RAHMANN G & AKSOY U (Eds.) (2014) Proceedings of the 4th ISOFAR Scientific Conference.
'Building Organic Bridges', at the Organic World Congress 2014, 13-15 Oct., Istanbul, Turkey (eprint ID 24070)

The organic food and farming innovation system in Germany: Is specific lobbying justified?

CHARIS BRAUN[1], ANNA HÄRING[2]

Key words: innovation system, research, organic food and farming, innovation requirements, representation of interests

Abstract

This study's goal is to identify starting points for improving how the interests of the organic agro-food innovation system are represented in Germany. The status quo of research for the sector, the sector's innovative ability and innovation requirements and the framework conditions for research funding were analysed. The study shows that research is often applied and inter- or transdisciplinary and thus contributes to the sector's innovative ability. The structural capacity of the sector and research funding, however, lag behind its requirements. Professional representation of the needs of the organic agro-food innovation system may strengthen it

Introduction

The organic agro-food sector is setting the course for dealing with various key problems currently faced by the agro-food sector: e.g. adapting to climate change, improving soil fertility and increasing food security (Niggli et al. 2008). Effective innovation systems in which research plays a key role support the further development of innovation systems. Yet the overall framework conditions for innovation do not adequately reflect the potential that lies in the organic agro-food innovation system (ibid.). Based on the assumption that the innovation system as a whole could be strengthened by improving the overall framework conditions through effective lobbying, this paper has the following objectives:

- Identifying starting points to improve how the interests of the organic agro-food industry are represented in Germany.
- Analyse the status quo of research relating to the organic agro-food sector in Germany.
- Analyse the ability of the organic agro-food sector system to innovate.
- Identify core innovation requirements in the industry.
- Analyse the overall framework for public and private research funding and the decision-making processes for designing funding programmes and selecting which research projects deserve funding.

Methods

Research and innovation in the organic agro-food sector were examined from different points of view, mainly by qualitative expert interviews. Interview guidelines with different focal points and mainly open questions served as a basis. These were supplemented by a few enquiries of quantitative data. In total more than 100 interviews were conducted. The interviews were digitally recorded and then a summary transcribed. The interview material was then gradually evaluated based on the criteria of the qualitative content analysis (Mayring 2011).

To determine the status quo of research in Germany, 24 institutions and researchers were randomly selected based research results on the organic agro-food sector in Germany published in „Organic-Eprints" and „ISI-Web-of-Knowlege" between 2005 and 2010. This sample included researchers who focus on the organic agro-food sector in their work as well as researchers who occasionally deal with issues related to this area. Expert interviews of up to 90 Minutes were conducted on the following aspects: topics, approaches, used methods, methodological innovation, cooperation, knowledge transfer, output, funding and ideas for a representation of interests of the innovation system.

The innovative ability of the organic agro-food sector was assessed on the basis of 33 interviews with advisors and researchers working in the fields of crop farming, livestock and food. The experts were randomly selected on the basis of conference papers and a list of recognised advisors working in the organic food and farming sector. Interview of up to 45 minutes were conducted covering the following aspects:

[1, 2] Eberswalde University for Sustainable Development (University of Applied Sciences), Policy and Markets in the Agro-Food Sector, Germany, www.hnee.de, anna.haering@hnee.de

innovations important for the development of the sector, users and fields of application of research results / innovations and criteria for successful adaptation and diffusion.

Finally, the innovation requirements of the sector were identified based on a secondary analysis of existing studies (see BÖLW 2012, Kuhnert et al. 2011, Röhring 2009) and research and innovation requirements mentioned in the interviews about innovative ability and the status quo of research.

The general research framework was analysed with respect to opportunities for public and private sector funding. To this end, information about public research funding at federal and state level was gathered and supplemented by selected expert interviews. In addition, interviews were also conducted with 44 foundations that could be considered to fund research in the organic agro-food sector.

Results

Research approaches in the organic agro-food sector are mainly applied and often applied and inter- or transdisciplinary and thus contributes to the sector's innovative ability and can, therefore, make an important contribution to innovation processes in the organic agro-food sector. Usually a range of actors are involved in the innovation process, who often work together in inter- and transdisciplinary partnerships. The research pursued at universities, government research institutions and private institutions only represents one part of the innovation system. Advisory services and practitioners make important contributions to the innovation process, including knowledge transfer.

However, the structural capacity, i.e. the current number of scientists who work on issues related to the organic agro-food sector, is not consistent with the relevance of the research field. Furthermore, certain research projects cannot be carried out due to funding practices. Short funding periods and a lack of basic financing impede the innovation process: system-oriented research, long-term projects that deal with specific issues (e.g. breeding livestock and crops) or projects that require co-funding are only possible to a limited extent. In addition, expedient knowledge transfer is prevented if there resources available are insufficient to communicate the results to potential users after a research project is over.

