

Einladung zum Pflanzenwissenschaftlichen Kolloquium

Freitag, den 23. Juni, 12 c.t.

Nussallee 4, Hörsaal Botanik

Referent: Dr. Kosala Ranathunge

School of Biological Sciences, University of Western Australia, Perth

Thema: „Functional roles of different types of roots (heterorhizy) on water uptake in rice (*Oryza sativa* L.)“

Rice is a major food crop in the world and is grown under various water levels in many parts of the world. So, it is important to understand how different types of roots in the root system function on water uptake and transport under different water levels. This knowledge can be applied for plant breeding purposes to develop varieties that can withstand water-limiting environments without yield reduction. Rice plants develop a root system that consists of morphologically different types of roots, such as main roots (adventitious roots), long or L-type lateral roots (L-type LRs), short or S-type lateral roots (S-type LRs), and L-type LRs with S-type LRs. Such a phenomenon is termed heterorhizy. In this seminar, I will discuss how these component roots differ morphologically and anatomically from each other, and how they contribute to water uptake (hydraulic conductivity), which determines the overall water uptake of a whole root system. I will also discuss how these component roots change their structures under osmotic stress and how it affects the relative contribution of different component roots to the overall water uptake (hydraulic conductivity) of the whole root system.

Diskussionsleitung: Prof. Dr. Lukas Schreiber, IZMB, Department of Ecophysiology, Universität Bonn