

TECHNOLOGY TO INTRODUCE TIBBATU (*Solanum torvum*) AND ELABATU (*Solanum surattense*) FOR URBAN HOMEGARDENS

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Solanum torvum and *Solanum surattense* are wild perennial species naturally grown in tropics and have a high market value as potted plants and berries for human consumption, though categorized as an under-utilized vegetable in Sri Lanka. They are used as traditional medicines in Asian countries. The seed germination of *S. torvum* is 56% and dormancy remains for five months and germination of *S. surattense* is also low. Studies were undertaken to identify a technique to obtain higher germination, easy vegetative propagation and to have early flowering and berry production. Study 1: four sets of seeds were treated in 1M H₂SO₄ for 0, 30, 60 and 90 seconds and kept in four concentrations of GA₃; 0, 250, 500 and 750 ppm for 24 hours to induce germination. Results showed that seeds dipped in H₂SO₄ for 90 seconds and then dipped in GA₃ 750 ppm for 24 hours gave the highest germination for both *S. torvum* and *S. Surattense* as 59% and 88%, respectively. Semi-hardwood cuttings of *S. torvum* and *S. Surattense* were treated with four levels of IBA; 0, 500, 1000 and 1500 ppm were planted in a propagator in study 2. After 30 days of nursery establishment *S. Torvum* and *S. Surattense* gave the highest mean number of leaves (25.8 and 16.6), roots (35 and 17.2) and longest root (13.03 and 25.35 cm) at 1500 ppm, respectively. Vegetatively propagated plants in study 2 were compared with seedling plants grown in polythene bags. Vegetatively propagated *S. surattense* plants gave early flowering (43 days). The mean number of days and the mean highest number of berries after 3 months was 63.7 and 11.3, respectively, whereas in *S. torvum*, flowering occurred but no berries were produced.

Key words: GA₃, Germination, H₂SO₄, IBA, *Solanum torvum*, *Solanum surattense*