

Water Dynamics in Plant Production, 2nd Edition

Questions and Discussion Points

Chapter 3 – The Interdependence of Soil Water and Vegetation

Section 3.1

1. Adsorptive and capillary forces hold water within the soil pore system. Explain how these forces act.
2. Give the definitions for 'field capacity' and 'permanent wilting point'. These limits encompass the 'potentially available' water. What does that mean?
3. Silt loam soils are normally considered as being very fertile with respect to water. Discuss this classification by explaining Fig. 3.2.

Section 3.2

1. Explain the equation of the soil water balance with the individual terms.
2. Taking Fig. 3.3 as an example, please reflect on the remarkable fact that the soil water balance is heavily weighted in favour of the water supply to plants.
3. Please explain the higher groundwater recharge from arable land compared with forest land and from sandy soils compared with silt loams.