

Original article

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## The Influence of Satellite Species on the Growth and Development of Petiolate Oak in the Field-Protective Forest Belts of the Steppe of the Don Plain

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**Abstract.** The article explores the influence of satellite species on the petiolate oak in the field-protective forest belts of the steppe of the Don plain. The article includes the indicators of the growth and development of the petiolate oak calculated for the objects of the study, as well as its relationship with the holly maple, smooth elm and lanceolate ash. The data on annual radial oak growth of field-protective forest strips over a 30-year period are analyzed. The researches indicates that the lanceolate ash is the best companion of the petiolate oak, because oak mixed with it shows the highest growth and maturity. In oak mixed with ash, growing in field-protective forest belts, the average annual radial gains over the studied thirty-year period also turned out to be higher. Smooth elm in field-protective forest belts exerts strong competitive pressure on petiolate oak, therefore oak with the participation of elm has lower growth and development rates.

**Key words:** field-protective forest belts, petiolate oak, radial growth, cambium productivity.

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