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Effects of MS, Sucrose and pH Contents on Shoot Length for High Quality Seedling Production of Potato

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Objectives

In order to produce high quality seedlings of potatoes *in vitro*, the tissue medium were modified and the shoot growth was investigated.

- Sucrose concentration: 7.5 g/L, 15 g/L, 30 g/L, 60 g/L, 120 g/L
- pH: 5.0, 5.4, 5.8, 6.2, 6.6
- Item Investigation: shoot length

Materials and Methods

1. Materials: potatoes 'Jopung', 'Irish cobbler', 'Jasim'
2. Methods: Modification of tissue culture medium
 - Treatments
 - MS concentration: 0.25, 0.5, 1, 2, 4

Results and Discussions

In experiments on MS concentrations, the best seedling growth was observed in 0.5 MS treatment. 15 g/L of sucrose was considered as the optimum concentration for the growth of potato seedlings *in vitro*. In the pH of medium, lower than 5.4 restricted severely the growth of seedling, but pH treatments was observed. All cultivars showed the same tendency for all experiments.

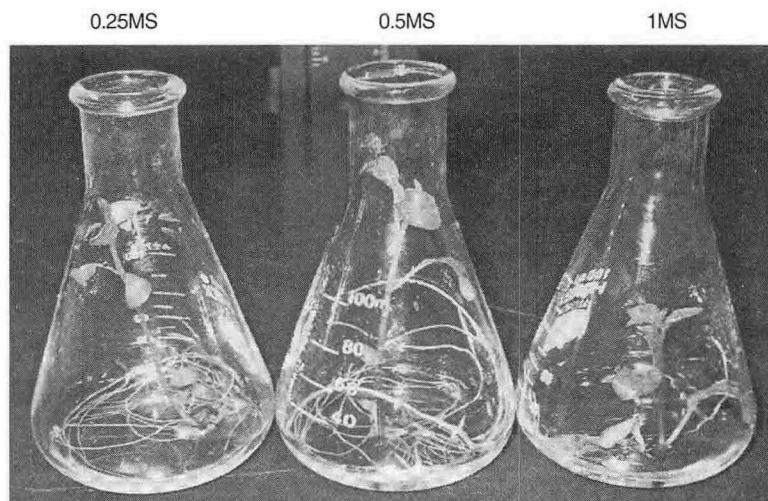


Figure 1. Shoot multiplication and seedling growth of 'Jasim' in different MS concentrations. A ; 0.25MS, B ; 0.5MS, C ; 1MS (Standard)