

Poster

**APPLICATION OF PACLOBUTRAZOL FOR FLOWER INDUCTION OF
DURIAN (*DURIO ZIBETHINUS* MURR.)**

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Durian is highly seasonal fruit crop with an irregular bearing pattern. The total production from different climatic areas is coming to the market within a short period of the year resulting no durian in the market during rest of the period. Most of the trees are seedling originated and they are showing different bearing pattern and take more than 10 years for the first bearing. Increasing demand prevails due to its high nutritious value, taste and its' addiction nature. However the seasonal production is not sufficient to meet the demand in the country. Therefore, it is essential to obtain the fruits during off season or to expand the fruiting season of durian to fulfil the consumers demand. We studied the possibility of flower induction of durian by applying Paclobutrazol. Four years old durian seedling trees and 4 years old grafted promising accession (HOD 32) trees were subjected to apply Paclobutrazol at 0 ppm, 250 ppm, 500 ppm, 750 ppm, 1,000 ppm, 1,250 ppm, 1,500 ppm and 2,000 ppm concentrations. Half the amount of the Paclobutrazol solution was applied to the soil near the root zone of trees and rests half of the solution was sprayed into tree canopy. The experiment was initiated at the end of December 2013 avoiding the heavy rainy period while soil moisture was maintained without affecting the stress condition. Flower initiation was observed forty to ninety days after application of chemicals. There was no flower bud initiation observed in the lower concentrations (0 ppm and 250 ppm). However, with increase of the concentrations (500 ppm to 1,500 ppm) flower buds initiation observed in 15-25% of trees. Higher concentrations showed early flower induction (between 50-60 days of applying) compared to lower concentrations (500 ppm). Leaf rosetting due to inter nodal shortening was observed with higher concentration (2,000 ppm) without flower bud initiation which could be due to high concentrations of the chemical. The response to the chemical varies with the genotype. It was clearly observed that genotype HOD 32, with 1,500 ppm concentration showed almost same time to flower induction at 50 days after application in all trees. No flower buds were observed in lower concentrations (0 ppm and 250 ppm) even in grafted trees. The variation of time for flower bud initiation was high among the seedling trees and in some seedling trees no flower initiation was observed with any concentration during the year.