

A- 34

## CULTURE OF EMBRYOS OF *PERSEA FLOCCOSA* AND *P. AMERICANA* CV. TOLIMÁN

D.P. Orea Coria<sup>1</sup>, A. Medrano Valverde<sup>1</sup> y M.G. Gutiérrez Martínez<sup>2</sup>

<sup>1</sup> Universidad Autónoma Metropolitana-Xochimilco. Depto. Producción Agrícola y Animal. Calzada del Hueso 1100, México 04960, D.F. [dorea@cueyatl.uam.mx](mailto:dorea@cueyatl.uam.mx), [medranov@cueyatl.uam.mx](mailto:medranov@cueyatl.uam.mx)

<sup>2</sup> Universidad Autónoma del Estado de México. Fac. Ciencias Agrícolas. El Cerrillo Piedras Blancas, Toluca 50200, Estado de México. [mquad@aol.com](mailto:mquad@aol.com)

The preservation and evaluation of wild and creole germplasm of the genus *Persea* and related genera are critical to increase the genetic diversity of cultivated varieties and rootstocks of avocado. In this way, problems and limiting factors of avocado culture can be more easily solved.

In this research, the response of semimature embryos to in vitro culture, of two materials from the germplasm bank of CITAMEX, was evaluated. Working materials were *Persea floccosa*, used as an experimental rootstock in this institution, and the creole cultivar Tolimán, the most widely used rootstock in the Querétaro State.

Embryos were cultured in a simple medium without growth regulators. After 4 weeks, when the plumule was approximately 2cm in length, they were transplanted to four multiplication treatments in Murashige and Skoog medium. According to previous experiences two BA (11.09 and 13.3 $\mu$ M) and two IBA (0.98 and 1.48 $\mu$ M) levels were tested. During this transplant, the plumules were cut to stimulate growth of axillary buds in the embryonic axis. Eight weeks later, a second transplant of the embryos with the separation of newly developed shoots, was carried out. These shoots were also placed in the multiplication treatments. In the first multiplication cycle and for the four treatments of *P. floccosa*, an average of 1.6, 1.8, 1.9, and 2.2 shoots per embryo were obtained. During the second cycle, the average numbers obtained were 3.4, 2.7, 3.3 and 8 shoots per embryo.

The cv. Tolimán presented during the first cycle 1.0, 1.3, 1.8 and 1.2 shoots per embryo. During the second cycle, average numbers were 5.3, 4.3, 4.0, and 5.0 shoots per embryo. In both genotypes, and in all treatments callus was formed.

These results show the potential of this technique for multiplication of superior materials to be used as rootstocks.