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International training and exchange – a useful instrument in knowledge and attitude dissemination.

G.J.H.M. van der Burgt[1], J.P. Wagenaar[1]

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Abstract

Knowledge about organic agriculture is constantly changing and growing. Research related to organic agriculture at EU level nowadays plays an important role. Organic agriculture, being an integrated, holistic and multi-target approach, needs researchers who are trained to investigate poly-factorial and multi-level problems. For students and junior scientists, international seminars and exchange programs are necessary instruments to gain "state of the art" knowledge and skills from senior scientists in the field of organic agriculture. The QLIF training programme under WP7.4 provides training in the different aspects of ecological farming systems, but also offers an opportunity to discuss relevant and adequate research strategies and results. Within the EU sixth framework QLIF project, so far two seminars have been organized. Contents and impact of these seminars are discussed.

Introduction

Associated with a growing market for organic products in the EU is growing national and EU support for research and research training dedicated to organic farming systems. Also, there is a growing number of researchers who are, partly or fully, engaged in organic research. For early stage researchers (ESR) entering the area of organic farming R&D often realise that their previous research education/training has not provided them with sufficient knowledge and skills to address the challenges and problems in organic agriculture which is generally characterized as an integrated, holistic and/or multi-target approach with multi-level interrelationships within the system (Anonymous 2005). As a results training schemes are required to prepare ESR for handling multi-level research questions directly within the context of the agriculture system itself. The skills and knowledge base require can be taught and integrated with the existing research skill and knowledge base and attitudes of ESR new to research on organic/ecological farming systems.

The EU framework 6 "Quality Low Input Food" (QLIF) project has allocated a specific budget for activities related to training and exchange of junior scientists. In training courses, students and junior scientists are introduced by senior scientists to existing knowledge, research questions, research attitudes and research techniques which are appropriate for organic agriculture.

In the research dedicated to organic agriculture, three aspects on how research is carried out are of particular importance. First there is the awareness that what is done here and now, has its effects on later and elsewhere (Brundtland, 1987). Of course this is not typical for organic agriculture, but within the organic movement it is an explicit part of the approach. Secondly, ethics and values such as naturalness

[1] Louis Bolk Instituut, Hoofdstraat 24, NL 3972 LA Driebergen, the Netherlands.
g.vanderburgt@louisbolk.nl

(Verhoog et al, 2002) and integrity (Verhoog, 2005) play an important role in the way organic agriculture is implemented. Thirdly, knowledge development directly focussed on farm practice should involve farmers in every phase, as is documented by Baars and De Vries (1999) and scientifically elaborated by De Vries (2004).

	Soil quality	Animal rearing
Participants		
Number	26	25
Nationalities EU	7	6
Nationalities non-EU	2	2
Students	6	2
(junior) scientists	13	16
Speakers		
Number	10	8
Institutions	8	6
Nationalities	3	3
Content		
Lectures	7	8
Workshops	3	2
Farm visits	2	2

Table 1. Some characteristics of the seminars

Seminars

So far, two three-day seminars have been organised, both coordinated by the Louis Bolk Instituut in Driebergen, the Netherlands. In February 2005 the first 1st QLIF-ESR training seminar was organised and focused on "soil quality management (Van der Burgt, 2005). In February 2006 the 2nd QLIF-ESR training seminar focused on "rearing of young farm animals" (Wagenaar and Bestman, 2006). In February 2007 the third seminar will be held, entitled "Measuring food quality: concepts, methods and challenges". (Van de Vijver et al, 2007). For some of the characteristics of the seminars, see table 1. In the next paragraphs details of the seminars are presented and discussed

Soil quality

In the soil quality seminar, much attention was focused on direct soil observation. Soil structure, soil life and rooting pattern are important characteristics in agriculture and can easily be observed and, to a certain degree, quantified and validated. For such observations to give meaningful results close contact between the researcher and farmer is thought to be essential (Baars and De Vries, 1999). It is the farmer who has the knowledge of what has happened in the field in the past and why he decided to do what he has done so far. It is then desirable for both the farmer and researcher to assess/observe soil quality in situ and discuss results. It is the researcher who contributes methodological knowledge and eventually the measurements to quantify the observations.

An instrument presented to and elaborated by the participants was the nitrogen model NDICEA (Van der Burgt et al, 2006). The objective of his model is to give insight in the nitrogen dynamics of a farm requiring fertility inputs. Also, the model should be easy to use for farmers or extension workers so that results can be obtained on-farm" at the kitchen table". The NDICEA systems was used as an example of a scientifically validated instrument developed in close cooperation between researchers and farmers, to be used by farmers themselves as well as by farm advisory services.

The rearing of young farm animals

The way young farm animals are reared has a major impact on important characteristics in adult animals, such as health and production (Koene 2001). Especially in organic farming, which aims to provide livestock husbandry systems that deliver higher levels of animal welfare and health, sound young animal rearing practices should be advocated and promoted. In this seminar the concept and consequences of alternative ways of rearing farm animals were presented and discussed. Scientific results produced thus far within the QLIF project were combined with examples from other R&D programmes carried out in Germany, United Kingdom and The Netherlands. Potential conflicts between different objectives/themes of organic livestock principles such as behavioural freedom versus health were considered (Wagenaar and Bestman 2006).

Final remark

Scientific research for organic farming requires more than **(a)** what is taught in conventional farming focused University and college courses and **(b)** the often mono-factorial approaches used in conventional agriculture focused R&D. It requires additional integrated, multidisciplinary, holistic and/or poly-factorial research methodologies, farmer participatory approaches and often an adapted attitude towards the subject studied. Training and exchange programme for ESR are therefore essential to improve the link between research and knowledge transfer specialists and the expanding organic industry.

The third seminar on Measuring food quality: concepts, methods and challenges" was held 12-14 February 2007, Driebergen, the Netherlands. QLIF will organise two further seminars in February 2008 and 2009. The 2008 seminar will again focus on soil quality, with emphasis on nitrogen dynamics and soil life. Further details can be obtained from the website http://www.qlif.org/forum/training/index.html or by e-mailing the author of this paper.

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