

**SOME STUDIES ON THE GROWTH CHARACTERISTICS OF TWO
VARIETIES OF *CATHARANTHUS ROSEUS* L.**

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Morphological and anatomical investigations showed that *Catharanthus roseus* L, is present in Sri Lanka as three varieties, distinguishable by flower colour and anthocyanin content.

The seeds of the purple and white flowered varieties had germination rate of about 70%. Stem cuttings showed rooting after 20d. On treatment with IBA it was found that the purples showed greater degree of root initiation, but the whites showed longer roots. IBA from 10 ppm to 0.01 ppm were tested, and the results showed that stem cuttings of both varieties responded best to root initiation on stimulus at 0.05 ppm IBA.

Dry matter accumulation in the whites was 10% higher than the purples even though root and stem growth was less in the whites. The time for flowering by seed-grown and plants propagated from cuttings was about 7-8 weeks. Those propagated from cuttings after treatment with IBA and those without IBA, and the plants that were seed propagated, all yielded dry weights that were not significantly different.

The crude alkaloid content of the plants propagated from seeds and cuttings with and without IBA treatment were compared and there were no significant differences. A comparative study of the crude alkaloid content of plants collected from the arid, dry, intermediate and wet zones of Sri Lanka showed that the plants from the arid zone contained about 80% more crude alkaloid. This indicated that the agroclimatic conditions have a distinct effect on plant alkaloid content.

References

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