

Germination biology and chemical composition of a Sri Lankan medicinal herb: *Abutilon indicum*

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Use of medicinal plants dates far back to the initiation of civilization. However, synthetic drugs replaced the demand for medicinal plants and the former has been neglected for decades. Currently, due to many detrimental effects of synthetic drugs, the demand for medicinal plants has increased throughout the world. However, to meet the demand, these medicinal plants have to be cultivated. Thus, the purpose of this study was to develop a protocol to determine the proper seed propagation strategy for the medicinal plant *Abutilon indicum*.

Imbibition and germination of manually scarified and non-treated seeds were studied to determine the presence of physical dormancy (PY). Moisture content (MC) of seeds was determined with an oven dry method. Growth performances of seedlings were evaluated on three growth media under two shade conditions. Chemical composition of the plants from wild and cultivated populations was compared.

Results of the germination and imbibition tests revealed that *A. indicum* seeds have PY. MC of 8.5% suggested the orthodox seed storage behaviour. Growth performance indicators revealed that *A. indicum* seedlings grew significantly well in sand + coir dust + compost growth medium under 80% shade. Methanolic extract of the plant showed the presence of phytochemicals; saponins, phenolics, alkaloids, flavonoids, coumarins suggesting methanol extract as the best extraction media for this species. Methanolic extractions of cultivated population and wild population had a similar phytochemical composition. However, concentrations of phytochemicals were high in wild plants. Our study clearly demonstrated that the *A. indicum* can be cultivated economically without changing its medicinal value.