Annals of the Sri Lanka Department of Agriculture 2010. 12: 295-296.

RESEARCH NEWS

ROOTING OF VINE CUTTINGS: A NEW PROPAGATION TECHNIQUE FOR SPINEGOURD (*Momordica diocia* Rox. Ex Willd)

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Spinegourd (*Momordica diocia* Rox. Ex Willd), an underexploited and underutilized diocious vine, is becoming popular crop among the farmers. Four gynocious (♀) varieties *viz Thumbica, Golika, Wisal, Kesara* with androcious (♂) variety of *Perakum* have been released after domestication, evaluation and selection of botanical varieties by the Department of Agriculture (DOA) in 2004. Although the conventional planting materials of released varieties have a high demand, the seeds and tubers consist of instinctive limitations, which hinder cultivation. Therefore, a series of experiments were carried out to find out measures to overcome the problems associated with seed dormancy as well as gynoceous *vs* androcieous ratio at the Regional Agriculture Research and Development Center, Aralaganwila, Sri Lanka during past few years.

At the initial stage of crop improvement, tuber cuttings and root cuttings were used to establish vines. Though the technique was successful, the quantity of the vines produced was insufficient to meet the demand for the establishment of mother vine orchards. Further, harvesting roots and tubers for propagation endangers the existence of botanical varieties. Therefore, it is essential to have an alternative method for propagation of spinegourd in prder to ensure existence of the crop. For the purpose an experiment was carried out to investigate the ability of producing propagules using vine cuttings. First, pure water was used as liquid media as in the rooting of ornamental plants. The technique developed a single rootlet each in a few number of vine cuttings. The technique was advanced by using moist sand media resulting in an increased of number of rooted vine cuttings, but the further growth was poor.

The vine cuttings were then established on pots made from black polythene (gauge 150, 15 cm dia x 15 cm height) filled with a mixture of topsoil, organic manure and carbonized paddy husks with 1:1:1 ratio. Three types of vine cuttings (soft, semi hard and hard) with four internodes were used to compare the potential of development into propagules under a plant propagator. Results showed that time taken for rooting decreased towards hard vine cuttings and survival rate showed the opposite pattern. In general, required time period for rooting, shooting and hardening was one week for each stage. Such potted plants were used to establish mother vine orchard as

well as to full fill the demand for nucleus planting material all over the country. Keeping of potted plants for longer time period was problematic due its tendrils, nature of creepiness and fast growth habit.

Rooting vine cuttings of spinegourd showed the potential in producing planting materials feasibly, efficiently, and economically with a simple technique.