D-07: Detopping of culm; a method for the rapid propagation of *Bambusa vulgaris var.* vitta.

T K Hathurusinghe, K U Tennekoon, S A Kulasooriya
(Dept of Botany, Univ of Peradeniya)

Since flowering in bamboo is uncommon and production of viable seeds rare, vegetative propagation is the preferred method of multiplication. This study examined a novel method to enhance the production of viable planting material in bamboo by detopping of mature culms.

Culms of *Bambusa vulgaris var. vitta,* were detopped to break apical dominancy, which promoted the growth of axillary buds into shoots at the nodes. A mean total of 40 axillary shoots per culm was recorded in detopped culms compared to 11 in non-detopped culms. Furthermore, their distribution was wider in detopped culms, being formed near the apex, at the middle level and towards the bottom of the culm, whereas they were formed only at the middle level in non-detopped culms. Top and mid-level axillary bud production increased rapidly and reached a maximum, 18 days after detopping.

Rooting was attempted by transplanting nodes with new axillary shoots in sand beds and maintaining a high level of soil moisture. From 10 nodes having a total of 40 axillary shoots obtained from detopped culms, 32 survived sand bed culture, but only 25 plantlets produced enough roots suitable for out planting. Among these, best plantlets with the highest number of roots per plantlet, came from the middle level shoots.

Of the 6 nodes with 12 lateral shoots obtained from the non-detopped culm transplanted in sand beds, only 4 survived and produced viable plantlets, but with less roots than those from the middle level nodes of the detopped culm.

These results show that detopping of culms could considerably increase the production of viable planting material for the rapid propagation of bamboo.