



PhD Program in Plant Sciences: Seminar “Sustainable Plant Systems” (ETHZ: 551-0209-00L)

Lecturers:	Melanie Paschke (ETHZ), Franz Bender (Agroscope), Frank Liebisch (Agroscope), Carole Epper (Agroscope) G. Singh Bhullar (FIBL),
Location:	ETH Zürich Center, tbd
Dates:	October 30, 2024 & December 04, 2024
Time:	14:00 – 18:00
Credit Points:	2 ECTS
Schedule-link:	https://www.plantsciences.uzh.ch/en/teaching/masters/sustplantsys.html

Course Contents:

Future society has to feed nine billion people, therefore agriculture and food, waste and resource management have to go hand in hand toward the use of less resources and acceptance of the limits of Planetary Boundaries. The focus of the seminar will be:

- (1) Research in agroecological systems. Can we transform the impact of agricultural in Switzerland and beyond?
- (2) Food system transformation. How can local sustainable food systems be built and scaled through policy strategies, food environments and consumer habits?

The seminar will have (a) two face-to-face sessions, (b) self-organized group work with case studies that will be analyzed and results be presented, (c) participants will publish a report of their findings in the ETHZ-PSC Science and Policy Blog.

Case studies (CS) will include:

- CS 1: How can Swiss farmers move to zero environmental impact?
- CS 2: What influence do the consumers in developed (importing) countries have on sustainability of (mainly) small-holder farming in the developing (sourcing) countries?
- CS 3: Sensor based fertilization techniques at the field for sustainability?
- CS 4: The blessing and curse of nitrogen – transferring knowledge from Science to Society to create more awareness
- CS 5: The transformation of the (urban) food systems and changing consumer food habits.

Learning objectives:

Participants will be able to: (1) Review issues of sustainability in the context of plant science research and literature on sustainable agriculture and the food system. (2) Analyze and interact on several case studies on agro-ecology and the food system.

Targeted group: MSc and PhD students of ETH Zurich, University of Zurich and University of Basel.

Individual Performance and Assessment: ungraded semester performance. Students will actively participate during the two afternoons with presentations on the second afternoon (8 hours). In between the participants will independently work on their group case and finish with a presentation and a report (52 hours).