



Teacher	Ass. Prof. Dr. Tiina Tosens
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Lectures	Plant stress
Key words	Structural and physiological acclimation and adaptation, homeostasis, xerophytes, mesophytes, abiotic and biotic stress, plant structure-function relationships, phenotypic plasticity
Learning objectives	After the course, the students are expected to know the main plant stresses and stress responses. They should know the main mechanisms of stress acclimation and understand the influences of global change on vegetation and be able to select suitable plant varieties for globally modified conditions. Further, they have completed a lab-project on the field of plant stress biology
Main subjects	<ul style="list-style-type: none">- capacity of plants to acclimate to their environment- the key stress responses and mechanisms of acclimation to environmental stress- reduction of the rate of plant physiological processes due to variation in environmental drivers- the limits of stress tolerance and acclimation to stresses under globally changing environmental conditions, i.e. elevated atmospheric CO₂ concentration and air temperature and drought in world ecosystems
Relevance to EduSaPMan	Plant stress biology is essential topic for students to understand the whole ecosystem functioning.
Recommended literature	AB Nicotra, OK Atkin, SP Bonser, et al. (2010). Plant phenotypic plasticity in a changing climate. <i>Trends in Plant Science</i> , 15(12):684-92 PJ Franks, MA Adams, JS Amthor, et al. (2013). Sensitivity of plants to changing atmospheric CO ₂ concentration: from the geological past to the next century. <i>New Phytologist</i> , 197(4): 1077-94. DA Herms & JM William (1992). The Dilemma of Plants: To Grow or Defend. <i>The Quarterly Review of Biology</i> , 67(3): 283-335 W Larcher (2003). <i>Physiological Plant Ecology</i> . 4rd Ed. Springer.