

Thesis Title	Factors Affecting Growth and Development of Mango Seedlings	
Author	Mr. Chawalit Korsamphan	
M.S.	Agriculture (Horticulture)	
Examining Committee	Assoc. Prof. Kesinee Ramingwong	Chairman
	Assist. Prof. Dr. Pittaya Sruamsiri	Member
	Mr.Boonrawd Suttisunchai	Member
	Dr. Surin Nilsamranchit	Member

Abstract

This study, which is emphasized on mango var. Kaew and Talabnak, was carried out in order to study the effect of seed size on germination and number of seedlings per seed; to identify zygotic and nucellar seedlings by mean of morphology, physiology of growth and development and electrophoresis; and to determine the effect of light intensity on growth and development of the seedlings. It was found that seeds of var. Kaew weighed 8.64 - 23.77 g while var. Talabnak weighed 9.45 - 34.49 g. The first seedlings of both varieties emerged at 11.71 - 12.10 days after sowing, germination rate at 13.16 - 15.19 days, germination percentage at 70 - 100 per cent and number of seedlings per seed ranged between 1.71 - 1.95.

Large and medium seeds emerged at 10.79 and 9.71 days after sowing, respectively which differed from small seeds at 15.21 days. Large seeds developed largest number of seedlings, with 2.36 seedlings, while medium and small seeds developed 1.71 and 1.43 seedlings, respectively.

Electrophoresis by rod gel and peroxidase isozyme was not sufficient for identification of zygotic and nucellar seedlings. However, seedlings of both varieties showed completely different banding pattern. Morphology and physiology of growth and

development showed that var. Kaew had larger leaf width and length and longer petiole while var. Talabnak had more frequent leaf flushing, more leaves per seedling and larger leaf area per seedling.

Different light intensity, i.e. 25, 50 and 100 per cent had no effect on seedling growth and development. However increasing light intensity had decreased leaf width and length, petiole length, leaf area per seedling and total chlorophyll content in leaves, whereas increased specific leaf weight, number of stomata per unit area, shoot dry weight and root dry weight.