

IN VITRO ROOTING OF PEA SHOOTS^{1/}

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In vitro cultures of pea epicotyl buds produce several shoots which are difficult to root. For that reason we undertook to find the conditions conducive to good radical formation.

Seeds of 'Proteo' were surface sterilized and, after several rinses in sterile water, were sown on agar medium (deionized water and 0.8% agar). Seven-day-old seedlings were removed and the epicotyl buds (2 for each seed) were excised under sterile conditions and placed on Lindsmaier and Skoog agar medium (1) to which IBA 1 mg/l, BA 5 mg/l, Sucrose 20 g/l, agar 0.6% were added. Explants were incubated in a growth chamber (24C, light 16h, dark 8h) and, after 40 days, an average of eight shoots without roots were obtained from each bud. The shoots were placed on a rooting medium consisting of half strength Lindsmaier and Skoog medium supplemented with Sucrose 1%, 0.8% agar, 1 mg/l NAA, 200 mg/l CaCl₂, 2 g/l charcoal, 1 g/l casein hydrolyzed, as shown in Table 1.

Only in the presence of charcoal were roots formed. The rooting medium containing charcoal and CaCl₂ gave the best results, with 82% of shoots rooted after two months.

Whole plants were transferred to Jiffy pots in the greenhouse and fully fertile plants were obtained.

T. Lindsmaier, E. M. and F. Skoog. 1965. *Physiol. Plant.* 18:100-127.

Table 1. Percentage of rooted shoots (rooting medium: L.S. half strength, sucrose 1%, agar 0.8%).

Rooting medium plus:				Number of cultured shoots	% of rooted shoots
Charcoal 2g/l	NAA 1mg/l	Casein hydrolyzed 1g/l	CaCl ₂ 220mg/l		
-	-	-	-	63	0
-	+	-	-	72	0
+	-	-	-	11	73
+	+	-	-	15	33
+	-	+	-	18	66
+	-	-	+	22	82
+	+	+	-	25	32
+	+	-	+	26	50
+	-	+	+	25	52
+	-	+	+	33	27

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