Comparison of growth parameters of black pepper (*Piper nigrum)* local selections with Panniyur - 1 under "Bamboo Rapid Multiplication System"

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Planting material of high yielding local pepper selections are inadequate to meet the demand due to their slow growth and multiplication nature compared to Panniyur-1. Therefore, this study was undertaken to compare the growth and plant production of four high yielding local selections with Panniyur-1.

The four local selections, i.e. NW21, GK49, MB12, GM28 and Panniyur-1 were used for the study. Plants were established and all cultural practices were adopted according to the "Bamboo Rapid Multiplication Method" under a net house at 50% shade. RCBD was used as experimental design. Nine vines of each selection were used in a block, replicated four times. Vine length, number of leaves and number of nodes at one-month intervals were collected as growth parameters. After 4 months, vines were harvested and single nodal cuttings were prepared and counted as usable single nodal cuttings. Plants were raised using all single nodal cuttings and successful plants were counted

after three months. Data were analysed using ANOVA (length) and nonparametric methods, Kruskal Wallis or Wilcoxson Signed-Rank Test (counts and percentages) using the SAS package.

Significant differences were found in vine length and total number of nodes among the selections tested. Significantly higher vine elongation was observed in Panniyur-1 (111.8 cm) than two local selections i.e. GK49 and GM28 (87.5 & 86 cm). The other two local selections i.e. MW21 and MB12 showed similar vine elongation (99.3 & 95.8 cm). Significantly low number of nodes was produced in GM28 (15.25) than MW21 (19.0). However, significant differences were not found among the selections on production of usable nodes and in their number of leaves. The percentage of successful plants from single nodal cuttings was significantly lower in the four local selections (19-29) compared to Panniyur-1 (60.5). Percentage of mother vine regenerated was significantly low in all four local selections (14-36) than Panniyur-1 (75) after first harvest, suggesting the requirement of higher rate of gap-filling for local selections.