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Some factors influencing micro tuber production of potato (*Solanum tuberosum* L.)

Factors influencing micro tuber production of potato (*Solanum tuberosum* L) such as concentration of sugar and Benzyladenine (BA) in the culture medium and light intensity for culture incubation were studied.

Murashige and Skoog (MS) medium was used in all experiments. Among four sugar levels (0.30, 60 and 120g/l) tested the highest number of micro tubers (12.5) and micro tuber weight (1.98g) were obtained by the cultures grown in the highest level of sugar (120 g/l). The growth of cultures was higher (fresh weight without micro tubers) by the sugar level of 60g/l.

Cultures were grown in medium containing 80 g/l sugar and incubated under continuous light with different light intensities (0,1500, 2500 and 3250 lux approximately). Significantly higher number of micro tubers (9.33) and micro tuber weight (1.52g) were given by the cultures grown under light intensity of 3250lux. The lowest tuber number (2.25), tuber weight (0.04) and chlorophyll II content (0.28 mg/g tissue) were observed in cultures grown in the dark.

Micro tuber production was compared at four BA levels (0,1,2) and 5mg/l) in medium containing 80g/l sucrose, The highest number of micro tubers (3.1) and micro tuber weight (1.19g) were recorded by cultures grown at 5mg/l of BA concentration.

It can be concluded that the micro tuber production in potato was influenced by sugar and BA concentration of the culture medium and light intensity. It is possible to get higher number of micro tubers at higher concentrations of sucrose (60 or 120g/l) and incorporation of BA at the concentration of 5mg/l BA in the culture medium. The suitable light intensity to get higher tuber yield was about 2500 lux.