

The effects of the difference concentrations BAP and sucrose on *In vitro* microtuberization in potato (*Solanum tuberosum* L.).

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The shoot raised from explants with 3-4 nodes have been cultured on MS media containing BAP (0.5 mg/L), GA3 (0.4 mg/L), and sucrose (20 g/L), and then were incubated at 25°C under 16/8H photoperiod irradiation 2000 Lux. The trend of microtuberization is studied by the use of the different concentrations of BAP (1,2,5, and 10mg/L) and with sucrose (30,40,60, and 80g/L) in the darkness. The increase of concentration BAP, at the stable concentration of sucrose (60 g/L), and the higher concentrations, the formation of tubers were observed within 2 weeks. The number of tubers weren't increased after this period. The weights of tubers continuously increased for least 10 weeks.

At the low concentrations of sucrose (30 g/L), BAP hasn't effects on microtuberization. At this concentration of sucrose (30g/L), with the increase of BAP aren't formed tubers. In the stable concentration of 40g/L sucrose tubers are formed only at the concentration of 5,10 mg/L BAP microtuberization is occurred on later, at the fourth week.

In the medium containing 5 mg / L BAP and 80gr/L sucrose was observed. But this tubers, dosen't have dormancy and the callus is formed on the surface of tubers and they are wilted. In the concentration of 10mg/L BAP and 80g/L sucrose, %30.7 of the tubers have 7mm Sizes. The most of tubers are spherical. The dormancy period of the tubers was long term about 3-4 months under room conditions.