

## Organic Farming: Enhancing Environmental Services from Farmland in Austria

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### Introduction

Consumers throughout the world are becoming increasingly aware of the benefits of organic farming for sustainable production. Austria has striven to enhance this form of management since the early 1990s and currently leads the European Union (EU) countries in the sector. 14% of national farmers practice organic farming and manage 16% of the Utilised Agricultural Area of the country (see Box 1), as compared to the EU average of 1.3% organic farms on 4% farm land (BMLFUW 2009). The greatest share (74%) of organic farmers is concentrated within mountain regions. Although organic farming is spread all across the country, there are several “hot-spots” in mountain regions (Salzburg, parts of Styria) where organic farming accounts for almost half of farms and farm land.

National subsidies were granted for organic farming in 1991, at a time when Austria was re-orientating agricultural policy towards less synthetic input, with the overall intention of improving the environmental performance of agri-economic activities. The initial payments were significantly increased after joining the EU (1995) and have become a core instrument of the overall Agri-Environmental Programme (AEP) within the framework of the Rural Development Programme.

Number of organic farms: 20,102 (14% of all farms).  
Area under organic farming: 383,756 ha (16% of all agricultural land).  
Share of mountain farms in Austria: 41% (of all holdings with agricultural land).  
Share of organic mountain farms: 74% (of all organic farms) and 21% (of all mountain farms).  
Agri-Environmental Payments as a proportion of total agricultural income: 31% in organic farms and 23% in mountain farms.

Box 1 Organic agriculture profile (2008), Austria

### Organic agriculture and environmental services

Organic agriculture complies with a number of common practices and principles designed to minimise human pressures on environmental services associated with more intensive agricultural systems, to use production methods that sustain soils and ecosystems and to make use of processes and cycles that are adapted to local conditions. EU Agri-Environmental Payments (AEP) in Austria are conditional on a comprehensive set of more than 30 different measures.

The environmental advantages of these tillage and cultivation practices have been widely discussed in the literature, broadly covering increased soil stability, fertility and biodiversity (Mäder et al. 2002) and improved water quality from restricted use of synthetic inputs and less soil erosion. More recently, research has also suggested significantly lower per hectare greenhouse gas emissions from organic production and retention of more carbon dioxide in the soils (Nemecek et al. 2006).

Impacts of the AEP are visible from evaluation studies, which confirm a slight decrease in the use of synthetic inputs (BMLFUW 2008, pp.113ff.) and, in general, a slow improvement in environmental performance (BMLFUW 2008, pp.169ff).

### A tailored payment

In order to carry the organic logo, organic farms have to comply with the EU Regulation on organic production (Reg. 834/2007), which defines production, labelling and inspection procedure. To guarantee expectations for a high quality product, the entire production process of all organic farms (including processing companies) is monitored by independent control agencies. Organic farming associations apply even stricter guidelines than those set by the EU regulation. Subsidies for organic farming are therefore needed to compensate for the additional tasks involved (e.g. more labour input) and the perceived higher risks, whilst potentially also helping in lowering costs passed onto consumers. This better enables integration of organic produce into the mainstream market, particularly over the initial transition phase.

In Austria support for certified organic farming, co-financed (50%) by the EU under the AEP, is a core element of policy



Field trip to an organic mountain farmer. Photo: Gerhard Hovorka.

determining remuneration for environmental services. In 2008 this compensation was on average 242 Euros per hectare or 4640 Euros per organic farm, amounting in total to 88.5 million Euros (17% of the total AEP in Austria). Including the other agri-environmental payments (such as payments for alpine pasturing or renunciation of the use of silage), organic farms received 26% of the total AEP funds.

### The organic farming boom in Austria

In Austria, the boom in organic farming took place in the early nineties. Between 1990 and 1994 the number of organic farms increased more than eight-fold, and Austria's accession to the EU in 1995 brought an additional incentive. One of the success factors was that food suppliers and retailers started to build their stock of organic products very early (Groier and Gleirscher 2005) and the label "from organic production" is now a positive marketing tool.

