

Abstract

The plant-soil feedback affects the forming of a plant community. Plants affect their own species as well as other species. The plant-soil feedback can be both positive and negative. Plants affect soil, change its properties, and the soil affects the plants reciprocally. Soil components can be divided into biotic and abiotic ones. The abiotic component is represented by physical and chemical properties of the soil. The main properties are the soil structure, the soil moisture, the soil temperature, the soil pH and the amount and availability of nutrients. The biotic component is composed of soil biota. The individual organisms can function as decomposers, symbionts and pathogens. The majority of soil organisms is composed of microorganisms, the most important of which are fungi and bacteria. The effect of the abiotic component in plant-soil feedback is mostly nonspecific, while the effect of the biotic component is more specific. These components interact with each other and determine the resulting effect on the plants and the type and intensity of interaction between various plant species. The aim of this thesis is to show the importance of these components in the plant-soil feedback.

Key words: plant-soil feedback, abiotic factors, biotic factors, soil structure, soil water, soil temperature, pH, nutrients, arbuscular mycorrhiza, N- fixing bacteria