



## Evaluating seedling production efficiency of different banana propagation methods (*proposed graduate research project*).

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### ABSTRACT

Bananas are one of the important crops for food security and income in parts of Kenya. Promoting banana production in the country is therefore one strategy to enhance food security since bananas diversify the food crops base, and they can also remain productive even under poor rainfall distribution that is frequently associated with changing climatic condition. Availability of high quality seedlings has been a serious constraint to most farmers who wish to establish new or expand their existing banana plantations. Natural regeneration of banana seedlings that most farmers depend on is slow and may be a source of pests and disease spread between farms in different locations. Considering the inefficiency of natural regeneration methods, better methods of propagating banana seedlings are required. To improve adoption among small scale banana farmers, a suitable method should preferably be less expensive and less sophisticated to implement. In this proposed research study, banana cultivars with high market demand in different agro ecological zones will be identified through a survey. The propagation efficiency of the identified



varieties will be studied and compared using three methods, i.e. macropropagation, micro-propagation and natural regeneration. The methods will be compared based on number of seedlings produced within a predetermined period (six months), cost, resources and skills required. Seedlings produced using each of the three methods will be planted in the field to compare growth in terms of establishment and vigour of individual plants. Data generated will form a basis for recommending the best cultivars for different agro-ecological zones and the most viable and economical seedling propagation method.

Key words: macropropagation, bananas