ON THE PHYSIOLOGY AND MOLECULAR GENETICS OF SALT TOLERANCE IN SALICORNIA

Strategies have to be developed to secure food production and fresh water availability to fulfil future demands of the human population, which is forecasted to reach 9.5 billion by 2050. Salt-tolerant crops for saline agriculture can contribute in this challenge by reducing the pressure on traditional agriculture using fresh water. This thesis focusses on the highly salt-tolerant salt accumulating halophytes of the genus Salicornia and the mechanisms underlying their salt tolerance. Salt tolerance in halophytes is a complex trait of which the underlying mechanisms are incompletely known. Knowledge of these mechanisms will open new prospects that can be utilised in the development of salt-tolerant crops.