

Photchanee Malichuen 2011: The Studies on F₁ Hybrids among Three Guava (*Psidium guajava* L.) Cultivars. Master of Science (Agriculture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Associate Professor Chalongchai Babpraserth, B.Sc.Agri. 103 pages.

Study on the ability of intraspecific hybridization among three guava (*Psidium guajava* L.) cultivars: 'Klom Salee', 'Kim Chu' and 'Salee Thong' This experiment was carried out at Chukeat Farm, Pak Chong district ,Nakornratchasima during March – December 2009. Cross breeding of mother and father parent include 6 crosses. Recorded of 3 character : percentage of fruit set ,percentage of fruit abscission and percentage of seed germination. The result showed the fruit set of all 6 crosses were in the range of 5.00 – 38.67 percentage. The highest percentage of fruit set was 'Kim Chu' x 'Klom Salee' . the fruit abscission was in the range 70 – 100 percent. The lowest percentage of fruit abscission was in 'Kalom Salee' x 'Kim Chu' The percentage of seed germination cross ability were studied 'Kalom Salee' x 'Kim Chu' and 'Kim Chu' x 'Klom Salee' The highest seed germination (83.33%) was in 'Klom Salee' x 'Kim Chu'.

The fruit quality of 65 lines of F₁-hybrids. The highest fruit weight in 'Klom Salee' x 'Kim Chu' , the hybrid row 7 no.13 was 502 g. The highest firmness , the hybrid row 1 no.28 was 4.3 Kg. The highest thickness was row 1 no.23 at 4.23 cm. The lowest number of seed was row 3 no.21 at 42 seeds. Total acid of the hybrids ware at range of 0.29 – 0.45 percent ,TSS ware 10 – 12 brix. In 'Kim Chu' x 'Klom Salee'. TSS ware 10 – 12 brix, total acid ware at range of 0.28 – 0.33 percent. When compaired with fruit weight ,fruit size ,fruit thickness and number of seed of 'Klom Salee' x 'Kim Chu'. The F₁-hybrids which had weight during 290 – 325 g. Thick flesh and less number of seed were row 1 no.23 row 1 no.28 row 3 no.21 and row 4 no.9 . If need a fruit weight suring 420 – 500 g ,the row 2 no.21 row 3 no.12 row 5 no.17 and row 7 no.13 respectively. F₁-hybrid from 'Kim Chu' x 'Klom Salee' row 1 no.8 is the most interesting.

Student's signature

Thesis Advisor's signature