Participatory development as a way to innovations: five key elements for success

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Abstract

In the participatory development of the organic sector five elements appear to play a key role: ownership, heterogeneity, sharing knowledge and experience, value driven and a system approach. It is recommended to identify these five key elements in each research based on a participatory development and handle consciously according to them.

Introduction

In the development of an integrated sustainable agriculture of the EU much new knowledge and innovation is needed (EU, 2012). In the Netherlands, the organic sector gained much experience with a partnership focusing on innovations. Farmers, industry en knowledge institutions worked closely together within a demand-driven context. The partnership is characterised by a high degree of active participation. Practice and research participated actively and contributed to the development. The aim of the partnership is to contribute to growth, innovation and the strengthening of the sector. We therefore call this approach a participatory development.

Organic farming is the fasted growing agricultural sector in the Netherlands. The sector strives towards an integrated sustainable development with a focus on a healthy environment, animal welfare, natural production, biodiversity, transparency, fairness, health and safety, regionalism, and the relationship with consumers and society. In an international perspective this is embedded in the principles of the International Federation of Organic Agriculture Movements (IFOAM, 2005).

Material and methods

Participatory development plays an important role in the design and concept of the research. The establishment of a structural cooperation between research and practice was possible through a knowledge network. The knowledge network organizes the exchange between practice and research. The network collects and prioritizes research questions. The knowledge institutions translate the questions into research projects. In conducting the research, research and practice work closely together. In recent years much has been learned about the different aspects of this cooperation.
The participatory model is quite unique in research (Koopmans *et al.*, 2011). In this model research is characterized by a strong connection between partners in the supply chain. It uses the knowledge and experience of farmers. The farmer brings in his practical experience and links them with the complex business environment. The interaction between the farmer and the researcher often leads to surprising new insights.

Which elements can be considered as key elements to the intensive cooperation of research and practice to be successful? In a series of expert meetings five key elements could be extracted and elaborated: ownership, heterogeneity, sharing of knowledge and experience, value driven and systems approach.

Results and discussion

Figure 1 shows a schematic overview of the five key elements distinguished in a participatory approach. From a base of 'ownership', the development is launched. The development will be more successful, as the group of people involved is or becomes more heterogeneous in composition and if the group wants to share experience and knowledge. It is crucial to commute back and forth between a focus on parts and the context of the larger system, in which the development must fit.

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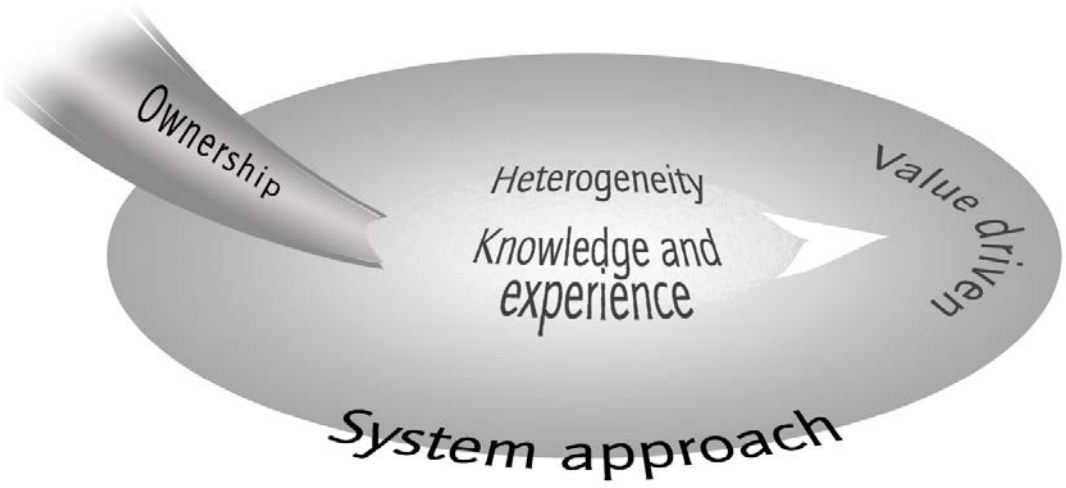

Figure 1. Schematic representation of the key elements of participatory development

Ownership is the key to a successful development and a precondition for knowledge transfer and utilization. Ownership is the extent to which a group or person considers himself owner of the problem and the development of the problem to solve. A development process often has four phases: articulation of demand, knowledge generation, dissemination and knowledge utilization (Kolb, 1984). The result of the development cycle is that the solutions are implemented. The more ownership is felt in all steps of this process, the more applicable the solutions are.

