

## Abstract

Factors of environment such as availability of water, nutrients, temperature and sunlight affect growth and metabolism of plants. The populations of the *Festuca rubra* L. from four habitats in Norway, differing in altitude, average temperature and precipitation, were grown in climatic boxes differing in temperature and humidity. The Rubisco, shikimate dehydrogenase activity and amount of the protein were determined in the leaf samples of these plants.

The specific activity of Rubisco was the lowest in leaves of *Festuca* plants grown in drought and elevated temperatures, but statistically significant differences between the various habitats and growth conditions were not found. The specific activity of shikimate dehydrogenase was, on the contrary, under drought conditions and elevated temperatures were the highest. The isoenzyme composition was tested by native electrophoresis. (In Czech)

Key words: Rubisco, shikimate dehydrogenase, abiotic stress in plants