

Effects of MS Concentration and pH of Tissue Culture Medium for High Quality in vitro Seedling in Potatoes

Cho, I. C*, Park, C. S., Chang D. C., Yoon Y. H., Jeong. J. C., Kim, S. Y.

National Highland Agricultural Experiment Station, RDA

Objectives

In order to produce high quality seedlings of potatoes in vitro, tissue media were modified and several characteristics of seedling were investigated.

Materials and Methods

1. Materials : potato cvs. 'Jaseo', 'Chudong'
2. Methods : Modification of MS concentration and pH of tissue culture medium
 - 1) MS concentration : 1/4, 1/2, 1(standard)
 - 2) pH: 5.8, 6.2, 6.6
 - 3) characteristics of seedling : shoot length, number of nodes, fresh weight.

Results and Discussions

In experiments on MS concentrations, Potato seedlings cvs. 'Jaseo' and 'Chudong' were actively grown in 1/2MS concentration and in the standard MS concentrations, respectively. The shoot length in both cultivars was more increased in pH 6.2 and 6.6 than pH 5.8. The characteristics of seedling growth of two cultivars showed the same tendency in pH experiments.

1/4MS 1/2MS 1MS

Fig 1. Shoot multiplication and growth of 'Jaseo' seedling in different MS concentrations.