Leaf discs and axillary buds were used as explants. Axillary buds isolated from rhizomes of *Kaempferia galanga* mother plants were sprayed with 0.2% Captan™ 2-3 days before collection. After that, they were placed on a wet paper lined tray and covered again with another wet paper. Five to six days later young axillary buds were emerged from nodes and they were used as explants. For leaf disc explants leaves were washed with soap and soaked in a solution of Teepol™ for 15 minutes, and washed with running tap water for 45 minutes.

Both leaf discs and axillury buds were dipped in 5% Chlorox™ (5.25% Sodium hyperclorite v/v) for 10-15 minutes under sterile conditions. Then they were washed 10% Clorox™ for 3 minutes and 70% ethanol for one minute each followed by two successive washings in sterile distilled water. Explants were cultured on MS basal medium (Murashige and Skoog, 1962) supplemented with different concentrations of Benzyl amino purine (BAP) and Indole acetic acid (IAA) (2.00 mgl^{-1} – 2.25 mgl^{-1} and 0.30 mgl^{-1} – 0.70 mgl^{-1} respectively). Sucrose 3% (w/v) and 0.8% agar were added to the media. pH was adjusted to 5.8.

Cultures were incubated under 16 hr light /8 hr dark at 26 ± 1 °C temperature for 21 days. Callusing was not observed from both tested explants in any of the media tested. After 15 –18 days of incubation axillary buds were elongated in all combinations tested. MS supplemented with 2.25 mgl^{-1} BAP and 0.5 mgl^{-1} IAA showed the highest elongation (490 ± 10 mm).

After 25-30 days of incubation *in vitro* grown shoots were cut and separated from the explant. Then they were subcultured on the same medium and incubated in 16 hr light at 26 ± 1 °C temperature for shoot multiplication. MS medium was used as basal medium with above combinations of growth regulators.

The highest multiplication was observed in 2.25 mgl^{-1} BAP and 0.5 mg^{-1} IAA (7.0 ±0.02) shoots per explant. Further sub culturing on to the same medium induced roots. Seven-weeks old plantlets were removed from culture vessels, washed well to remove all agar and transferred to small plastic pots containing sand, soil and compost in 1:1:1 proportion by volume and kept in shade house covered with polythene bags, for acclimatization. 100% survival was observed when acclimatized plants were transferred to the field.

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Effect of physiological status on rooting of Masbedda (*Gymnema sylvestre*) cuttings

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Vegetative propagation by means of cuttings is an important method for starting new plants identical to the parent plants. Many plants can be propagated with good results by cutting, though the success depends upon the propagator's circumstances, the time of year, and the plant to be propagated. The present study was carried out to investigate the effect of physiological stage on rooting of *Gymnema sylvestre* stem cuttings.

Healthy, double nodded cuttings were made from the mature plant stock established at the Faculty of Agriculture, University of Ruhuna. The cuttings taken from pre-flowering (T1), flowering (T2) and post-flowering (T3) stages were stuck into preformed holes in poly bags filled with moistened rooting medium which consisted of sand, top soil and compost (1:1:1 by volume). They were placed in a shade house and watered once a day. The Completely Randomized Design (CRD) was used with ten replicates. Assessment was done 75 days after for rooting. The percentage survival was not significantly ($p \leq 0.05$) different between cuttings taken from the pre-flowering (92%) and post-flowering (87%) stages. No significant ($p \leq 0.05$) differences also in the percentage of callused and rooted cuttings were recorded between T1 and T3. However, number of roots and length of the longest root per cutting were significantly ($p \leq 0.05$) higher in T1 than any other. Furthermore, T2 showed the lowest figures for all the parameters assessed, indicating that the physiological status of the stock plant at the time the cuttings are excised is of great importance for the rooting process.