

Adaptation of aspen regenerated plants to natural conditions

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The quality of planting material is of great importance in creating of forest plantations. Aspen is a species that successfully reproduce vegetatively, but necessary to use a method of micropropagation to enhance economic efficiency and a high-quality plant material. Technology micropropagation of aspen in in vitro culture to date is sufficient tested, but further refinement of some of the steps is need to lower the cost of the resulting plant material.

Researches are conducted at the Laboratory of Micropropagation (Central European FES VNIILM). Metamers young shoots isolated from the middle part of the crown of the fallopian plants triploid aspen clone №35 were as a donor explants.

Rooting of microshoots is consuming and crucial stage of micropropagation. Plants can be considered as fully formed and ready to adapt to the soil conditions, when each of them formed 2-3 leaves and a strong root system is developed. The development of the root system at the stage of rooting observed within 3-4 weeks, which suggests that regenerants are planted in a soil substrate in a month.

The height and the physiological condition of regenerated plants are of great importance in the test-tube plant adaptation to soil conditions, which affect on the survival of regenerated plants.

The influence of the time of year to survival of test-tube plants during the landing in a mini-greenhouse. Spring and early summer are the best times of disembarkation. Young plants are watered regularly at the stage of adaptation to soil conditions, because the survival rate of plants adversely affects both the drying of the soil, and short waterlogging. Survival rate of plants is recorded when new leaves and amounted to 83,3%.

The in vitro method to successfully receive a large number of planting material of highly productive triploid aspen resistant to heart rot.

Keywords: micropropagation, in vitro, regenerated plants, aspen, rooting, adaptation, survival.