

Abstract

Sugarcane planted at wide row spacing grows slowly in the early stages, and this is detrimental to both the soil and the crop because the delayed closure of the crop canopy in wide rows hinders efficient use of light, water and nutrients. Two experiments were conducted at Kibos and Nasewa during 2002/03, with the objective of determining the effect of row spacing on seedcane yield and yield components of two varieties. The experiments were laid out as 2×4 factorials in randomised complete block designs, replicated three times each. Treatments were two cane varieties (KEN82-247 and N14) and four row spacings (120, 60, 50 and 40 cm). Three-budded cane setts were planted in plots measuring 72 m². Each plot had a length of 10 m and width of 7.2 m. Data on yield and yield components at 12 months after planting were determined. Analysis of variance for yield, stalk weight (tch), stalk population/ha and setts/ha showed significant differences (P<0.05) between the row spacings. There were no significant interaction effects between variety and site for any of the yield components. The 120 cm spacing gave significantly lower yields (58 tch) than the other three spacings, which gave similar yields (103, 103 and 104 tch for the 60, 40 and 50 cm spacings, respectively). The results from the study show that any row spacing between 40 and 60 cm nearly doubled yields and can therefore be a better option for sugarcane growers to adopt for seedcane production. The 50 cm row spacing cannot be managed with current machinery, and will require modifications to be made to existing equipment.