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In vitro Micropropagation and Root Induction of Pear Genetic Resources

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Pear (*Pyrus* spp.) is a typical fruit and grown in the temperate climate regions throughout the world. Development of appropriate methods for in vitro propagation and root induction are important to increase the production rate and plant quality rapidly. This study was conducted to find the most appropriate media conditions for in vitro propagation and rooting of three pear cultivars, 'Barttlett', 'BaeYun No.3' and 'Oharabeni'. In vitro propagation was induced on Murashige and Skoog medium (MS) with 2.0 mg/L N6-benzyladenine (BA) and 0.2 mg/L indole-3-butyric acid (IBA) medium. For root induction of these cultivars, the shoot explants of the propagated plants were cultured on two different media containing 1/2 MS medium containing 0.2 mg/L IBA with 15 g/L Sucrose (Rooting Medium 1, RM1) and 1/4 Linsmaier and Skoog medium (LS) medium containing 1 mg/L IBA and 1 mg/L NAA hormone with 7.5 g/L glucose (Rooting Medium, RM2) and after 2 weeks, the plants on the RM2 medium are transferred on RM1 medium (RM2 condition). After nearly seven weeks, percentage of rooting formation were 22.2% in RM1 and 30% in RM2 conditions for Barttlett and 70% in RM1 and 60% in RM2 conditions for Oharabeni cultivars. No differences in these cultivars were observed between RM1 and RM2 conditions. However, BaeYun No.3 cultivar was observed 0% in RM1 and 72.7% in RM2 conditions. This study will help to propagation and root induction of in vitro plants for various pear cultivars.

Key words: Pear, Propagation, Root Induction

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