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“Global food security and food safety:
The role of universities”

Trends in the Development of Cassava Stem Planter

MONDAY ALE¹, SETH MANUWA²

¹*Rufus Giwa Polytechnic, Owo, Agricultural and Bio-environmental Engineering Technology, Nigeria*

²*Federal University of Technology, Akure, Agricultural and Environmental Engineering,*

Abstract

Cassava is now grown throughout the tropical world with annual global production at approximately 276 million tonnes. Nigeria is the largest producer of cassava in the world accounting for nineteen percent (19%) of the global production. Cassava is mainly planted with cut stem at a spacing of 1m × 1 m. Manual stake production is tedious and time consuming. The production rate per person is about five thousand (5000) stakes per day and about one hundred thousand (100000) stakes are required per day for mechanised commercial planting. Some cassava planters have been developed but they have not been commercially available to farmers in Nigeria. There have been attempts made in research on mechanical planting of cassava stems. The prototype-planters from the previous research include cassava planter model PC-2; cassava planter model PMT-3; automatic cassava planter model 3; commercial prototype of model 3; Thailand cassava planter model; NCAM-developed cassava stem planter and a single-row cassava stem planter. However, this critical review has revealed that all the mechanical planters require extra labour for feeding of the stems for cutting and planting of the stakes. Therefore, projection for an improved mechanical planter named single-row cassava stem planter with semi-automatic metering system is recommended for research. This improved planter will eliminate the extra labour required by the existing mechanical planter as well as providing such labour for other farm and processing operations like harvesting, transportation, peeling, grating, cleaning, dewatering, sifting, chipping, pelletizing, frying, packaging, and marketing for the present and future demand of cassava products

Keywords: Cassava, mechanisation, planting, review, stem planter