

Influence of land cover on the runoff formation in the upper part of the soil profile

Abstract

This thesis examines the effect of vegetation cover on runoff generation in the top soil profile. The research is carried out in the Šumava Protected Landscape Area in the Liz catchment and focuses on two typical tree species for this area, spruce and beech. The work not only investigates the occurrence of runoff, but also analyses individual events using data from rain gauges and soil moisture sensors. Artificial irrigation experiments of extreme intensity were also included. It is clear from the work that subsurface runoff occurs more easily in spruce than in beech forests and that runoff volumes are also higher in spruce than in beech forests.

Key words: subsurface runoff, forest, Sumava, European beech, Norway spruce, forest hydrology