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COST-EFFECTIVE MASS PROPAGATION OF VIRGINIA FANPETALS (*Sida hermaphrodita* (L.) Rusby) FROM SEEDS

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Abstract

The primary objective of this research was to develop safe, programmable and cost-effective technologies of plantlet production from the seeds of undomesticated American populations of Virginia fanpetals (*Sida hermaphrodita* RUSBY). During our seed priming treatment experiments, approximately 40% of the Virginia fanpetals seeds that were high-quality, infection-free, normally imbibing and germinating seeds. Our spring propagation tray experiments indicated that the spring large-scale tray plantlet production of Virginia fanpetals can be performed with using properly pre-treated and fractioned seeds and the phytotechnology that is characteristic of conventional, large air-space plastic tunnels that are used in white cabbage production. This phytotechnological method can be conducted in a simple and efficient way, making it possible to produce hardened, strong plantlets at an industrial scale, scheduled for planting in early spring (March). Our investigation showed that the combination of summer-autumn nurse-in-tray plantlet production technique and subsequent unprotected wintering of Virginia fanpetals with properly pre-treated and fractioned seeds is a promising new methods. There are no heating costs, and this phytotechnique can be easily and properly mechanized. Scheduled plantlets can be produced at an industrial scale by the time of early spring (March) plantlet planting. The digging up of the plantlets can be flexibly adjusted; the plantlets may even grow in the plantlet cases for an entire year. A comparative analysis of the costs of this procedure needs further research.

Key words: nurse-in-tray method, plantlet production, seed priming method, *Sida hermaphrodita* Rusby, Virginia fanpetals

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