



ADVANCES FOR HIGH-SCALE MICROPROPAGATION BY TEMPORARY IMMERSION BIOREACTORS (TIBS) IN COMMERCIAL PLANTS FOR THE NUTRACEUTICAL INDUSTRY

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The optimization of photomixotrophic conditions (increase of both light intensity and the CO₂ atmosphere inside the culture flask) improves plants quality and can lead to greater efficiency during the acclimatization phase. For this case, Temporary Immersion Bioreactors (TIBs) installed in controlled environment characterized by CO₂ enrichment, higher luminosity, and sucrose-reduced medium might be considered as priming treatments, support on the TIB plasticity as an integrative tool for a high-scale micropropagation. Examples in berries as commercial blueberries (*Vaccinium corymbosum*), raspberries (*Rubus ideaus*), maqui (*Aristotelia chilensis*) and *Kalanchoe spp* should be presented related to an increase in the efficiency of plants survival and their adaptability to field conditions.

Keywords: photomixotrophic cultures; temporary immersion bioreactors; nutraceutical industry