IN- VITRO PROPAGATION OF BLACK PEPPER *(Piper nigrum)*

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Black pepper (*Piper nigrum*) is an important spice crop among minor export crops. In conventional vegetative propagation systems of black pepper, cuttings and seeds have been used. But these methods provide limited quantities of planting materials, and also spread certain pests and diseases. These problems can be overcome by adopting a propagation method through tissue culture techniques.

All experiments were set up according to completely randomized design. The best sterilization was obtained in 0.1 % $HgCl_2$ solution for 10 minutes immersion prior to dissection of the final explants. Bud length was maximized (4.6 ± 0.84) after 8 weeks in WP medium supplemented with 2 mg/l BA and 1 mg/l Kn. The highest survival rate (78 %) was observed, when surface sterilized in leaf sections of third leaf with 0.1 % $HgCl_2$ in 10 minutes followed by dipping in 90 % alcohol solution. MS medium supplemented with 0 mg/l Kn and 1 mg/l 2,4- D was the most suitable medium for callus formation of pepper leaf culture.

According to the experiment results, 0.1 % $HgCl_2$ with 10 minutes was best treatment for surface sterilization of buds. For multiplication of pepper buds, 2 mg/l BA and 1 mg/l Kn combination was superior to other treatments. When surface sterilized in leaf sections of third leaf with 0.1 % $HgCl_2$ in 10 minutes and dipped in 90 % alcohol solution was best for pepper leaf culture and MS medium supplemented with 0 mg/l Kn and 1 mg/l 2,4- D was superior treatment for callus formation.