

عنوان مقاله:

Effects of GA3, ABA, Embryo Desiccation and Embryo Production Containers on Plantlets Regeneration in Microspore Culture of Brassica napus L. cv. PF704

محل انتشار:

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خلاصه مقاله:

Plant regeneration trait in microspore culture of rapeseed (*Brassica napus* L. cv. PF704) was studied, using four independent experiments. The effect of GA3 concentrations (0, 0.05, 0.1, 0.15, 0.2 mg l⁻¹) and its sterilization method (autoclave, filter sterilization) on normal plantlets regeneration was firstly examined. The use of 0.1 and 0.15 mg l⁻¹ of filter sterilized GA3 showed the highest number of normal plantlets (50% and 44%, respectively). The influence of embryos desiccation at various time periods (0, 3, 5, 10, 15, 20 min.) on plantlets regeneration trait was secondly studied. Air drying of embryos for 10 min. into the laminar-air flow cabinet, appeared to be the best with the highest normal plantlets production (60%). In the third experiment, the interactive effect of embryo desiccation and ABA treatment in B5 medium, as 9 desiccation-ABA treatments, on above-mentioned trait was tested. Of which, embryos in either T6 (no desiccation) or T7 (5 min-desiccation) treated with 40 μM l⁻¹ ABA in B5 medium for the first week exhibited the largest number of normal plantlets (68% and 63%, respectively). In the last experiment, the effect of embryo production containers (1 L flasks containing 100 ml medium, 0.5 L flasks containing 25 ml medium and glass petri dishes 100×15 mm containing 12.5 ml medium) on plantlet regeneration trait was also studied. Produced (embryos in both 1 and 0.5 L flasks showed the highest number of normal plantlets (58% and 54%, respectively).

کلمات کلیدی:

ABA, Brassica napus, Embryo Desiccation, GA3, Plantlet Regeneration, Rapeseed

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