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Research Abstract

Adventitious Shoot Formation Obtained From *In Vitro* Culture Of Embryos From *Pseudotsuga menziesii* Trees Treated With Pesticides

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Abstract: In this research was evaluated the formation of adventitious shoots obtained from *in vitro* culture of mature embryos from trees of *Pseudotsuga menziesii* treated with three types and concentrations of pesticides (Thiametoxan 25%, Acephate 97% and Mocotrofos 60%) and two different combinations of plant growth regulators (Naphthalene Acetic Acid/6-Benzyl Aminopurine or 2-4 Dichlorophenoxyacetic Acid/Kinetin). The morphogenetic response of embryos was evaluated in four stages of development. The results showed that the two combinations of plant growth regulators (2-4D/K and ANA/BA) had no effect on morphogenetic response of the embryos. However the seeds treated with Acephate 97% (moderately toxic) had the highest values regarding embryos with morphogenetic response (17.63%), embryos that formed shoots (15.34%) and shoots individualized (19.3), these were of good vigor. Treatments with lower morphogenetic response were those where the seeds were treated with Monocrotophos 60% (highly toxic) with 6.8% of embryos that showed morphogenetic response, 6.18% of embryos that formed shoots and 6.5 shoots individualized. We conclude that the pesticides with greater toxicity as monocotrofos, reduce insect damage to cones and seeds of *P. menziesii*, but have a toxic effect on reproductive structures affecting the ability of morphogenetic response and shoots development in *in vitro* conditions.

Keywords: Pseudotsuga menziesii, pesticides, in vitro culture, morphogenetic response.

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