

ABSTRACT**Early Growth and Yield of *Solanum* Potato in a
Humid Tropical Environment as Influenced by
Sugarcane Filter Press Mud in St.Kitts****Jerome Claude Thomas**

The influence of the planting date and the modifying effects of sugarcane filter press mud on potato growth and yield in a lowland humid tropical environment were evaluated in St.Kitts.

Growth analysis studies were conducted during three potato growing seasons which normally extend from November to March. The studies were established mainly as rainfed field trials at various planting dates during the period 1990 to 1993. For each field trial, FPM was either broadcast and incorporated into the soil or applied as a band along the bottom of the planting furrows. The seed tubers were planted between 0 to 42 days after the FPM application. During the third year trials, nitrogen side dressing at 14 and 28 DAP and supplemental irrigation during the tuber bulking stage were applied.

The rate of early vegetative growth of the potato plant increased with each successive planting date during each growing season. The LAD and tuber yields increased

for each successive planting date during the month of December but decreased with each planting date from January to March. The plant's growth and development were adversely affected by early tuber initiation and moisture stress when the seed tubers were planted during the period January to March. The FPM treatments boosted the early growth of the potato plant and increased the final tuber yields by 29 % when the FPM was at least eight months old. Tuber yields were increased as a result of increased dry matter production. The nitrogen side dressing and the supplemental irrigation treatments did not significantly influence the modifying effects of the FPM treatments.

The results of this study show that the potato tuber yields can be increased in a lowland humid tropical environment by the manipulation of the planting dates and the localised application of air dried FPM at 12.5 t/ha in the planting furrows.