



### Studies on silver nitrate impact on jojoba *in vitro* culture

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**Abstract :** Many problems have been faced in micropropagation of jojoba. Slow growth, low multiplication rate, hyperhydresity, difficulty of rooting and low survival rate in acclimatization. Many reports have shown the positive effect of AgNO<sub>3</sub> on plant tissue culture. This investigation aimed to study the effect of AgNO<sub>3</sub> on multiplication and rooting of jojoba *in vitro* shootlets. Results indicated that silver nitrate (SN) has an elevating and boosting effect on jojoba multiplication. It raised average multiplication rate from 3 to 14 shoots with the same benzylaminopurine (BAP) concentration. The best multiplication rate was achieved with SN and BAP at 7.0 and 6.0 mg/L, respectively. The combination of SN and BAP at 7.0 and 2.0 mg/L, respectively showed the highest shoot length and leaf number. Moreover, SN enhanced root induction, root number and root length of jojoba shootlets when combined with Indole Butyric acid (IBA). The highest rooting percentage appeared with silver nitrate and IBA at 3 and 7 mg/L, respectively. Meanwhile, silver nitrate and IBA at 5.0 and 7.0 mg/L, respectively gave the highest number of roots per shoot and satisfying root length. As we know, it is the first time to study the effect of silver nitrate on shooting and rooting of jojoba *in vitro* culture.

**Keywords:** silver nitrate, jojoba.

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