СПЕКТРАЛЬНЫЕ ХАРАКТЕРИСТИКИ ТКАНЕЙ ПРОРОСТКОВ РЖИ

THE SPECTRAL CHARACTERISTICS OF THE TISSUE SEEDLINGS OF RYE

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An *in vivo* cytophotometric method was used to study the spectral characteristics of coleoptile tissue and a leaf of two-day seedlings of winter rye. The optical density of axial transmittance of light in the visible region of the spectrum by parenchyma and tissues of conducting beams in seedlings grown in light and in complete darkness was estimated. It was revealed that under conditions of etiolation all the studied tissues had minimal average values of optical density in the visible part of the spectrum as compared to those during germination under illumination conditions. The tissue specificity of the optical properties of different anatomical structures has been established. It was revealed that the growing conditions have the greatest influence on the optical properties of the cells of the conducting coleoptile bundle. It is suggested that the coleoptile parenchyma is not photomorpho-genetically active at this stage of ontogenesis. It has been shown that the effect of the light factor is manifested both in a change in the ultrastructure of the tissue, which affects their optical density, and in the new formation of pigment systems.

Key words: winter rye, coleoptile, leaf, optical properties, conducting beam.

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