Posters

Poster Prizes

For our Networking Poster Session, the audience is kindly requested to cast their vote for which poster they would like to receive each prize. Ballot slips are available for all participants. Please place in the corresponding ballot box by 20:45.

We asked poster contributors to make their content visually accessible to a general public. Please judge the posters on the (1) excellence of content, (2) visual accessibility of content, (3) researcher interaction, and (4) relevance of the research to sustainable food systems and achieving the SDGs.

Best Overall Poster Prize: 1000 CHF award to be used for any food system related research, education, or outreach activity.

The Mercator Poster Prize: 1000 CHF to be used for any organic food or agriculture related research, education, or outreach activity. To be considered for this award, a poster should touch on the role of organic production systems in addressing food security.

-O denotes a poster is eligible for only the **Best Overall Poster Prize**

-OM denotes a poster is eligible for **both prizes**

Full poster abstracts are available at **www.bit.ly/wfsc-symposium2019**

Poster Abstracts

01-OM Buckwheat for more diverse crop fields and diets

Authors: M.M. Nay, E.A. Perez, S.L. Byrne, A. Walter, B. Studer

Affiliations: Molecular Plant Breeding, ETH Zurich; Crop Science, ETH Zurich; Teagasc Crop Science, Oak Park Carlow, Ireland

Contribution to Sustainable Food Systems: Buckwheat is an excellent food crop for pollinators, livestock and human consumers alike. By determining the suitability of different buckwheat accessions for their cultivation in Switzerland, we provide farmers with a valuable alternative to the major crops currently grown.

Abstract: Just three crops – wheat, rice and maize – provide globally the majority of calories in our diet. This overrepresentation of a few crop species leads to a limited diversity in our fields. To enhance the variety of crops on farm and in our diets, we are investigating the performance of different accessions of the pseudocereal buckwheat (*Fagopyrum esculentum*) in Switzerland. To characterize the diversity of the buckwheat crop, a panel consisting of over 150 buckwheat accessions with worldwide origin will be evaluated in multi-location field trials. In combination with genotypic data of the accessions, the genetic basis of several phenotypic traits will be determined. This study will allow to find superior buckwheat accessions that give farmers a valuable alternative to major cereals. Furthermore, it prepares the ground for buckwheat improvement through breeding.

02-OM Effect of the total replacement of soybean by feeds from Black Soldier Fly larvae in egg production

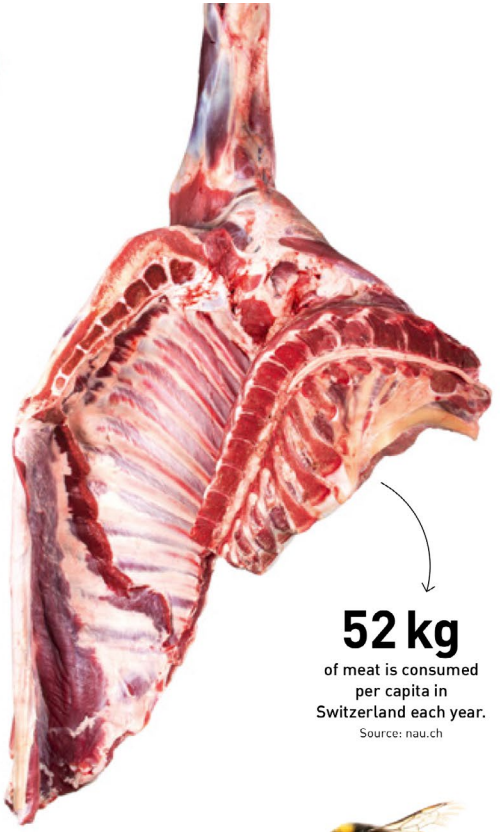
Authors: M. Heuel, C. Sandrock, A. Mathys, M. Gold, C. Zurbrügg, M. Kreuzer, M. Terranova

Affiliations: Animal Nutrition, ETH Zurich; Research Institute for Organic Farming (FiBL); Swiss Federal Institute of Aquatic Science and Technology (Eawag)

Contribution to Sustainable Food Systems: Caused by the high import rate for soybean in organic egg production it is important to investigate alternative and local protein sources. One of these could be insects. Therefore, it is important to examine their impact on the poultry performance.

Abstract: In this study the utility of insects as ingredients of organic diets for laying hens as a potential novel and more sustainable protein and energy source was investigated. The used insect material (protein meal and larval fat) was obtained from Black Soldier Fly (BSF) larvae reared on two permitted substrates (primarily grain-based agrifood sidestreams and preconsumer foodwaste, respectively) and then integrated in the diets of laying hens to completely replace soybean cake and oil. Over the feeding period of seven weeks various performance characteristics, protein and energy utilization, as well as egg quality were analyzed. The results show that replacement of soy meal and oil by insect materials did not negatively affect performance of the hens or the quality of the eggs. It remains to be investigated if and to which degree unfavorable saturated fatty acids, characteristic for BSF, are incorporated in the egg.

1/3
of all the food produced in Switzerland ends up as food waste.
Source: foodwaste.ch



52 kg
of meat is consumed per capita in Switzerland each year.
Source: nau.ch

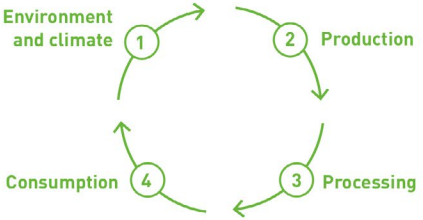
60%
of the 1,143 recorded insect species in Switzerland are endangered or threatened.
Source: naturwissenschaften.ch

9.7 bn
people will inhabit Earth by 2050
Source: UN

Our food: climate change, global population growth and biodiversity loss are a threat to our food system.

45%
of the planet's land surface is used for livestock farming.
Source: planted.ch

We need to take a more sustainable approach to what we eat and how we produce it. In its search for solutions, the ETH World Food System Center deploys cutting-edge technology to investigate the entire food value chain.



25%
less precipitation will fall in Switzerland by the middle of this century.
Source: CH2018

Graphic from
***ETH GLOBE* 3/2019**

Layout & Content: Nadine Stähli and
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