tourism and civil society stakeholders, etc.
- A real appropriation of these indicators is needed to have a real impact.
- An agro-ecology center at the level of a federation of municipalities could be an effective lever.

The further development of relevant indicators and levers to be acted upon is proposed in an upcoming workshop to co-construct a diagram linking indicators, levers and objectives.