

## **Organic principles and research: What implications the new IFOAM principles of organic agriculture?**

By G DAVIES

*HDRA, Garden Organic Ryton, Coventry, CV8 3LG, UK*

### **Summary**

This paper examines some of the implications of the recently approved IFOAM principles of organic agriculture for organic research programmes. In examining the four principles we ask what types of research processes are likely to be in keeping with the principles, who should have the power to define research agendas, and ultimately who should control the output from research programmes. We argue that participatory research programmes incorporating the values and experiences of wider stakeholder groups (including researchers, farmers and consumers) should be regarded as equally important as other research approaches as they are likely to meet many of the underlying intentions of the principles. We are also led to ask whether organic research is increasingly coming to be regarded as an end in itself, almost something apart from the principles, increasingly remote from the end users and consumers, rather than as part of an on-going process aiming to support and promote the organic movement.

**Key words:** Organic principles, IFOAM knowledge development, participatory research

### **Introduction**

The International Federation of Organic Agriculture Movements (IFOAM) has defined its mission as leading, uniting and assisting the broader organic movement, with the goal of the worldwide adoption of ecologically, socially and economically sound agriculture systems based on the principles of organic agriculture. Recently, at the 15<sup>th</sup> Organic World Congress in 2005, the organisation has approved a set of principles that aim to inspire the organic movement in all its diversity (IFOAM, 2006). They are intended to be a guide to IFOAM's development of positions, programmes and standards. The principles are set out as four guiding principles, each articulated as a statement followed by an explanation that are intended to be used as a whole. The four principles are: 1) the principle of health, 2) the principle of ecology, 3) the principle of fairness and 4) the principle of care. The full principles are available from IFOAM (2006) and will not be cited in their entirety for reasons of space. The aim of this paper is to look at each principle in turn and to stimulate discussion on what implications they have for organic research programmes and to make suggestions as to the type of research programmes that might work towards achieving the goals of the 'organic movement' as embodied in IFOAM.

### **The Principle of Health**

This principle has been summarised as "Organic Agriculture should sustain and enhance the health

of soil, plant, animal, human and planet as one and indivisible”. Health in this sense is defined as the wholeness and integrity of living systems and is represented by the concepts of immunity, resilience and regeneration. The origins of the organic movement are, from some perspectives, based in the idea that the ‘good’ health of people, animals and ecosystems are intimately linked (Conford, 2001). Some of these concepts have been explored more or less systematically, as represented by research such as the Haughley Experiment (Balfour, 1977).

‘Good health’ or ‘good heart’ are normally related to the idea of ‘correctly or fully functioning systems’. The WHO (1946) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. However, systems are not easy to define and crucially their definition depends on perspective (Davies & Gibbon, 2004). Function is also likely to depend on a specific situation as biological systems are adaptable, respond through feedback, evolve and are comprised, to some extent, of redundant sub-systems all of which work together to provide ‘health’. It thus becomes difficult to decide what is implied by the term ‘good health’ as it necessitates choosing some given system functions over others and choices influence outcomes. For instance nitrogen fixation in soil can be achieved in many different ways; in rhizobia in nodules, in free-living soil bacteria, by artificial fertilizer, and it is not always obvious which is ‘optimal’ without understanding the context. From a systems or holistic perspective it will therefore be difficult to obtain clear cut answers of the type normally sought by a reductionist research approach. Such approaches will always be useful in helping to understand system sub-components and how they function but will be less useful in understanding how they integrate, especially at higher (and social) system levels.

Crucially it would seem that research programmes need to engage a wide audience in defining the idea of ‘good health’ and, more generally, the ‘well being’ that arises from agriculture. This will necessarily involve an ongoing dialogue and negotiation between researchers and other stakeholders (consumers, farmers etc.). Questions such as what research is necessary will necessarily change as circumstances change and will be rooted in the communities and socio-economic systems in which they arise. For instance the debate about nutrition has a very different emphasis for subsistence farmers as compared to UK consumers. We would argue that in these cases research is relegated to a secondary role and should take the place of informing ethics, philosophy and politics. Questions about the exact role of, for example, nutrition in health will always have ambiguous answers even though detailed scientific research can elucidate the exact mechanisms involved in many cases. Notwithstanding this, researchers also have a responsibility not to undertake research that potentially closes off choices and threatens the ability of systems to adapt and evolve, e.g. GM technologies.

### **The Principle of Ecology**

This principle assumes that agricultural practice is rooted in ecological systems and states that production should be based on ecological processes and recycling, so that “Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them”. Recent population and consumption trends have placed the planet’s ecosystems under increased strain (World Watch Institute, 2004). Agricultural systems depend intimately on ecological cycles for their functioning and it is a fallacy to believe that they can be divorced from these cycles (Jones, 2001). Organic farming should fit these cycles and work with them and it is therefore likely to be complex and site specific and, from a human perspective, be rooted in a cultural context (Pretty, 2002). As in the previous case, the cultural context is likely to make any definition of ecological systems difficult as has been seen in the debate over landscape values in Europe (Council of Europe, 2000). In addition there is also a great deal of misunderstanding over ecological and emotive terms like ‘balance of nature’, which although widely used is not really meaningful in a scientific or evolutionary sense, and ‘survival of the fittest’, which has been linked to all sorts of political ideologies.

Once again we argue that research needs to engage a wide audience in defining the value of landscape and agricultural function. These areas have begun to be explored by social scientists (e.g. Oreszczyn & Lane, 2000) and they should increasingly be integrated into agricultural research programmes.

