

## **Fruit Set Capabilities and Yield Variability among Cucumber (*Cucumis sativus* L.) Germplasm Collections**

### **ABSTRACT**

In cucumber (*Cucumis sativus* L.) male and female flowers' production rate is not the same in every variety, which is the main cause to create variation in fruit set. Though natural pollinators (honeybees and flies) are significant catalysts in fruit settings, but if genetically the female flower production rate is lower then we cannot expect more fruits from that plant. Knowing the female flower-bearing characteristics of selected cucumber plants is important otherwise cannot expect the desired yield from the plant. Considering the overall issues, a study was conducted for the evaluation of performance of five cucumber varieties namely, Timun Putih Besar (TPB), Timun Hijau Manis (THM), Timun Hijau Tanga (THT), Timun Susu Besar (TSB), and Timun Putih (TP). The study was carried out in Nethouse 7 at the Faculty of Sustainable Agriculture (FSA), Universiti Malaysia Sabah (UMS), Sandakan. Data on plant height (cm), numbers of leaves, days to first male and female flowering, total numbers of male and female flowers, fruit length (cm), fruit diameter (cm), fruit weight (g), total numbers of fruits per plant, total yield (kg), and leaf chlorophyll content were collected and analysed. The result showed that there were significant differences ( $p < 0.05$ ) among the varieties for days to first male and female flowering, total numbers of female flowers, fruit length (cm), fruit diameter (cm), fruit weight (g), total number of fruits per plant, total yield (kg) and chlorophyll content, respectively. Overall, Timun Hijau Manis (THM) significantly ( $p < 0.05$ ) exhibited the best performance for days to first female flowering (25.50 days), total numbers of female flowers (21.50), total number of fruits per plant (5.75), and total yield (1.99 kg) compared to other 4 varieties. Therefore, THM variety is highly recommended to farmers for the overall performances and yield followed by TBP, THT, TSB and TP cucumber varieties, respectively.