



How do farmers research and learn?

The example of organic farmers' experiments and innovations



SUSANNE KUMMER, FRIEDRICH LEITGEB, RACHELI NINIO, CHRISTIAN R. VOGL

Working Group for Knowledge Systems and Innovations, Division of Organic Farming, Department for Sustainable Agricultural Systems, BOKU, Vienna;. E-Mail: orgexp@boku.ac.at

Introduction

Experimentation was and is a vital part of farming activities all over the world. Farmers' experiments build up local knowledge, enable farmers to adapt their farms to ever changing circumstances, and build the base for countless agricultural innovations. The development of locally adapted farming systems worldwide can be ascribed to the continuous experimentation activities of farmers. Organic farmers themselves have been responsible for most of the advances and innovations in organic farming, and have always researched topics pertinent to their production systems.

Through investigating farmers' experimental processes (figure 1), formal researchers can broaden their epistemological base by understanding the importance of observation and experience, and by learning from farmers' strategies how to deal with complexity.

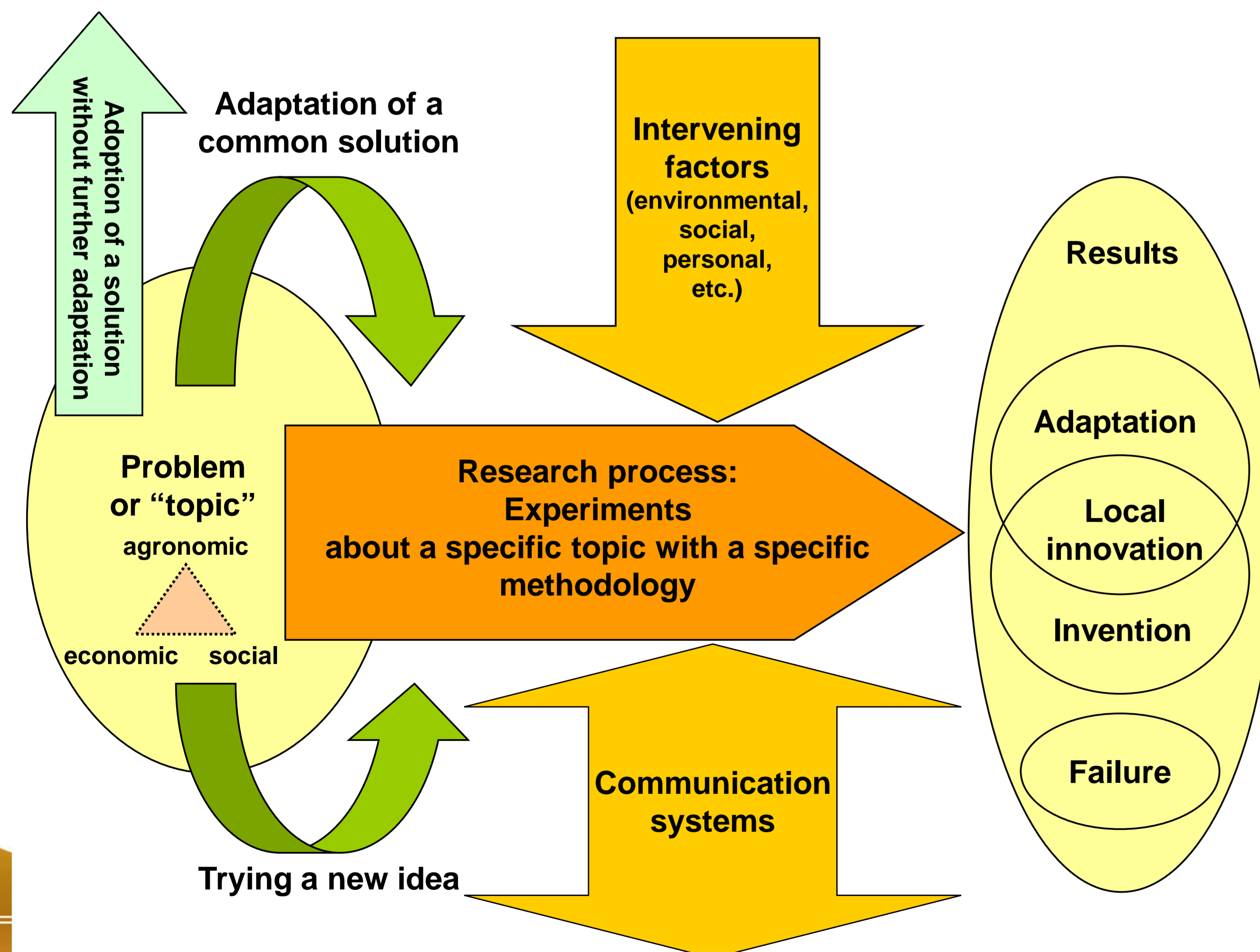


Figure 1: The research process as context to study farmers' experiments.

Objectives

The objectives of the research are:

- to generate empirical knowledge on the processes by which organic farmers' local knowledge is created;
- to identify and define motives, topics, methods and outcomes of farmers' experiments;
- to understand the factors associated with variation in organic farmers' experiments within and among sites;
- to define the links between organic farmers' experiments and the local agricultural communication systems; and
- to analyse the significance of organic farmers' experiments in the context of learning processes and resilience building strategies of farmers.

Methods

- Field work in Austria, Cuba and Israel by 3 PhD-students and 4 master students.
- Selection of countries to represent organic farmers in i) different environmental conditions, ii) different agricultural systems, iii) different socio-economic conditions and iv) different phases of the organic farming movement.
- Personal semi-structured interviews with organic farmers and representatives of the organic movement, purposefully selected sample with maximum variation.
- Farm walks and photographic documentation to complement interviews, timelines to track changes at farm level.
- Structured questionnaire interviews with randomly selected organic farmers in contrasting regions of the respective countries.
- Qualitative content analysis based on a combination of deductive and inductive coding. Statistical analysis of quantitative data.

Conclusion

Conventional research has long overlooked the active and creative role of farmers in innovation processes. The outcome of farmers' experiments can be management changes, new knowledge, or technology. These can be passed on to others in the farmers' social network and potentially be built into institutions at higher scales. Institutions such as regulatory or advisory systems can benefit from the outcomes of farmers' experiments.

Regulations, subsidies and support payments influence the possibility of farmers to carry out experiments. To support farmers' experiments, it is crucial to give farmers room for creativity within the regulatory frameworks and conditions for farming, and to develop policy tools that support farmers in their experimenting role. We propose that the knowledge development that farmers carry out through experimentation should not only be acknowledged in research and advisory systems, but that farmers' experimentation could be vital for the development of sustainable farming systems and for building resilience on farms.



Organic farmer explaining his composting method



Experiments to improve grassland composition and quality



Experiments with locally adapted vegetable varieties



Experimenting to establish organic free-range pig keeping system

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