

The Effects of Stigma Extract Solution and Culture Medium on Pollen Germination *in vitro* of Sugar Apple ‘Taitung No. 2’

Yi-Chun Chen¹ Shu-Wen Jiang¹

Abstract

Pollen germination *in vitro* of ‘Taitung No. 2.’ sugar apple were studied. Stigma extract solution was added in culture medium, and at different temperature (5°C to 40°C) and relative humidity (30% to 100%). The results show added stigma extract solution in B&K medium had best germinated. The germination of pollen was less than 30% when temperature over 40°C or less than 15°C. The pollen germinated at 35°C had highest germination percentage, is 72.4%. The germination of pollen was less than 30% when relative humidity less than 40%. The maximum germination was 81.4% at relative humidity was 70%. Until relative humidity at 100%, pollen germination was down to 37.8%. In summary, the optimum temperature was from 30°C to 35°C, and the optimum relative humidity was from 70% to 80%.

Key words : sugar apple 、 pollen germination 、 culture medium 、 temperature 、 relative humidity

¹Assistant Researcher of Banjiou Branch Station of Taitung DARES, COA.