In this case the debate can also be informed by the incorporation of ecological and evolutionary theory, which have been well developed over the past century, and are tending to indicate that adaptation and diversity are the key to understanding evolution and its consequences. In addition, an enormous wealth of natural science knowledge has been developed and can be utilised to better understand the functioning of agricultural and organic farming systems. In this situation the research is not likely to be served by conventional reductionist approaches that help to understand components but rather by integrative approaches that attempt to model and understand how components integrate and communicate. An understanding of soil ecology, nutrient cycles, predator-prey relationships or market functioning are all areas that can typically benefit from such an integrative approach and which have potential benefits for organic farmers, growers and consumers. Although from a researcher point of view these are not easy concepts to explore, and do not provide definitive answers, they will ultimately better serve the development of organic farming in keeping with the principles.

### **The Principle of Fairness**

The principles state that “Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities” and this is further developed by stating that fairness is characterized by equity, respect, justice and stewardship. Fairness, as such, is not directly related to what research is done, but rather to the manner in which it is done. Traditionally most power in research programmes has resided with researchers and funders. These groups do not necessarily have the same objectives as consumers or farmers and in fact their interests might be contrary (Buhler *et al.*, 2002). The only way to ensure fairness or relevant research is to operate in a consensual way and negotiate the research that needs to be done. In formulating research proposals researchers should define the stakeholders in the research process; who is defining what research is done? Who is funding it and why? Who is doing it? How will the information or results be shared? Who will be adversely affected and who benefit? All these will have a bearing on the ‘fairness of a project’ but are often not taken into consideration when a project is designed.

Experience has tended to show that openness is important and that as much effort needs to be put into communication as research. Projects should therefore integrate communicators and make provision for sharing information with all stakeholders. In this situation the best projects are likely to be shaped by coalitions of researchers, farmers and consumers working towards specific local objectives. We would argue that research in these situations is best served by a collegiate system of peer-to-peer networks that allow all stakeholders to express opinions and develop their ideas.

### **The Principle of Care**

“Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment”. This principle puts the idea of precautionary approaches at the heart of research and also calls for a specific recognition of farmer and consumer knowledge in scientific programmes, rather than radical change for the sake of it. Once again the principle of care would seem to place the emphasis on constructing a dialogue between stakeholders and asking questions as to what is appropriate in any given situation. Researchers have the responsibility under this principle of designing open and transparent research processes that adequately reflect the needs and values of those who are affected. They should also take responsibility for examining the likely outcomes or consequences

of the research work they undertake, taking into consideration the impact on less powerful groups and especially 'silent voices' as represented by the fauna and flora in the ecological system.

## Discussion

Research should be seen as having an important role in putting organic agriculture on a firm and rational footing. Current research programmes in the UK (Davies & Gibbon, 2004) are mainly directed at researching technical solutions to researcher defined 'problems' and as such are becoming increasingly remote from the concerns of both consumers and farmers. By attempting to live up to the organic standards research will come to better reflect the aspirations of stakeholders in the organic movement; ultimately local, diverse and healthy agricultural systems.

A clear theme running through the organic principles as defined by IFOAM is that of openness, transparency and participation. We believe that organic research programmes should reflect such values and incorporate them into their processes and that it is not sufficient to add them as an afterthought. Research processes should be open and accessible to all stakeholders in the organic movement. All ideas should be considered in the spirit of diversity and inquisitiveness as central to the human ethos of well-being and fulfilment. Above all communication between stakeholders would seem to be a prime requisite for all organic research programmes so that the approach to organic research should be from the basis of a social science platform informed by a practical science base and experimentation programme.

## References

- Balfour E. 1977.** *Towards a Sustainable Agriculture- The Living Soil*. Originally presented at IFOAM conference and available at <http://www.soilandhealth.org/01aglibrary/010116Balfourspeech.html>. Accessed 7 July 2006.
- Buhler W, Morse S, Arthur E, Bolton S, Mann J. 2002.** *Science, agriculture and research. A compromised participation?* London: Earthscan.
- Conford P. 2001.** *The Origins of the Organic Movement*. Edinburgh: Floris Books.
- Council of Europe. 2000.** *The European Landscape Convention*. Available on line at [http://www.coe.int/t/e/Cultural\\_Co-operation/Environment/Landscape/](http://www.coe.int/t/e/Cultural_Co-operation/Environment/Landscape/) . Accessed 7 July 2007.
- Davies G, Gibbon D. 2004.** Systems thinking in organic research; does it happen? In *Organic Farming: Science and practice for profitable livestock and cropping. Proceedings of the BGS/AAB/COR Conference* at Harper Adams, 20-22 April 2004, pp. 216–219. Ed. A Hopkins. British Grassland Society.
- IFOAM. 2006.** *The principles of organic agriculture*. At [http://www.ifoam.org/about\\_ifoam/principles/index.html](http://www.ifoam.org/about_ifoam/principles/index.html). Accessed on 28 June 2006.
- Jones A. 2001.** *Eating Oil: food in a changing climate*. London: Sustain and Elm Farm Research Centre.
- Oreszczyn S, Lane A. 2000.** The meaning of hedgerows in the English landscape: different stakeholder perspectives and the implications for future hedge management. *Journal of Environmental Management* **60**:101–118.
- Pretty J. 2002.** *Agri-Culture: Reconnecting People, Land and Nature*. Earthscan; London.
- World Health Organization. 1946.** *Constitution, Geneva*. Available online at <http://w3.whosea.org/aboutsearo/pdf/const.pdf>. Accessed 7 July 2006.
- World Watch Institute. 2004.** *State of the World 2004: Special Focus: The Consumer Society*. Washington: World Watch Institute.