Results provide substantial proof of the innovative ability of the organic agro-food sector. The innovation system has given rise to numerous innovations in crop farming, livestock and food processing, some of which have made their way into the conventional farming and food system. The spectrum of innovations spans specific process and product innovations (e.g. new breeding varieties or animal feed systems) through to complex organisational and social innovations (e.g. sustainable concepts in production and marketing). These successes, however, are neither adequately communicated within the industry nor to the outside. This can be attributed, at least in part, to a lack of awareness of the innovative ability among the actors themselves.

In addition, adaptation and diffusion of research results still needs to be improved. On the one hand, practitioners are often not aware of problem or lack motivation to participate in the innovation process. On the other, researchers still have to improve how they communicate their research findings. Inadequate resources on both sides hinder the diffusion of results.

Research and innovation requirements in the organic agro-food sector have been collected in the past by governmental and non-governmental institutions. The results of the expert interviews conducted over the course of this study also underscore the huge need for innovation in the sector. Improving or maintaining soil fertility, developing alternative plant breeds and dealing with climate change are examples of the requirements they identified.

Even though there are numerous public and private funders with different programmes that would provide a framework for researching issues relevant to the organic agro-food sector, there are only a few funding programmes specifically designed for this area that would reflect its relevance.

The analysis of the decision-making processes of funders showed that the structure of support programmes and the assessment of research projects to determine whether they are worthy of funding is not always transparent. Networks of key individuals within the organisations largely determine who sits on the committees of the funders analysed. The decisions made by the committees about programme structure and the selection of topics worthy of research are subject to both the personal assessment of the committee members as well as the political and financial pressure to take action.

Conclusions and recommendations

The findings described show that research makes an important contribution to the ability of the organic agro-food sector to innovate. The structural capacity of the innovation system and research funding, however, lag behind the industry's innovation requirements. The overall framework for research and innovation needs to be improved. Professional representation of this sector's interests may help. First steps in the representation of the agro-food innovations systems interests would include (see Häring et al. 2012)

- Continuous communication with individuals and institutions and participation in committees that influence the overall conditions for research in the agro-food sector on the innovative ability and the specific requirements of the organic agro-food sector. These include representatives of governmental and non-governmental institutions, companies and associations that fund research.
- Ensuring that information is shared within the innovation system of the organic agro-food sector. This includes regularly discussing innovations in the sector, the innovative ability of the sector, innovation requirements, communicating funding opportunities and motivating the actors to participate in the committees mentioned above.

While this study only looked at the innovation system in Germany, it is clear that the key problems the organic agro-food sector is facing are global. An effective international innovation system could help the sector to further develop. An improved representation of the sector's interests would be a starting point to achieve this.

Acknowledgements

The project was carried out in collaboration with the Bund Oekologische Lebensmittel-wirtschaft (BÖLW). Financial support from Software AG Foundation is appreciated.

References

BÖLW (Bund Ökologische Lebensmittelwirtschaft) (2012): Forschungsideen. Was der Ökolandbau alles wissen will. URL: http://boelwforschung.fiblprojekt.de/index.php (visited on 05/20/2012).

Häring, A. M.; Blodau, S.; Braun, Ch.; Meyerhoff, C.; Winkler, Ch. (2012): Forschung für die ökologischen Land- und Lebensmittelwirtschaft – Ansatzpunkte für eine Interessenvertretung. Diskussionspapier. Schriften zu den Wirtschafts- und Sozialwissenschaften der Land- und Lebensmittelwirtschaft 1/2012. Eberswalde University for Sustainable Development.

Kuhnert, H.; Behrens, G.; Nieberg, H. (2011): Kurzfassung der Ergebnisse der Anhörung zum Bundesprogramm Ökologischer Landbau am 15. und 16. November 2010 im vTI.

Niggli, U.; Slabe, A.; Schmid, O.; Halberg, N.; Schlüter, M. (2008): Forschungsvisionen 2025 für die ökologische Land- und Lebensmittelwirtschaft - Bio-Wissen für die Zukunft. TP Organics Technology Platform, Brussels and Research Institute of Organic Agriculture (FIBL), Frick.

Mayring, P. (2011): Qualitative Inhaltsanalyse. 11th Edition. Weinheim.

Röhrig, P. (2009): Was die Praxis von der Forschung will: Ausgewählte Ergebnisse aus 600 Wissenstransferveranstaltungen für Öko- Praktiker in Deutschland. In: J. Mayer, T. et al. (Ed.): Werte-Wege-Wirkungen: Biolandbau im Spannungsfeld zwischen Ernährungssicherung, Markt und Klimawandel, 10. Wissenschaftstagung Ökologischer Landbau. ETH Zürich, 11.-13. Februar 2009. Berlin: Verlag Dr. Köster.