

# The effect of different concentrations of plant growth regulators on micropropagation of cyclamen persicum

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**Abstract** Cyclamen is one of the most important crop products in some countries, such as France and Germany, as an important ornament of high value. This plant has 22 species, which Iranian Cycloman has the most important and most valuable type of flower, with its various colors. In commercial production, this plant is used only seeds. The plant is seeded after the first flowering period. It can be stored in the tubers and reused for the second year, but due to increased fungal contamination and some changes in the habit of flowering and plant growth, the remaining tubers The use of plant tissue culture (micronutrient) is the best way to achieve a large number of plants with the same genetic structure, which, while reducing production costs, allows planning in terms of timing and number of products It has The aim of this study was to investigate the effect of crop growth regulators on Cycloman rootstock and root rot in a randomized complete block design with Murashik and Skoog (MS) culture medium with a combination of growth regulators NAA and BA with concentrations of 0, 0.5, 1 and 2 mg / L were used. The results showed that the maximum leaf length (with a mean of 94.13 mm) was obtained in a culture medium containing 0.5 mg BA and 2 mg NAA. The highest number of leaves (with an average of 6) was observed in the medium containing 1 mg BA and 1 mg NAA. The highest leaf area (with an average of 16.7 mm) was produced in 1.5 mg BA and 1.5 mg NAA. Maximum root length (with mean of 87.1 mm) and root number (with mean 5.86) were obtained in culture medium containing 1 mg BA, 1.5 mg NAA and culture medium containing 1.5 mg BA and 1.5 mg NAA. Also, the highest germination percentage of cycloman seeds was obtained with an average of 80% in three culture media containing 0.5 mg BA and 1 mg NAA, 1 mg BA and 1 mg NAA and 1.5 mg BA (no NAA). **Keywords:** cyclamen, microtubule, plant tissue culture, plant growth

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regulators.

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