The increase in organic farming demonstrates rising consumer demand, a consequence in part of growing social awareness of the need to safeguard cultural landscapes and improve the environmental performance of agricultural management, but also an emerging interest in the perceived health benefits of using less synthetic inputs in the production process (BMLFUW 2009). An important reason for the rapid development of organic farming in mountain areas was that grassland management was traditionally very extensive in Austria, which allowed a swift conversion to organic management practices. The current Organic Farming Action Programme for 2008 -

2010 underlines the national target of raising the share of agricultural area under organic farming to 20% by 2010. Key issues in obtaining this goal are enhancing the efficiency and profitability of organic production and improving education and research. Whilst recent studies have found that organic farming in more developed countries can produce a better (or at least comparable) yields-costs ratio to conventional farming (Pimentel 2005), there is undoubtedly potential to further maximise these benefits to enhance growth and profit margins.

### Success factors

Critical factors behind the rapid development of organic agriculture since 1991 were (BMFLUW 2009):

- The idealism and commitment among organic farmers.
- The foundation and professionalisation of organic farming associations cooperating in a network.
- The organic agriculture payment scheme.
- The creation of reliable organic labels.
- The participation of large trade-chains (starting marketing activities in 1995).
- The increased ecological awareness of consumers.

### Conclusions

The AEP accounts for a significant contribution to the total agricultural income of organic farms (33%) and mountain farms

(24%). Agricultural policy makers in Austria are aware of the strategic role of organic farming for sustainable development in mountain regions. Their tasks link to the development of cultural landscapes which represent important rural development assets and a key part of the mountain regions' capital stock (Dax and Hovorka 2004).

Developing strategies to enhance high quality regional production creates significant opportunities for mountain farming. Organic farming can be seen as part of such an orientation complementing an integrated regional development strategy (Groier and Hovorka 2007), and to this end the recently developed concept of an Eco-Region might underpin regional focussing (Groier et al. 2008). The active participation of local actors from different sectors can be linked with organic farmers, creating increased cross-sectoral cooperation at the regional level. This would enhance the impact of organic farming subsidies and would strengthen local institutions, support groups and other (e.g. marketing) initiatives.

### References

BMLFUW (2008), Ex-post-Evaluierung des Österreichischen Programms für die Entwicklung des ländlichen Raums, Evaluierungsbericht 2008, Wien.

BMLFUW (2009) Organic Farming in Austria. Report. Vienna.

Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91, Official Journal of the European Union, L189/1, Brussels.

Dax, T. and Hovorka, G. (2004) Integrated rural development in mountain areas. In: Brouwer, F. (ed.) *Sustaining Agriculture and the Rural Environment. Governance, Policy and Multifunctionality*. p. 124 - 143, Cheltenham.

Groier, M. and Gleirscher, N. (2005) Bio-Landbau in Österreich im internationalen Kontext. Band 1. Strukturentwicklung, Förderung und Markt. Bundesanstalt für Bergbauernfragen. Research Report no. 54. Vienna.

Groier, M. and Hovorka, G. (2007) Innovativ bergauf oder traditionell bergab? Politik für das österreichische Berggebiet am Beginn der 21. Jahrhunderts. Bundesanstalt für Bergbauernfragen. Research Report no. 59. Vienna.

Groier, M., Kirchengast, C. and Schermer, M. (eds) (2008) *Auf dem Weg zur Bioregion. Ergebnisse, Erfahrungen und Reflexionen aus einem Aktionsforschungsprojekt*. Bundesanstalt für Bergbauernfragen. Research Report no. 61. Vienna.

Mäder, P. Fliessbach, A. Dubois, D. Gunst, L. Fried, P. and Niggli, U. (2002) Soil Fertility and Biodiversity in Organic Farming. *Science*, 296, pp. 1694-1697.

Nemecek, T., Dubois, D., Huguenin-Elie, o. and Gaillard, G. (2006). Life cycle assessment of Swiss farming systems for arable crops and forage production. *Aspects of Applied Biology* 79, pp.15-19.

Pimentel, D., Hepperly, P., Hanson, J., Douds, D., and Seidel, R., Environmental, Energetic, and Economic Comparisons of Organic and Conventional Farming Systems, in *BioScience* 55(7):573-582. 2005

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<sup>1</sup> One month prior to signing agreements for the one year pilot project with landowners, Socio Bosque approached FCT and proposed to work collaboratively in the area, with Socio Bosque administering the payments and assuming the administrative transaction costs, and FTC continuing the outreach and recruitment.