Original article

DOI 10.24419/LHI.2304-3083.2022.1.05

Rhizogenesis of Narrow-Leaved Blueberry (*Vaccinium angustifolium* Ait.) *in vitro* Depending on the Concentration of Auxins

Sergey S. Makarov[1]
Candidate of Agricultural Sciences

Nikolay A. Babich[2]
Doctor of Agricultural Sciences

Elena I. Kulikova[3]
Candidate of Agricultural Sciences

Irina B. Kuznetsova[4]
Candidate of Agricultural Sciences

Denis N. Klevtsov[5]
Candidate of Agricultural Sciences

Abstract. *The results of studies on the cultivation of half-highbush blueberry (Northblue and Putte cultivars) and hybrid forms of narrow-leavedblueberry (Vaccinium angustifolium Ait.) in vitro at the stage of rooting of microshoots on WPM nutrient medium. IBA and IAAare used as growth regulating substances at concentrations of 1.0 and 2.0 mg/l. The number and total length of the roots of blueberry regenerated plants increased by 1.2–2.4 and 1.8–8.1 times, respectively, with an increase in the concentration of IBA and IAA in the nutrient medium from 1.0 to 2.0 mg/l. The total length of roots per plant of blueberry has maximum values (12.2 cm on average) in the presence of IAAauxin in the nutrient medium at a concentration of 2.0 mg/l, while in plants of hybrid forms 23-1-11 and 27-10 the number and the total length of roots per plant are 1.2–1.3 and 1.4–1.6 times greater, respectively, than in the Northblue and Putte cultivars.*

Key words: *narrow-leaved blueberry, forest berry plants, clonal micropropagation, in vitro, root formation, growth regulators.*

For citation: *Makarov S., Babich N., Kulikova E., Kuznetsova I., Klevtsov D. Rhizogenesis of Narrow-Leaved Blueberry (Vaccinium angustifolium Ait.) in vitro Depending on the Concentration of Auxins // Forestry information.2022. № 1. P. 74–84. DOI 10.24419/LHI.2304-3083.2022.1.05*

[1] Central European Forestry Experimental Station, Branch of the Russian Research Institute of Silviculture and Mechanization of Forestry, Senior Researcher (Kostroma, Russian Federation), makarov_serg44@mail.ru
[2] Northern (Arctic) Federal University named after M.V. Lomonosov, Professor (Arkhangelsk, Russian Federation), forest@narfu.ru
[3] Vologda State Dairy Academy named after N.V. Vereshchagin, Head of the Plant Growing, Agriculture and Agrochemistry Chair (Vologda, Russian Federation), elena-kulikova@list.ru
[4] Kostroma State Agricultural Academy, Associate Professor (Kostroma, Russian Federation), sonnereiser@yandex.ru
[5] Northern (Arctic) Federal University named after M.V. Lomonosov, Associate Professor (Arkhangelsk, Russian Federation), d.klevtsov@narfu.ru