THE EFFECT OF TIMING TRANSPLANTING ON PERFORMANCE OF BABY CORN (Zea mays 1)

By Kirigiah Richard Murithi

A thesis submitted to the Department of Agriculture and Natural Resources,

Faculty of Science and Technology in partial fulfilment

of the requirements for the degree of

MASTER OF SCIENCE IN AGRICULTURAL AND RURAL DEVELOPMENT

of the

KENYA METHODIST UNIVERSITY

ABSTRACT

The country is facing the problem of rainfall shortage due to global warming as a result of climatic change. Horticulture farming helps the farmer to generate income and also helps the country to generate foreign currency through the export of vegetables and creates employment to many unemployed youth in Kenya. It was in the light of the above that the study was designed to establish the right transplanting stage of baby corn. The overall objective of this study was to establish the effect of timing of transplanting of baby corn on its performance. Specifically, the study sought to establish the effect of transplanting age on cob length, cob diameter and cob weight, establish the relationship between transplanting age and maturity period and establish the effect of transplanting age on plant maturity height. This study was an experimental one and was limited to Imenti Central district. The treatments were based on the age of the seedlings at transplanting stage. There were four treatments namely; Direct seeding - T0, Fourteen day old seedlings - T1, Twenty one day old seedlings - T2, Twenty eight day old seedlings - T3. The study was carried out in researcher's farm in Nduruma location of Abothuguchi West division of Meru County. The farm had been previously been under horticultural crops cultivation including cabbages, carrots, French beans and snow peas. The farm had not been under maize crop for the last five (5) years. The nursery bed and the seedbed were prepared on the same day. The seedbed was prepared by digging and thereafter, the land was harrowed to attain a medium tilth. Planting holes of 10cm depth were dug up at 15cm intervals along the row. Transplanting of maize on each of the plots was done on defined variable times and plots for each of the category and treatments were labelled accordingly. The plants were closely monitored and follow up was made on a routine basis to ensure that the experiments captured all observations in each of the plots. Both descriptive and inferential statistics were used to analyze the data obtained from the field. One-way ANOVA with Turkey post test was performed. Study findings revealed that 14-day old seedlings produced the highest performance yields and beyond 21-day old seedlings performance was reduced significantly. This study established that transplanting after 14 days decreased the flowering age, while transplanting after 28 days delayed the maturity. It was also established that transplanting at 14 days significantly increased cob weight. This study also concluded that transplanting after 14 days increased the apical height of baby corn, while transplanting after 28 days resulted into significatly shorter baby corn. Generally yield attributes like length of cob, number of cobs per plant and cob weight reduced gradually with the increment of age of seedlings. The study established that there was no significant relationship between transplanting and leaf length. Transplanting at days 14, 21 and 18 did not affect leaf length of baby corn, an implication that transplanting increased yield in terms of number of cobs per plant. This study therefore recommends that baby corn seedlings transplanting should be performed at the age of 14 days to achieve the highest performance in terms of yield. This study did not establish the influence of transplanting labour cost on the profit margin. Further research is needed to evaluate whether transplanting is economical as compared to direct planting in respect to labour cost.