

In vitro rooting was successfully achieved in *Storvrum*. the shoots regenerated from all the explants were rooted on NAA, IBA and IAA. Profuse rhizogenesis was observed on MS medium augmented with 1.0 mg/L IAA in comparison to all other concentrations of auxins used in *Storvrum*. Maximum percentage of responding cultures was also observed at the same concentration of IAA. IAA showed superiority in inducing *in vitro* rooting followed by NAA and IBA. The protocol developed during the present investigation for *in vitro* rooting is useful in mass-scale propagation and multiplication of the species.

Agrobacterium tumefaciens mediated genetic transformation has also been carried out to introduce the pCMUSANRSHSP-163 in order to develop the high temperature stress tolerant transgenic plants.

For the establishment of *in vitro* regenerated plants acclimatization/Hardening is a crucial step. For multiplication and conservation of medicinally important and endangered plant species, **Lab-to-Land Program** has to be taken up in which this technique plays a vital role. We are successful in transferring the plants developed in **Lab** to the **research** field.

OP-82: Pruning as an effective practice for Kothla himbutu (*Salacia reticulata* white) to ensure sustainable leaf/stem harvesting

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Kothala Himbutu (*Salacia reticulata* White), a well-known medicinal plant is near extinction from their natural habitats due to severe exploitation and unsustainable harvesting methods. Thus domestication and cultivation are considered to be effective means of conservation while meeting the increasing demand. The present field investigation is carried out at the Faculty of Agriculture, University of Ruhuna to assess the effect of plant pruning on growth and sustainable leaf/stem harvesting. Twelve months old plants were selected and their first pruning was done at 30, 40 and 50 cm above the ground level. After a period of six months, the 2nd pruning was done at 90 cm height. Number of new leaves and stems, height of the shoots were measured at monthly interval. Dry weight of pruned leaves and stems were measured as yield parameters. Number of new branches (4) of the plants that have been first pruned at 50 cm height was significantly higher than that of the other two pruning heights. The same treatment was found to be dominant in producing new branches (20) even after the second pruning at 90 cm. Measurements on shoot height and dry weight also proved that the first pruning at 50 cm height could result in more biomass. Thus it could be concluded that pruning can effectively be used in ensuring sustainable leaf/stem harvest from Kothala Himbutu plants.

OP-83: Comparative study of embryogenic and non embryogenic callus of male flower buds and shoot tip explants of banana Cv. Rasthali. (Aab).

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Banana is known in the ayurvedic practice in India and Ancient Persia as nature's secret of perpetual youth. Studies were initiated to develop regeneration protocol through somatic embryogenesis in banana cv. Rasthali which is highly susceptible to fusarium disease. Embryogenic callus and somatic embryos were generated with male flower buds and shoot tips on MS medium supplemented with 2, 4-D (18.10 µM), NAA (5.37 µM) and IAA (5.71 µM) with 3% sucrose and 0.2% gelrite. After 6-8 months well developed somatic embryos were sub cultured on to MS supplemented with NAA (1.07 µM), Zeatin (0.23 µM), 2-ip (0.60 µM) and kinetin (0.46 µM) for further maturation. Plantlets were obtained when somatic embryos were cultured on MS with Morel vitamin, IAA (11.42 µM), and B₉ (2.22 µM).