

P.26 Establishment of Efficient Acclimation of Plant Regenerated from Somatic Embryos in Soybean

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콩 체세포배의 재분화 식물체 순화조건 확립

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Objectives

To establish the efficient acclimation system of regenerated plantlets from immature cotyledon in soybean.

Materials & methods

Plant materials : Plantlets regenerated from somatic embryos in *in vitro*

Acclimation method :

- Regenerated plantlets were transferred to small pot with soil, vermiculite, perlite, and horticultural bed soil
- The pot was placed on the surface of nutrient solution in the tray, covered with polyethylenevinyl, and kept 23hr photoperiod at 27°C.

Nutrient solution :

Modified Yoshida's solution

Results

The regenerated plantlets were successfully established by closed hydroponic system which was using modified Yoshida's solution. Following acclimation, over 95% of the regenerated plantlets were survived well without any loss when they were transferred to horticultural bed soil in pot, and grown to normal plant in the greenhouse. On the other hand, no survival plantlets without using hydroponic system could be obtained. The best results for acclimation were achieved in pot filled with vermiculite only under the high humidity condition(above 95%) by hydroponic culture. Nutrient solution was refilled to avoid nutrient depletion and also exchanged every 3-day-interval to maintain optimum pH(5.6). This hydroponic system might be contribute to efficient acclimation of plant regenerated from somatic embryos in soybean.

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Table. Effect of acclimation methods on survival rate(%) of regenerated plantlets from somatic embryos of soybean

	Survival rate(%)					
	Vermiculite		Pearlite		Horticultural bed soil	
	With ^J	Without ^J	With	Without	With	Without
Lx15	100	0	95	0	85	0
PI96322	95	0	90	0	90	0

J Hydroponic system

J None hydroponic system.



Fig. Efficient acclimation methods on somatic embryogenesis of soybean.