Studying conversion as a human activity system

Susanne Padel
Institute of Rural Studies, Llanbadarn Campus, University of Wales, Aberystwyth, SY23 3AL, Wales.

ABSTRACT

Farmers convert to organic farming for a variety of reasons including environmental concerns, problems with conventional systems, and personal and financial reasons. They also vary in their management styles. These personal characteristics are rarely considered as explaining variables in comparative studies of farming systems, because of the contrasting methods used to evaluate personal objectives and attitudes as opposed to farm activities. Farming should be seen as a human activity system, in which people actively manage some natural resources, for the purpose of producing output, influenced by their subjective values and attitudes. The Farming Systems Research (FSR) approach aims to consider the social, cultural, ecological and economic context of farming, but provides little methodological guidance on how these aims can be achieved in a rigorous way. In this paper reference is made to the tradition of qualitative social inquiry, especially case studies, whereby inductive research is undertaken in real world situations without deliberate manipulation. The paper provides an example of case studies of converting dairy farms integrating structured data on farm activities with unstructured ones of personal characteristics.

Keywords: organic farming; research methods, farming systems research, soft systems

INTRODUCTION

The use of well functioning organic farms as case studies is widespread among researchers of organic farming systems (Lieblein & Østergard, 1993; NRC, 1989; Vogtmann, 1983; Vogtmann *et al.*, 1993). However, the majority of case studies of organic farms ignore human aspects, such as the farmers' motivation for the conversion to organic production, their personal goals and perspectives or provide only anecdotal references in this respect. Researchers make no reference to the tradition of qualitative social inquiry, to which case study research belongs, and provide mainly biophysical and financial details of the farming system(s) under study.

The conversion process is influenced by a considerable number of farm-specific and external factors related to the social, biophysical and financial context of the farm (e.g. Padel, 2001). Organic farming researchers stress the importance of systems research traditions. These can be divided into 'hard' (systems as they

are presumed to exist in nature) and 'soft' systems (human activity is seen as central (Bawden, 1995; Checkland, 1999)). Most agricultural systems research focusing on the bio-physical and ecological aspects of the farm belongs to the 'hard' systems tradition, e.g. agricultural systems analysis (Spedding, 1988) or agro-ecosystems analysis (Altieri, 1995). In contrast, Farming Systems Research (FSR) argued that the social, cultural, ecological and economic context should be considered (Bawden, 1995). Table 1 summarises four broad research traditions. Those of qualitative social inquiry and soft systems thinking appear particularly suited to study organic farming systems and the conversion process as they are concerned with interactions between farmers and their environment and processes of change.

Case study research is one method of qualitative social inquiry considered as valuable tool for FRS. The method is suited to study processes as they unfold and the inductive analysis develops flexibly, not strictly limited to a predetermined hypothesis (Patton, 1990; Yin, 1994). However, the richness of the data obtained in documenting and analysing various perspectives (such as bio-physical, farm accounts data and personal aspects) is achieved at the expense of sample size.

Table 1 Ontological and epistemological assumptions in different research traditions

Research traditions	*Logical positivism*	*Hard systems*	*Qualitative methods*	*Soft systems*
Ontology	realist/ reductionist	holistic	holistic	holistic
Epistemology	objective	objective	contextual relativism	contextual relativism
Human nature	rational	rational	'act on meaning'	'Weltanschauung' of stakeholders
Methodology	deductive & experimental	inductive & modelling	inductive & empirical	action research & learning cycle

Source: Own summary after Bawden (1995) and (Woodhill and Röling, 1998)

STUDY METHODS

Case study research was used to study the conversion process to organic farming of eight dairy farms in England and Wales. In this research a combination of structured and unstructured data was collected for studying the farmer and farm related factors influencing or influenced by the conversion process to organic farming. The unstructured data were collected by means of face-to-face interviews. Lofland & Lofland (1984) argue the epistemology should be reflected in the form of inquiry and that face-to-face interactions provide the best opportunity to participate in the mind of another human being and should therefore be the preferred. The protocol for the quantitative data collection was largely based on FBS and farm management procedures covering in detail aspects considered important in the conversion of livestock farms. The farm data were seen to provide an additional perspective into the human action (e.g. decision-making during conversion), and comparative cross-case analysis was used to uncover important factors driving the process.

STUDY RESULTS AND DISCUSSION

All case study farmers had a variety of objectives in running their farms, including lifestyle and family-related goals. Improvement of their financial situation remained an important objective to most farmers throughout their conversion. Several of the objectives clearly had an impact on farmer decision-making, confirming its complexity, and the influence of a range of socio-economic and psychological variables (various authors quoted by Willock *et al.*, 1999). From those goal-related variables that appear to influence most strongly the direction in which a farm developed were identified in the study as: 1) marketing (5 farms), 2) diversification (4 farms), 3) low-cost or -input production (3 farms), 4) dedication to production (2 farms), and 5) lifestyle (2 farms). These correspond well with other studies of organic farmers and conventional producers (Fairweather & Keating, 1990; Noe, 1999; Peters, 1997; van der Ploeg, 1994; van der Ploeg, 2000). The results also gave an indication that farmers' personal attitudes change and that their concerns for technical detail increase during conversion.

CONCLUSIONS

It can be concluded that the method of comparative case study research is a suitable method to study complex and changing processes on farms, such as that of conversion to organic farming. Analysing a combination of quantitative and qualitative data allows the farmers' objectives and experiences to be included as part of case study research, but the combined analysis of different types of data remains explorative and needs further development. Farm case study research provides understanding of the complexity of farming as a human activity system and compliments, rather than replaces, supplement surveys of larger samples.

Farmers' motives for organic conversion and personal attitudes vary and appear to influence the direction of the development of the farm. It appears likely that the conversion process also influences the farmers' attitudes in becoming more 'organic' as the conversion progresses.

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