

## Micropropagation of economically valuable poplar forms

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*In the process of micropropagation of woody plants morphogenetic reaction considerable depends on genotype, age, source material. These factors require optimization of culture conditions and the composition of culture media for specific forms, varieties, hybrids.*

*The aim of this study is regenerate in vitro fast-growing and resistant poplars form for plantations and to find the optimal conditions for obtaining aseptic viable cultures and the composition of the culture medium based on genotypic characteristics of trees.*

*Poplar micropropagation was performed by activation of axillary meristems. Using the young shoots, isolated in May and June lets to get more aseptic viable cultures (76.4%) compared with winter woody shoots (60.6%). The most effective method of explant sterilization is preprocessing means 2% solution of «Domestos» for 7 minutes and the basic sterilization by solution mixture of 0.02% thimerosal and «Belizna» 7% for 10 min.*

*The results showed that the highest percentage of morphogenic cultures was obtained using 1/2 WPM medium, containing BAP 0.2 mg/l. For elongation the shoots are transplanted to fresh medium every 30-35 days.*

*The shoots 1.5-2 cm long were rooted in the hormone-free media and with the addition of auxin. The maximum rooting (71.4%) was achieved using IBA 0.01 mg/l as root inducer. The efficiency of all stages of micropropagation is significantly depends on the genotype of the source tree. For all test forms were obtained regenerated plants useful for mass micropropagation.*

**Key words:** tissue culture, poplar, explant, culture medium, growth regulators