RESCUE OF GENETICALLY TRANSFORMED AVOCADO BY MICROGRAFTING

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Avocado embryogenic cultures have been transformed with several gene constructs. Development of avocado somatic embryos to maturity appears to be normal; however, the majority of somatic embryos lack bipolarity, often lacking a shoot apex. Developing shoots generally become necrotic in vitro. The germination and conversion rate of somatic embryos has therefore been low under optimal in vitro conditions. In order to increase the plant recovery rate, shoots (3-6 mm long) that develop from somatic embryos have been grafted onto 3 to 4-week-old 'Booth' and 'Lula' in vitro-germinated seedling rootstocks with a success rate that is ca. 70%. The first nursery trials of transgenic avocado plants have been entirely derived from micrografted somatic embryo shoots.