

**ABSTRACT**

The Effect of Sett Characteristics on the Performance  
of Yellow Yam (Dioscorea cayenensis Lamb.)  
Planting Material in Jamaica

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The effects of sett characteristics on the rate of sprout emergence and field establishment of Dioscorea cayenensis Lamb. were examined. Setts were characterized according to size, by weight, and type with respect to origin from the head (proximal), middle or tail (distal) regions of the tuber. Heads sprouted earlier than middles and tails with the effect being more pronounced for small (25g, 75g) than large (200g, 300g) setts.

While thiourea (2%) had no effect on sprouting, 2-chloro ethanol (1%) promoted sprouting with twice as many sprouts emerging for setts treated for 12hrs than from setts treated for 6hrs after 56 days. Thus, this growth regulator could be used to enhance early field establishment through the provision of a large batch of sprouted setts.

The effect of time of planting on time to tuber maturity was examined as a means of achieving year round production of yellow yams. Setts that sprouted at the same time were planted successively at weekly intervals for one year. Harvested after 9-10 months' growth, 90% of the tubers were found to be mature indicating that by selective planting the variability in sprouting yellow yam setts had been successfully reduced.

Special thanks are also due to Dr. Isaac Bekela, for The percentage marketable tubers was increased with increased sett size, mulching and staking.

Based on the results obtained, two production systems were recommended: for small farms located on steep slopes where mechanization was not feasible, 200g setts of heads and whole tubers previously selected for uniform sprouting are recommended, as these are easier to handle by small farmers and may be planted directly to the field. For larger farms with mechanization, the use of pre-sprouted 200g setts in combination with mulching is recommended.

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