

# World Food System Center News

## WFSC News & Upcoming Events

**Center Enters Phase 2: 2016-2020** The WSFC's first evaluation by the ETH Office of the Vice President Research concluded in December, marking a successful end to the Center's initial phase of operations (2011-2015). We are excited to continue building our programs and activities during the second phase, which is now confirmed for the next five years (2016-2020).

**New Members** The WFSC is happy to welcome three new professorial members. Prof. Wolfgang Langhans, chair of Physiology and Behavior joined in July of this year. Next month, Prof. Alexander Mathys, chair of the new Sustainable Food Processing professorship and Prof. Robert Finger, incoming chair of Agricultural Economics, will add their expertise to the Center.

**New Partnerships and Professorships** We are excited to have new additions, fenaco and Migros Industry, to the Center's Partnership Council, a platform for exchange, debate, and information among the WFSC's strategic partners. A contribution by fenaco to the ETH Zurich's strategic initiative on the world food system aims to help better connect Swiss farmers with the ETH and supports a new professorial chair in Molecular Plant Breeding (search currently underway). A contribution from Migros Industry will provide postdoctoral research funding via the ETH World Food System initiative

### UPCOMING EVENTS

**Public Lecture** (17 March 2016) *Sustainable Proteins of the Future*, featuring a keynote lecture by Prof. Alexander Mathys and panel discussion.

**WFS Summer School Call for Applications** (March 2016)  
Applications will open for the August 2016 program on *Organic Agriculture and Food* in Rheinau, Switzerland.

**Study Tour** (10-16 April 2016) ETH Meets California Study Tour, *Tackling Food System Challenges with IT Innovation*.

**Workshop at eco.naturkongress** (27 May 2016) *To Meat or not to Meat: Research for sustainable livestock production and consumption* featuring research from WFSC projects.

[www.worldfoodsystem.ethz.ch/news/event-calendar](http://www.worldfoodsystem.ethz.ch/news/event-calendar)

and together with renewed commitment from founding partner, Bühler, supports the new chair in Sustainable Food Processing (Prof. Mathys to begin in January).

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## Research

**New WFS Grants Awarded** A record number of grants were submitted by to the Center's two competitive grant programs this November. Projects will be selected in early 2016 after a peer review process is concluded. There are currently 8 ongoing projects in the Sustainability in Food Value Chains program (supported by the Center's Coop Research Program) and 5 ongoing projects in the program Organic Production Systems for Global Food Security (supported by the WFSC Mercator Research Program). The first Mercator PhD project will be concluding 2016.

Further information about the ongoing projects can be found at [www.worldfoodsystem.ethz.ch/research](http://www.worldfoodsystem.ethz.ch/research). The next call for proposals will open in July 2016.

**Resilience in Food Systems Flagship Project** This project has kicked off successfully, with recent developments including the conclusion of the first field research and case study of the tef value chain in Ethiopia, conducted together with partners from the Ethiopian Institute of Agricultural Research and NutrAfrica. A second case study just started on the cocoa value chain in Ghana, in collaboration with Kwame Nkrumah University of Science and Technology. The first international workshop involving researchers with expertise that spans the food system took place in June, as part of the WFS Conference at Monte Verità, Switzerland. A new website for the project is also online, where viewers can find additional project information and the first peer-reviewed paper from the project. [www.resilientfoodsystems.ethz.ch](http://www.resilientfoodsystems.ethz.ch).

**Belmont Forum Project** The WFSC joins an international consortium that is taking on the challenge of modeling the complex interactions and feedback loops that exist between land use, land use change, and food and nutrition security. The models will focus globally and on three study regions, and be used to test and map different scenarios of food

supply and demand. As a partner in this project (with co-PI, Nina Buchmann), the Center brings its experience working across disciplines and with diverse stakeholders. We will drive the knowledge exchange, stakeholder engagement, and educational outreach activities for the project, entitled, Delivering Food Security on Limited Land. Our work begins in earnest in 2016 with stakeholder workshops and planning a summer school course that will take place in 2017 in South Africa.

