



ICOAS '18

6th International Conference on
Organic Agriculture Sciences

DYNAMIC DEVELOPMENTS IN ORGANIC RESEARCH

Strengthening
partnerships across
Europe and
beyond

**BOOK OF
ABSTRACTS**

7 – 9 November 2018
Esterházy Palace
Eisenstadt, Austria



Foreword

The present Book of Abstracts includes the abstracts of the scientific contributions presented at the 6th International Conference on Organic Agriculture Sciences (ICOAS), held 7 – 9 November 2018 in Eisenstadt, Austria. The 80 contributions, oral and poster presentations alike, from 26 countries show that ICOAS is an important hub for presenting significant research results on organic agriculture in Europe and beyond.

As the big challenges of organic agriculture cannot be addressed by single researchers, the main purpose of ICOAS is to share latest research results on organic agriculture in Central and Eastern Europe among scientists and other stakeholders. ICOAS, therefore, fosters the strong partnership across stakeholders in these countries. Knowledge dissemination and capacity building along the value chain in Central and Eastern European countries are the main focal point of ICOAS.

For the first time ICOAS 2018 is held in Austria. After a longstanding collaboration in various agricultural fields, the Austrian Research Institute on Organic Agriculture (FiBL) and Esterhazy Betriebe GmbH decided to jointly organize ICOAS 2018. Eisenstadt, located in Eastern Austria, was chosen as it is the perfect location for ICOAS – building a bridge between Central and East European countries.

In the present Book of Abstracts you find the scientific contributions presented at ICOAS 2018 compiled. From the numerous submissions following the open call for abstracts, the contributions presented were selected in a two-step reviewing process. Each abstract was reviewed by two independent reviewers before a final decision was made by the Scientific Committee. The organisers of ICOAS 2018 would like to thank all the reviewers for their support in the reviewing process – you can find the list of reviewers at the end of this book.

The first part of the Book of Abstract includes the abstracts of the oral presentations given during the 16 parallel sessions. The second part contains the abstracts of the two poster sessions. Within the two parts the abstracts are sorted in alphabetical order according to the authors' names.

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The following partner organizations kindly support ICOAS 2018:

Governmental institutions:

- BMNT – Federal Ministry for Sustainability and Tourism, Austria
- Ministry of Agriculture and Rural Development, Poland
- Ministry of Agriculture, Hungary
- UKZUZ – Central Institute for supervising and testing in agriculture, Czech Republic

Research institutes:

- FiBL – Research Institute on Organic Agriculture
- ÖMKi – Research Institute on Organic Agriculture, Hungary
- BOKU – University of Natural Resources and Life Sciences, Austria
- Bioinstitut, o.p.s, Czech Republic
- CTPEZ/CTPOA – Czech Technology Platform for Organic Agriculture, Czech Republic
- University of Agriculture in Nitra, Slovakia
- LfL – Bavarian State Research Center for Agriculture, Germany

Associations and other organisations:

- LKÖ – Chamber of Agriculture Austria
- NZR – Netzwerk Zukunftsraum Land – the Austrian Rural Network
- IDM – Institute for the Danube Region and Central Europe, Austria
- Bioselena – Foundation for Organic Agriculture, Bulgaria
- BioEAST, Hungary
- IFOAM EU

Sustainability assessment of organic dairy farms in mountainous areas of Austria

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Dairy farming plays a major role in mountainous regions of Austria, mostly due to high proportion of grasslands. In general, Austria's dairy farming faces challenges regarding sustainability, e.g. environmental impacts, but specifically for alpine areas low productivity and dependency on direct payments are lowering sustainability. Organic farming is considered as a strategy to overcome these challenges. Considering this general background, we analysed the sustainability performance and its main drivers of organic dairy farms in mountainous regions of Austria.

In 2017-18 we assessed 173 organic dairy farms delivering milk to the organic brand Zurück zum Ursprung with the Sustainability Monitoring and Assessment Routine (SMART). SMART-Farm Tool is based on the SAFA Guidelines (FAO 2014) and models the performance of 58 SAFA sub-themes using 327 indicators. On a scale from 0% for poor to a 100% SMART analyses the degree of achievement of indicators and for the sub-themes (Schader et al. 2016). Stratified random sample (n=173) represents roughly 10% of all Zurück zum Ursprung-dairy farms. We applied descriptive statistics to analyse the sustainability performance of farms.

Average values of 58 sub-themes show an overall positive picture in the sustainability performance resulting in 26 sub-

themes scoring 'very good', 25 'good', 6 'moderate' and 1 sub-theme scoring 'deficient'. Due to relatively high social standards in Austria, farms perform very well with respect to Social Well-Being, whereas in Ecological Integrity only 4 of 14 sub-themes do so. In many sub-themes regional comparisons show relatively homogenous scores, which indicates a levelling process through various standards applied by these farms, which focus on organic regulations, less concentrated feed and animal welfare. However, an intra-regional comparison shows higher variability.

We conclude that the individuality of farm backgrounds shows a relatively high variability of farms, though the standards mentioned. This is even true for core areas of these standards, e.g. the SAFA sub-theme livestock's Freedom from Stress showing a range of 30%, 34%, 23% and 32% for the regions Alpenostrand (Eastern Alps), Hochalpen (High Alps), Voralpen (Pre-Alps) and Wald- and Mühlviertel, or only moderate results for the SAFA sub-theme regional Value Creation, despite the fact that farms are part of a regional brand. Although farms show good to very good results, our analysis shows optimisation potentials and measures to improve sustainability not only on farm level, but also on a regional and national scale.