

Acquisition and transfer of knowledge within the organic sector in Iceland

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Implications

Organic agriculture is developing at a slower rate in Iceland than in the other Nordic countries, partly due to lack of research and development work. While the supply of organics does not meet demand, and the market is growing, this sector within Icelandic agriculture is largely driven by consumers, ideologists and enthusiasts. They are, for example, trying to solve problems and promote progress by accumulating and disseminating knowledge from various sources. Much more support is needed from the scientific community and politicians should pay closer attention to the contribution organic farming can make to sustainable development and the wellbeing of society at large. Transfer of knowledge from other Nordic countries could, for example, be linked to research on organic fertilizers and methods of teaching and extension.

Background and objectives

Although recognized organic growing in Iceland dates back to 1930 only a few pioneers were involved until 20 years ago (Dýrmundsson 1999a; 2000). Since 1993 the number of organic holdings has increased from 6 to 40 accounting for approximately 1% of the total agricultural production in the country. Conversion support has been much less than in other Nordic countries (Davíðsdóttir 2013; Dýrmundsson et al. 2010). The objective of this presentation is to review briefly the development and status of research and the acquisition and transfer of knowledge within the organic sector.

Key results and discussion

While agricultural research has flourished for several decades in Iceland there is a dearth of such fundamental activity specifically aimed at the organic sector. In 1998 the Council for Science and Technology in Organic Agriculture, having studied the research needs in detail, proposed a list of priorities (Dýrmundsson 1999b, 2000). Hvanneyri Agricultural University and Reykir Horticultural College paid some attention to these priorities, especially the first one dealing with organic fertilizers (Brynjólfsson 2008). However, after the merger in 2005 of all the agricultural-, research- and teaching bodies into the Agricultural University of Iceland (LbhÍ), minimal attention has been paid to the needs of organic farming with the exception of recent positive trends in its horticultural department at Reykir (Stadler, personal communication) where organic fertilizers are included in trials. It should be kept in mind, however, that several past and present studies, e.g. on legume growing, within conventional farming systems, have relevance to the organic sector (Dýrmundsson 1999b, 2000). Given this background we still have to depend heavily on small case studies, observations based on limited statistical data and, last but not least, knowledge accumulated by farmers' experience. Let me give a few examples:

- 1) In addition to farmyard manure the supply of organic fertilizers may be boosted substantially by by-products and effluents from the fishing industry.

- 2) The supply of hay and silage for winterfeeding, especially on some organic sheep farms, can be increased a great deal by utilizing natural meadows where sedges dominate (*Carex* species) and in coastal areas seaweed foraging may supplement organic fodder in winter.
- 3) All ruminants and horses may be fed on organic grassland products (hay/silage) without grain supplementation throughout the winter. Even dairy cows may produce fairly good milk yields without concentrate feeding.
- 4) There are indications that both cow health and human-cow relationships are better on organic than on conventional farms, possibly due to less production – and handling stress.
- 5) Marketing studies have indicated that organic food is favoured by consumers who care for their health and amongst the target groups are women, especially mothers, well educated people and people older than 40 years of age. Of food items baby food ranks highest.

How was the work carried out?

I reviewed all BSc, BEd and MSc theses relating to organic agriculture in Iceland, submitted from 1995-2013, of which 2 out of 10 were from Hvanneyri Agricultural University and none from the Agricultural University of Iceland. Six of them were quoted by Dýrmundsson (2000) while the 4 most recent ones are by Maravic (2008), Magnúsdóttir (2008), Seebach (2013) and Davíðsdóttir (2013), from the Leopold-Franzens-University Innsbruck, Austria, Reykjavík University, Iceland, Kassel University, Witzenhausen, Germany and the University of Iceland, respectively. Moreover, these sources of information were supplemented by knowledge acquired by farmers' experience disseminated through personal discussions and from meetings where organic farmers have given talks.

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