The research can be formulated by individuals or by a group of stakeholders. This process is called 'articulation of demand'. From the moment the question is converted into a research question, the researchers themselves feel more responsible for answering the question. Importantly, the stakeholders are closely involved in the implementation and also in guiding the research. Sufficient attention to the applicability will then also lead to a continued feeling of ownership of the stakeholders.

The dissemination and discussion of results can best be linked to meetings and the sector itself. Think of meetings of farmer's networks, businesses or buyers etc. Good communication also requires professionals, exceeding the industry alone. In the knowledge dissemination and knowledge utilization phase networks are an important link to maintain ownership.

Heterogeneity refers to differences in views and perceptions of problems and their causes and possible solutions. Heterogeneity is often guaranteed when parties come from different professional domains or have different interests.

Reform and innovation are often stimulated if several stakeholders talk to each other each with its own vision on the challenges and possible solutions. Different perspectives arising from different underlying ways of looking to the world (values and norms, interests) call for new approaches. By that, a learning process is initiated on all levels that can lead to new perspectives. This creates a larger space for new and surprising solutions. Also, this leads to a greater commitment of stakeholders and more effective participation in creating solutions based on own responsibility and capabilities. Often this process arises if the parties are new to each other, with an unusual mix of stakeholders. Partners can trust each other, if there is a common goal and if there is a proper process management. Farmers themselves indicate that such cooperation is inspiring.

The chance of success and finding solutions is enhanced through sharing **knowledge and experience** with all stakeholders. Moreover, it is a good basis for a further flow of knowledge. By linking science and practice and practical experiences with science, more applicable solutions are created.

Formal scientific knowledge consists of abstract concepts, falsifiable and verified scientific knowledge. Experiential knowledge from practice is often implicit knowledge of the actors, personal, situational and time-bound. Experiential knowledge can be made more explicit and general by asking critical questions, reflection, measuring, review and integration with formal (scientific) knowledge. As a result, it is more broadly applicable.

Bringing together these different kinds of knowledge and experience is essential for boosting innovations. In a participatory development, the collective knowledge and experience of all partners are brought into workable methods and techniques for optimization and innovation. For specific situations in practice, feasible and effective solutions and innovations come into place. This is also called knowledge construction or co-creation. In these, often lengthy processes an upward learning circle of 'learning by doing' arises.

Value driven. Participatory development looks ahead and is proactive. A common direction is only possible if there is a degree of consensus on the desired development, a common image of the future. Values are the basis. IFOAM (2005) uses four guiding values in the form of principles from which organic agriculture grows and develops: health, ecology, fairness and care. In the Netherlands, playing alongside these more general IFOAM values are social values, animal welfare, natural products, healthy and safe as well as regional production and the connection with consumers in a socially responsible chain. The concept of 'naturalness' is an important integrative value of organic farming (Verhoog *et al*., 2007).

Values also play a role in the development of research projects. The problem being investigated is central and roles that values play in identifying this problem are not always made explicit. The underlying values determine to a large extent the perception of the problem or challenge and potential solutions. The objective pursued already, refers to a realizable ambition. Science is not value free, but where and when are values made explicit in the research process? According to Alrøe and Kristensen (2002) a scientific way of dealing with values, is made possible by 'reflexive objectivity'. Analysing, clarifying and communicating values are a part of that. Reflexive also refers to questioning the own underlying values. By bringing together different stakeholders it is important that through a good process, principles, perceptions and worldviews are addressed and made explicit.

A final key element in the participatory development is the **system approach**. This approach is rooted in the realization that the context in which farmers, researchers and other partners come to decisions and control their processes, is always the whole system. Moreover, stakeholders within organic farming strive towards several, often potentially conflicting, objectives. A decision on one item of the business affects another item. In business there are items that lead to synergy and strengthening of goals and items that work antagonistic towards goals*, i.e.* the strength of one item means a decline of another item. Questions and solutions always deserve to be studied and solved in a system context.

Working under a system approach also requires a good analysis of the total system in which the change has to take place. The social system and the agro-system or parts thereof, can teach us a lot about the opportunities and obstacles associated with it and provide targets for the desired development.

If we consider the wider context: different ideas about the future are imaginable in a participatory development. It is not one, but there are several possible solutions. Each sector, each industry, each area requires its own elaboration. In this the cooperation of many stakeholders is needed. Moreover, the context might also change: the formal and informal rules (institutions) and the methods being used. In this way, working on technological solutions becomes more embedded in socio-economic and institutional innovation and several innovations come together. We call that a system innovation.

Conclusion

Participatory development has been shown to be an effective tool to sustain and innovate the organic sector. The sector is closely involved in the research and determines the research agenda. A real impact on the research direction is imposed. Researchers do more practice-related research resulting in innovations that are also more relevant for practice.

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