**Foresight Study** The WFSC recently concluded a study on the research needed for a sustainable Swiss food system. Commissioned by the Swiss Federal Office for Agriculture, the results will inform the development of the agency's research concept for 2017-2020. The project (led by Prof. Nina Buchmann) took a multi-method approach including expert interviews, an extensive literature review, stakeholder consultation, and an online questionnaire. Findings have been presented to Swiss and international audiences, most recently at a workshop at the Brennpunkt Nahrung conference in Lucerne in October. The study report can be viewed at [www.worldfoodsystem.ethz.ch/research/special-collaborations/foresight](http://www.worldfoodsystem.ethz.ch/research/special-collaborations/foresight).

## Outreach

### Tackling World Food System Challenges Conference

This June, 100 people from 24 countries attended in the WFSC's first academic conference at the Congressi Stefano Franscini in Ascona, Switzerland. With a focus on cross-disciplinary and cross-sectoral collaboration, participants attended 21 interactive sessions including keynote lectures, panel discussions, workshops, and poster presentations and covering a broad range of food system topics. We are excited that the participants were overwhelmingly interested in a follow up conference, which is tentatively planned



WFSC Conference 2015 at the CSF, the Conference Center for ETH at Monte Verità, Ascona, Switzerland.

for summer 2017. Abstracts, presentations, and further documentation are available at [www.worldfoodsystem.ethz.ch/outreach-and-events/wfsconference](http://www.worldfoodsystem.ethz.ch/outreach-and-events/wfsconference).

**Zürich isst** This month-long public festival on food, nutrition, environment, and consumption provided a platform for the WFSC to organize two public film screenings with panel discussions on contemporary, food system topics. The films, *10 Milliarden: Wie werden wir alle satt?* and *Fair Food*, provoked thoughtful discussions amongst the panelists and audience. Film director Valentin Thurn participated on the panel after the Zurich premiere of his documentary (10 Milliarden). We also organized a "Science on Your Plate" luncheon event for festival partners and invited guests, featuring short presentations about research projects supported by WFS grants paired with specially prepared tasting plates.

**Public Roundtable on Oil Palm** The WFSC was happy to support a public event organized by the Oil Palm Adaptive Landscapes (OPAL) project, an R4D project led by WFSC members Jaboury Ghazoul and Claude Garcia. A full house showed up for a lively discussion amongst experts who hoped to debunk some persistent myths about oil palm.

## Education

**ETH Week a Success** A highlight of the ETH Critical Thinking Initiative, ETH Week 2015 brought together over 130 students from 15 departments for an intensive week of experiential learning focused on "The Story of Food." The WFSC supported lead-organizers from ETH Sustainability to offer a packed week of learning activities that included excursions, lectures, and hands-on team exercises. WFSC partner, Bühler, also participated with a public lecture by R&D Manager, Eliana Zamprogna.



Film screening and panel discussion at Kino Riff Raff during Zürich isst.



**Summer Schools** The WFSC's 4th summer school course in August brought 24 students from 17 countries to Rheinau, Switzerland. With a focus on organic agriculture and food, the course helps students take a systems perspective to better understand the complexities of the world food system. Applications will open in March for the next course, which will take place again in Switzerland. Coming up in 2017, we are planning two courses that will be organized with partners in Africa: one in Burkina Faso and one in South Africa. Details on our summer school program can be found at [www.worldfoodsystem.ethz.ch/education/summer-schools.html](http://www.worldfoodsystem.ethz.ch/education/summer-schools.html).

## Member Highlights

Four WFSC members participated in the World Economic Forum IdeasLab in Dalian China in September. The "Science of Food Security" presentations by ETH Profs. **Peter Edwards, Laura Nyström, Shana Sturla, and Hong Yang** (Eawag) focused on urbanization and the food system, strategies to reduce food waste, tracking food safety, and managing water scarcity with better data. Watch videos from the event at <http://tinyurl.com/WEFfood>.

**Dr. Kenneth Harttgen** (Development Economics group of Prof. Isabel Günther) was awarded the 2015 excellence prize for policy-relevant development research at the annual conference of the VfS Development Economics Group in Kiel for his publication "Association between economic growth and early childhood nutrition," published in *The Lancet, Global Health*.



Students working on their team project during ETH Week  
(Photo: Alessandro Della Bella).



