

## **LAND SUITABILITY OF COMARNA CATHEMENT BASIN FOR CHERRIES TREES**

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### **Abstract**

The land suitability for cherries orchard represent the extent to which soil satisfy requirements of Cherry trees, on the local climatically conditions and within the framework of a management adapted to adapted to this species. Land with optimal suitability for cherry plantations are located in areas with average annual temperatures of 20 years,  $8 \div 11^{\circ}\text{C}$ , the average temperature of May are between  $14$  and  $16^{\circ}\text{C}$ , the absolute minimum annual air temperature does not drop abruptly as  $-20^{\circ}\text{C}$ ), and if it decreases gradually does not fall below ( $-28^{\circ}\text{C}$ ). In Romania, cherry trees grow well on a wide range of soil types such as Chromic Luvisols, Phaeozems, Eutric Cambisols, Chernozems and even Kastanozems. The stagnic, gleyic and stagni-gleyic soils are unsuitable for cherry plantations due to poor drainage. Another optimal soil characteristics for cherry orchard are: pH values between 5,5-7,2, aeration porosity of 16-22%, calcium carbonate content lower than 7%. The hyposalic, hyposodic and vertic soils are excluded from the establishment of orchards. We intend to present a case study of Comarna catchment area. The land of this watershed has good suitability for cherries orchard due to local microclimate, good external and internal drainage, ensured by middle slope and middle soil texture. The specific local microclimate is reflected by an earlier ripening cherry, about two weeks compared to neighboring basins located on the same altitude. Some of the lands are degraded by landslides and have severe restrictions for the establishment of orchards. The soil are more colder due to high content of clay, high water capacity and land shaded exhibition.

**Key words:** microclimate, land suitability, cerry orchards.