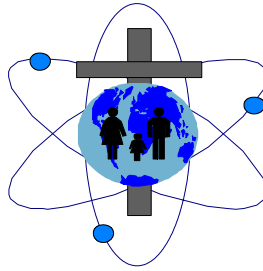


SOCIETY, RELIGION AND TECHNOLOGY PROJECT

Church of Scotland



Sustainable Agriculture - Making our Food Better?

“How should we make our food better?” In reaction to pesticides, BSE and the GM food controversy, there has been a growing interest in what are called sustainable agricultural practices, and especially in “organic” methods and products. Is this the right trend for the agriculture of tomorrow, majoring more on health and environmental care than production efficiency, or is just “trendy”, strong on lifestyle and imagery but short on practicality? This SRT information sheet draws from several years study of the issues, and is based on our report to the Church of Scotland 2002 General Assembly.

What is the Key Criterion to Decide the Future?

There are three main criteria and corresponding approaches to agriculture. In a highly competitive international climate, one argument maintains that it is essential to continue **intensive methods**, focused on high inputs, efficiencies and yields in order to compete in the global market. A second sees a far greater emphasis on environmental protection using **integrated approaches** with greatly reduced chemical inputs, sensitivities to soil quality, and careful habitat management. The third view regards such changes as insufficient, arguing that a revolution is needed to break the mould of the past 50 years, moving to a quite different philosophy of agriculture using **organic farming** methods.

Working with God’s Creation

All food comes from the rich provision of God’s creation, but the earth and its creatures are not ours to do with as we please. We are both stewards and companions of nature. The Bible gives a picture of a subtle balance between intervening to order creation to human needs and caring for it like a garden. The efficient use of soil, water, crops, nutrients, minerals and livestock can represent good stewardship, husbanding it well for the poor as well as the rich. The application of industrial methods to crop agriculture arose in response to food shortages at the end of the Second World War. It has raised efficiencies and yields, and reduced the direct price of food. But the logic of industrial production has brought a functional view of agriculture which sits awkwardly with care for living creatures and ecosystems. The drive for efficiency has now been over stressed, at the cost of other important values in the creation and human communities. A proper balance has been lost. We probably cannot afford for food to stay as cheap as it is, because it costs too much in other ways. There is serious damage to God’s creation in loss of soil nutrients and organic matter, habitats and biodiversity, and in increased wastes in water courses. Many feel we have now gone too far down this route, and the Kirk affirms the importance of moving to more sustainable forms of agriculture.

What is Organic Agriculture?

Organic farming is not just about avoiding synthetic pesticides and fertilisers. It is a quite different philosophy of agriculture. It is a holistic, integrated system of farming based on the management of the natural ecosystem and its processes, so that crop production is in balance with the ability of the soil to release nutrients. Synthetic fertilisers are unnecessary because of the way organic methods manage the soil, its microbes and nutrients, as in the phrase, ‘Feed the soil and let the soil feed the plant.’ Similarly, it aims to maintain crop health by natural systems of pest, weed and disease control. Organic farming is a complete system which aims to produce good yields without needing artificial inputs, while emphasising harmony with nature, biodiversity, soil health, energy conservation, food quality, farm animal welfare, and the avoidance of environmental pollution.

Pros and Cons of Organic Systems

Organic agriculture thus offers good ideas and concepts well worth trying on a larger scale to test its economic, practical and environmental sustainability. But there are also drawbacks and uncertainties. It tends to have more variable yields and be more expensive to run than current conventional systems. Organic food therefore frequently costs more on the shelf. Supermarkets geared to a continuous supply concept are less sensitive to small scale production and seasonal effects. The prices of many conventional crops are artificially low since they do not include wider costs to the environment. This correction may not itself make organic the preferred economic option, but there seems considerable scope for research investment into organic methods to give substantial improvements in yield. No one knows if the whole UK could be fed organically or if we could afford the cost. Organic may remain too expensive for the poor. Its claims to offer better nutrition and health are so far less certain than its environmental credentials. They need proper scientific testing, but may be more a question of belief than proof. The concept of organic farms is small, local and sensitively managed. How effective would it be on a large scale and perhaps with less committed farmers? These various unknowns indicate that increasing organic production must be done cautiously and with careful monitoring.

Integrated Agriculture

Integrated farming represents an alternative to intensive agriculture, in which conventional arable farming systems are adapted in more environmentally sustainable ways, without so complete a revolution as the organic approach. This may take into account landscape, soil structure, nutrient status, crop rotation, variety choice, conservation, energy use, waste disposal, and the management, auditing and monitoring of the whole farming process. In principle, the practical scope is as wide as organic, but with a different starting point and philosophy. Many broader claims now popularly associated with the word organic could apply to food grown by integrated methods. They differ in allowing the carefully targeted use of some chemicals for pest, weed and disease control, and, where appropriate, genetic modification. Integrated systems are not governed by a tight set of rules and do not have one all-embracing label equivalent to organic, and so may be harder to regulate and market. For many in mainstream farming they offer a more flexible, less radical transition to sustainability, which can be built upon carefully, than the specific conversion period entailed in going organic.

Practical Conclusions

The environmental impact of intensive methods of agriculture calls for a change to more ecologically sustainable approaches. While organic methods hold serious attractions, they also have significant uncertainties. Too much is now being claimed politically as being “organic” which could equally be applied to good integrated farming systems. Both aim to produce food profitably, whilst safeguarding the environment by balanced and holistic approaches to farming. We feel both should be encouraged. Farmers’ markets, seasonal, locally grown produce and food boxes are welcome trends, but are not specific to one form of agriculture. We oppose a merely functional attitude towards God’s creation, but we caution against a rising tendency to see nature as quasi-divine, instead of created, or to assume that natural is always better than technical. On its own, nature is an ambiguous guide for ethics. The secret of agriculture is a co-operation of human skill and research and the processes of God’s creation

Summary of General Assembly Motions, May 2002

- Affirm the importance of moving to more sustainable forms of agriculture, including both integrated and organic farming systems.
- Urge the Government to provide more incentives and assistance for farmers to do so, and to submit the health & nutritional claims of organic agriculture to independent scientific research & evaluation.
- Encourage members to adopt more sustainable food purchasing practices, as far as they are able, emphasising food which is seasonal, grown locally & uses more environmentally sustainable methods

For more information about this and other ethical issues in technology, contact :

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