

# The Current State of the Oak Trees of the Main Botanical Garden and Increasing the Stability of Pedunculate Oak

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**Keywords:** oak grove, petiolate oak, undergrowth, living ground cover, reforestation, stability, canopy closeness.

The article is devoted to the problem of reducing the stability of the forest-forming species of the pedunculate oak (*Quercus robur* L.). Plantations may need a set of special measures to improve their sustainability as a complex impact of negative natural and anthropogenic factors lead to the weakening of forests, deterioration of their sanitary condition, violation of their environmental, water protection, recreation and other functions. In the course of the study, the taxation characteristic of oak grove was studied. Factors that influence the growth and development of English oak were identified on the basis of the analysis of grouped data. Assessment of the state of undergrowth of the main forest-forming species was carried out on the territory of the Protected oak forest Of the main Botanical garden N. In. Tsitsina, undergrowth rocks, living ground cover. The impact of the degree of mineralization of the soil and density of canopy on the growth and development of the main components of plantations and their sanitary state has been studied. The account of windfall and dead wood of the main forest-forming species was carried out in the course of the study, path mapping. The unsatisfactory condition of the whole oak grove was noted due to the over-age. Preliminary conclusions were drawn from the analysis of experimental data. On the basis of these conclusions, proposals to improve the sustainability of the renewal of English oak as part of the Protected oak, including the development of a project for sanitary measures, care for planting, measures to promote the natural renewal of the forest and the restoration of oak by partial artificial reforestation under the canopy of the main plantings were created.