

Natheepong Muangkaew 2012: Production Technology on Rhizome Yield of *Globba williamsiana*.
Master of Science (Horticulture), Major Field: Horticulture, Department of Horticulture.
Thesis Advisor: Assistant Professor Patchareeya Boonkorkaew, Ph.D. 91 pages.

Production Technology on Rhizome Yield of *Globba williamsiana* 'Giant Violet Dancing Girl' was studied in order to find out the appropriate methods for seeded rhizome production. The experiment were conducted at Department of Horticulture, Faculty of Agriculture, Kasetsart University, Bangkok and farmers's field at Sansai, Chiang Mai during July 2009 to January 2012. There were seven experiments. In experiment 1, the cycle development of globba : the development of globba rhizome initiate on May. After that will be developed and increase pseudostem height, leaf number, flower and storage root. In October, It was early winter when the leaves are wilting, the globba leaf and globba dormancy is completely in November. By the Rhizome and storage root will turn dark brown, dry and hard, including the leaves fall. Experiment 2, the effects of seeded rhizome size and growing system : using three seeded rhizome sizes, such as small size (rhizome diameter <1.5 cm), medium size (1.5 to 2.5 cm) and large size (> 2.5 cm), the results showed that large size had the greatest of rhizome size, rhizome number, root number and storage root length, but no significant difference in these results between large and medium rhizome sizes. On the other hand, the small size had the least of all values. The comparison between plastic bag and field growing systems, we found that globba were grown in field growing had higher in rhizome number, number and length of storage roots, fresh and dry weight of rhizomes than in plastic bag. Experiment 3, the effect of storage root length : comparison of rhizomes that there were different in storage root length, such as 8-10, 4-5 and 0 cm (no storage root), the results showed that storage root length 8-10 cm had the greatest of rhizome size, rhizome number, storage root number and fresh weight, but no significant difference in these results between 8-10 and 4-5 cm storage root length. On the other hand, the no storage root had the least of all values. Experiment 4, the effect of mulch materials between straw and black-silver plastic, we found that straw mulching had higher in size, number, fresh and dry weight of rhizomes, number and length of storage roots than black – silver mulch material. Experiment 5, the effect of flower thinning : comparison between flower thinning and no thinning, the results showed that flower thinning had higher in rhizome number, number and length of storage roots, fresh and dry weight of rhizomes than no thinning. Experiment 6, the effects of shading and color shad net (black, red and blue), the results showed that there were no significant different in rhizome yield between shade and no shade, including among colors shade net. Experiment 7, the effect of inflorescence flower and/or pseudostem cutting : the results showed that inflorescence cutting had the greatest of rhizome yield, while whole pseudostem cutting had the least of all values.

Student's signature

Thesis Advisor's signature