Morphology of pollination and fruit set in four mango (*Mangifera indica* L.) cultivars was studied from October to December 1999. It was found that there were differences in fruit set: Choke Anan had the highest rate of fruiting of 72%, while the fruit setting Mun Duen Kao and Num Dok Mai was 54% and 45%, respectively. No fruit set was observed in Khiew Sawoey. The difference in sex expression ratio (perfect flower to staminate flower), pollen growth and pollen tube growth were a cause of differences in fruit set. Mun Duen Kao had higher sex expression ratio than Num Dok Mai, Choke Anan and Khiew Sawoey at 1:2.57, 1:3.5, 1:3.88 and 1:10.64, respectively. During a blooming stage, Choke Anan and Num Dok Mai had more pollen growth than Mun Duen Kao and Khiew Sawoey. At 50% blooming stage, Choke Anan and Mun Deun Kao had the highest percentage of pollen tube growth at 49.08% and 35.01% respectively. Khiew Sawoey which showed the lowest percentage of pollen tube growth at 20.99% during blooming stage. 12 hours after pollination Choke Anan’s pollen tube was the fastest germination and pollen tube reached an ovule within 18 hours. Khiew Sawoey was the slowest (30 hours) and the pollen tube reached ovule (100%) within 42 hours.

The proposed method to increase the fruit set of Num Dok Mai and Khiew Sawoey by others stamen of their cultivars was studied from October to December 2000. For Num Dok Mai, it was found that the highest fruit set was between Num Dok Mai and Num Dok Mai’s stamen which yielded more fruit set than between Num Dok Mai and Choke Anan’s stamen, Mun Duen Kao and Khiew Sawoey’s stamen: 48%, 41%, 43% and 45%, respectively. For Khiew Sawoey, it was found that the highest fruit set was between Khiew Sawoey and Choke Anan’s stamen, which had more fruit set than between Khiew Sawoey and Mun Duen Kao’s stamen, Khiew Sawoey and Num Dok Mai’s stamen of 44%, 36% and 32%, respectively. The lowest fruit set was Khiew Sawoey’s stamen, accounted for 13.33%. 

Signature: 

Student's signature: 

Thesis Advisor's signature:  

Date: 1/4/2003