



**ICOAS '18**

6<sup>th</sup> 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.

## Organising Committee

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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
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# Biodiversity performance of organic farms in Austria – results from eight years of biodiversity assessment

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Assessing the biodiversity performance of agricultural farms has gained importance in recent years since conserving and promoting biodiversity and associated ecosystem functions in cultural landscapes is a key aspect in making agriculture more sustainable – a demand expressed in science, politics and society. This contribution presents results from eight years of biodiversity assessments on organic farms in Austria applying a method developed at FiBL that estimates the biodiversity potential of agricultural farms (Schader et al. 2014). The assessment method covers the entire farm and its core consists of 99 parameters concerning agricultural practices and semi-natural habitats and their impacts on the diversity of eleven indicator species groups (e.g. soil fauna, vascular plants, birds, grasshoppers and spiders). These impacts were evaluated semi-quantitatively by expert judgements and aggregated for each parameter across all eleven indicator species groups based on food-web relationships between these groups in agricultural ecosystems in Austria. A farm gets a share of these parameter scores according to the agricultural practices carried out on

the farm and a biodiversity potential is calculated ranging from 0% to 100%, where 100% would be reached with the highest possible scores for all parameters.

Since 2010 more than 300 organic farms have been assessed using this method. The approach proved to be feasible and efficient. It provides plausible results at the farm level and it allows for conclusions on farming practices and farming systems. The results from eight years applying the method show that the biodiversity performance of organic farms varies considerably. While most farms achieved high scores in parameters covering farming practices, there exists potential for improvement mainly regarding semi-natural habitats – which play an essential role in conserving biodiversity in agricultural landscapes. This contribution will give an overview of accomplished assessments covering a range of farm types and regions across Austria. Strengths and potentials for improvement concerning conserving and promoting on-farm biodiversity will be discussed.