

SUMMARY

Propagación *in vitro* de *Mentha piperita* L. y *Mentha spicata* L.

The mints have a great demand, due to its content of essential oils, its different culinary, pharmaceutical and cosmetical uses, production of health and food products. However, production is insufficient; since, generally it is performed at backyards. In this context, micropropagation is a technique that helps to get healthy plants in large quantities with agronomic uniformity. Therefore, the objective of this work was to develop an *in vitro*, somatic embryogenesis efficient protocol to large-scale propagation of *Mentha piperita* L. and *Mentha spicata* L. plants. To do so, axillary buds were used as explant. They were cultivated in the Murashige & Skoog culture medium. Five concentrations of BAP (0.0, 1.0, 2.0, 3.0, 4.0 mg L⁻¹) and three concentrations of IAA (0.0, 0.5, 1.0 mg L⁻¹) were tested for *M. piperita*, which resulted in a total of 15 treatments. For *M. Spicata*, six concentrations of BAP (0.0, 0.5, 1.0, 1.5, 2.0, 2.5 mg L⁻¹) and three concentrations of IAA (0.0, 0.25, 0.50 mg L⁻¹) resulted in a total of 18 treatments. Days to sprouting, number of shoots, shoots length, number of leaves, internodes number, length of roots and survival for the two species were evaluated. For *M. piperita* the best treatment for days to sprouting was BAP 4.0 and AIA 1.0 mg L⁻¹ and this occurred in five days. For number of outbreaks, with a value of 5.6, BAP 3.0 and AIA 0.5 mg L⁻¹ was the best treatment. For number of internodes, with an average of 5.6, BAP 2.0 and AIA 0.0 mg L⁻¹ was the best treatment and for root length, BAP 0.0 and AIA 0.0 mg L⁻¹ was the best treatment. In addition, survival observed was of 100%. For *M. spicata*, with 1.5 outbreaks, the best treatment was BAP and AIA 0.25 mg L⁻¹; for number of internodes, BAP 1.0 AIA 0.0 mg L⁻¹, and for root length was BAP 2.0 AIA 0.25 mg L⁻¹. Since the number of internodes is a variable that is directly related to the multiplication rate, the best treatment for *M. piperita in vitro* propagation was BAP 2.0 and AIA 0.0 mg L⁻¹ and for *M. spicata* the best treatment was BAP 1.0 mg L⁻¹ and 0.0 mg L⁻¹. AIA. This difference between the two species is explained by the different growth habits of the two species and the variability in ploidy.

Key words: Micropropagation, indole-acetic acid, benzylaminopurine, axillary bud.