Feed experiment in Plantahof in Landquart (GR), Switzerland. (Photo: F. Grandl)

**Q&A with Florian Grandl**, Doctoral student on the project "Greenhouse Gas Emissions of Dairy Production Systems based on Longevity and Zero-Concentrate Strategy as Compared to Conventional Systems."

**Q. The project is called Long Life Cow for short, what does that mean?**

A. In modern dairy farms, cows are culled far earlier than their natural life expectancy. This is detrimental from an economic and an environmental perspective. In our project, we investigated the biological and economic consequences of increasing the length of productive life in dairy cows. We focused particularly on how digestion differs between older and younger cows and the effects on greenhouse gas emissions of the whole milk production systems.

**Q. Why is this particularly relevant for organic farming?**

A. Organic dairy production has restrictions regarding the use of external inputs and is based on a systems approach, which explicitly includes longevity as a breeding goal. The project deals with both, studying how less use of feed concentrate, which consists of ingredients which are potential human food, and increasing the length of cows' productive life affects the entire system and the extent to which it alters the environmental impact of milk production.

**Q. What was the most surprising thing you learned?**

A. There were a number of unexpected differences between young and old animals in our experiment, showing how animals can adapt during lifetime. Besides the single animal, it is also interesting to learn how minor changes can have big effects at the systems level.

Florian Grandl is completing his PhD in the group of Animal Nutrition (Prof. M. Kreuzer) at the Institute of Agricultural Sciences. His research project is funded by the WFSC's Mercator Research Program, Organic Production Systems.

## Q&A with Bastian Flury Co-Leader of the Seed Sustainability project "Key Factors of Sustainable Catering at ETH Zurich."

### Q. What is this Seed Sustainability project all about?

A. Students are working with campus food service providers to explore catering innovations with the potential to make campus meals more sustainable. They are developing and studying interventions (e.g., to reduce the climate impact of the menu or food waste) on theirs. So far, 7 theses have been written since the project began in Spring 2013. Currently two students are studying another dimension of sustainability: human health and nutrition.

### Q. How is this project making catering more sustainable?

A. The impact of the project is three-fold. Firstly, best practices are shared through scientific publications, newspaper articles, conferences and through stakeholder meetings that are organized by the project management team on a regular basis. Secondly, the project established a living lab for innovations in campus catering that we would like to institutionalize next year.

### Q. What's next for the project?

A. Thirdly, the project is now at a point where best practices are available and documented and we will be looking into ways to create broader support for implementation of such practices at ETH Zurich.

Bastian Flury, Project Manager at the WFSC, and Patrick Jiranek, Project Leader of Seed Sustainability, manage the project, which is carried out in partnership with SV Group and supported by the ETH Catering Commission.



Information for students about climate-friendly meals at the student mensa. (Photo: Heidi Hostettler)



Stakeholders at a tef value chain workshop in Ethiopia, organized as part of the Resilience in Food Systems flagship project.

**Dr. Else K. Bünemann** (Plant Nutrition group of Prof. Emmanuel Frossard) obtained her habilitation in the field of soil science and plant nutrition based on her thesis entitled "Microbial processes affecting the dynamics of soil organic phosphorus."

**Prof. Jaboury Ghazoul** was in July awarded the Prince Bernhard Chair of International Nature Conservation (Utrecht University and WWF Netherlands), a prestigious 5-year visiting professorship. He was also recently appointed as President of the Association of Tropical Biology and Conservation.

**Prof. Laura Nyström** received a prestigious, 5 year Starting Grant from the European Research Council (ERC). Her project, "Soluble dietary fibre: unraveling how weak bonds have a strong impact on function" will study of interactions with soluble dietary fibres with nutritionally relevant ligands, and provide insight to the binding mechanisms at a level of detail that has not earlier been achieved. She was also awarded the Young Scientist Research Award by the American Association of Cereal Chemists (AACC International) at the Centennial Meeting of the AACCI in October.

**Prof. Nina Buchmann** was recently re-elected by the Swiss Federal Council as a Member of the Landwirtschaftlicher Forschungsrat (Agricultural Research Council) of Switzerland. She was also nominated by Switzerland and elected as Member of the Committee on Scientific Planning and Review (CSPR) of the International Council for Science (ICSU).

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