

Piyarat Khanthawaro 2012: Segregation of the Second Generation of Standard and Mini Flower in *Catharanthus roseus* (L.) G. Don Hybrids. Master of Science (Horticulture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Associate Professor Thunya Taychasinpitak, M.S. 85 pages.

Segregation of the second generation of standard and mini flower in *Catharanthus roseus* (L.) G. Don hybrids between mutant vinca, a receptor, and trailing vinca as a donor plant. Six combination hybrids, 'Trailing red', 'Trailing magenta', 'trailing violet', 'Trailing red eye', 'Trailing orange', and spontaneous mutant vinca were determined. The hybrids of small flowers had no significantly different from the 3:1 ratio of the watercress leaves and small flowers with a gene 1 and was controlled by dominant which controlled the petals. The 'V<sub>1</sub>' x 'Trailing pink red eye', 'V<sub>1</sub>' x 'Trailing orange', 'V<sub>1</sub>' x 'Spontaneous mutant vinca' and the hybrid was characterized by flowers and crosses which 'V<sub>1</sub>' x 'Trailing magenta' was chosen for flowers, hybrids and small. As a consequence, those hybrids were found significantly and substantially different. The characteristics of these mice could be recessive epistasis; the number of mice in the second generation of phenotypic change in the ratio of 9:3:3:1 to 9:3:4. The small leaf and petal, compact canopy (shrub) and color variation were chosen. The results showed that hybrid from spontaneous mutant vinca with 'Trailing red', 'Trailing magenta', 'Trailing violet', 'Trailing orange' and spontaneous mutant vinca were determined and exhibited the new characteristics. The size of flowers were 1.92 and 2.37 cm., the leaves' proportion were 1.40, 1.41, 2.88 and 3.40 cm, for wide and length, respectively. Branch numbers were 12.00 and 11.68 per plant. Moreover, the canopy was compact. Finally, the vinca were selected as a suitable pot plant.

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Student's signature

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Thesis Advisor's signature