Use of Heat Units to Predict the Optimum Transplanting Stage of Baby Corn (Zea Mays L.) Seedlings Under Field Conditions in Meru County, Kenya

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Abstract

Baby corn (Zea mays L.) is a type of maize belonging to the Poaceae family of plants. It is grown as a vegetable in a wide range of Agro-ecological zones in Kenya. The plant is mainly grown for its immature unfertilized ears harvested within 2 to 3 days after silk emergence. However, due to continued demand for water, rainfall unreliability and the need for accelerated maturity, transplanting has to be adopted as an intervention of choice with good outcomes. The optimum transplanting stage is influenced mainly by the altitude (area temperature) of the locality due to difference in plants growth rate hence a universal transplanting stage parameter of heat units was used to establish the correct stage. The experiment was conducted under field conditions to determine the best transplanting age of baby corn seedlings. It involved two Baby corn varieties namely Thai-gold and Pan-14 which were raised in potted sleeves in a nursery and later transplanted at different stages to establish the effect of transplanting stage on their performance. Transplanting was done at 200, 300 and 400 GDD apart from the directly planted Babycorn at 0GDD. Data on GDD, maturity height and yield parameters were collected and subjected to analysis of variance (ANOVA) using a normal excel programme as well as SAS version-20. The means were considered different if the p-value was less or equal to 0.05(p≤0.05). In both varieties, results showed that baby corn plants transplanted at 200 GDD had higher flowering height (MH), fewer maturity GDD, longer cob length, larger cob diameter and more marketable cobs per plant.