Verification of Plant Spacing For the New Cassava Varieties

Muli M.B, T.L. Munga and D. Mwakina
Kenya Agricultural and Livestock Research Organization- Mtwapa P.O. Box 16 MTWAPA, 80109
Email: musmuli2@gmail.com or Benjamin.Muli@kalro.org

Sub-Theme: Innovation and Technology in Applied Science for Societal Transformation

ABSTRACT
With the release of new varieties for coastal lowlands, it was observed that some of the varieties closed their canopy very early in the season hence hindering some agronomic practices such as weeding. Work was therefore carried out to determine the optimum plant spacing for the new varieties. Four varieties: Shibe, Karembo, Tajirika and Nzalauka were evaluated alongside four plants population densities of 13,333; 10,000, (control), 8,000 and 6,666 plants per hectare. The treatments were laid out in a split plot design with cassava varieties as the main plots and different plant spacings as the sub-plots. The results indicated that Shibe variety recorded significantly (P< 0.05) higher number of roots per plant than the rest of the varieties. The variety also showed significantly (P< 0.05) higher total number of roots than the rest of the varieties and Nzalauka showed significantly (P< 0.05) higher total number of roots than Tajirika but not Karembo. Plant spacing significantly (P< 0.05) influenced the number of roots per plant, total number of roots but not marketable root yield. The number of roots per plant increased with increase in spacing or decrease in population. The spacings of 1.00 x 1.25 m and 1.00 x 1.50 m recorded significantly (P< 0.05) higher number of roots per plant than the control. The spacing of 1.00 x 1.50 m recorded significantly lower total number of roots per plant than the control. There were no significant (P< 0.05) differences among various plant spacings as regards marketable root yield per hectare.

Keywords: Agronomic practices, Cassava variety, Plant spacing, total number of roots, Marketable root yield