

# THE EFFECTS OF SEVERAL FACTORS ON CULTIVATING STEM AND TUBER OF POTATOES “FAVORITE” BY *IN VITRO*

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## Summary

Favorite is a new Dutch-originated yellow potato, high yielding and good quality, which should be produced widely. The research aims to find the best formulas for cultivating stem and tuber of Favorite by *in vitro*. The results showed that the Favorite potato starch was disinfected with HgCl<sub>2</sub> 0.1% in 5 minutes, the best effect was achieved with the rate of 70%. The rapid multiplication stage using material from the stem and stem sections showed high multiplicity, using the tops of the cultured shoots in complete tree formation stage made *in vitro* seedling which had strong growth. Adding 1.0 mg /l thiosulfate to medium environment was the most effective formula for reducing ethylene in pots, producing the best quality potatoes (vitamins, foliage, thick, dark green) *in vitro*. *In vitro* potato tubers could be produced under both light and dark conditions. Bulbs produced under light conditions germinated immediately after planting, making it insignificant in bulb production and storage. Culturing in the MS + 10% sucrose + 4 mg/l BA and under the dark condition was the best formula for Favorite potato, which made the earliest appearance of the tubers, gave the most tuber numbers and the largest bulb size.

**Keywords:** *Light conditions, Favorite potato, sterilization, culture medium, in vitro.*