

## Chapter 6

### Conclusion

The application of potassium chlorate ( $\text{KClO}_3$ ): paclobutrazol (PP333) = 1:5 and 1:9 g/pot, at November, could induce the early season flowering of lychee cv. Kom which grew in 37.5 cm diameter pot at a fruit tree nursery of Department of Horticulture, Chiang Mai University.  $\text{KClO}_3$ : PP333 applications could shorten the flowering time for 13 – 15 days. The application of  $\text{KClO}_3$ : PP333 in higher amount caused the toxic symptom of the chlorate, chlorosis and defoliation. The application of  $\text{KClO}_3$ : PP333 did not affect flowering percentage, panicle width and length.

The application of  $\text{KClO}_3$ : PP333, on July, could not induce off-season flowering of 2 years old lychee cv. Chakrapad which grew in 37.5 cm diameter pot at a fruit tree nursery of Department of Horticulture, Chiang Mai University. But the  $\text{KClO}_3$ : PP333 on July applications could induce on-season flowering of the treated trees in the low chilling condition while the untreated trees did not flower.

In the production field, at Chiang Rai Horticultural Research Station, the  $\text{KClO}_3$ : PP333 application, on July, for 8 years old lychee cv. Chakrapad could not induce off-season flowering. However, the flowering percentages of the treated trees were higher than the untreated trees. But the  $\text{KClO}_3$ : PP333 application, on July, for 2 years old lychee cv. Hong Huay at immature and mature leaf stages could not induce off-season flowering and it also did not affect the flowering of the treated trees in the following natural flowering season. The  $\text{KClO}_3$ : PP333 application, on July, for 14 years old lychee cv. Hong Huay at mature leaf stages could not induce off-season flowering as same as in the 2 years old trees. The  $\text{KClO}_3$ : PP333 application, on November, for 14 years old lychee cv. Hong Huay could shorten flowering time for 7 - 9 days. But the  $\text{KClO}_3$ : PP333 application did not affect flowering percentage and panicle sizes.

The  $\text{KClO}_3$ : PP333 application, on November, for 14 years old lychee cv. Hong Huay at mature leaf stages did not affect the IAA leaf-diffusate and ethylene content. But  $\text{KClO}_3$ : PP333 application decreased gibberellin-like and increased cytokinin-like substances in shoot. The TNC and RS contents of leaf and shoot also affect by the  $\text{KClO}_3$ : PP333 application. During the flowering period of the  $\text{KClO}_3$ :

PP333 treated and untreated trees, the leaf TNC and RS contents reduced while the shoot TNC and RS contents increased.



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