

STUDY ON PLANT TYPE, CONTROLLED VINE GROWTH AND N - FERTILIZER
ON YIELD OF SWEET POTATO (IPOMEA BATATAS.L)

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At present, besides the familiar viny type of sweet potato, compact and bush type plant stature have been incorporated to the high yielding sweet potato varieties. However, the knowledge on their responses to the high N-fertilizer conditions and to the control measures on vine growth are very meagre. Therefore, a study was carried out at the Central Agricultural Research Institute, Gannoruwa, from May to September, 1985 to determine the effect of different levels of N-fertilizer application (0, 25, 50, 100 kg N/ha) on tuber yield of bush and compact type sweet potato varieties (C-26 and Wariyapola) under uncontrolled and controlled vine growth (turning over vines fortnightly) conditions.

Excess N-fertilizer (100 Kg N/ha) in the soil led to high vegetative bio-mass production and subsequently changed the plant type of sweet potato varieties, giving low values of harvest indices and yields. Higher tuber yields were obtained at the N-fertilizer level of 50 Kg N/ha with uncontrolled vine growth (21.60 and 24.68 t/ha respectively for bush and compact type varieties). Controlled vine growth at high N-fertilizer level (100 Kg N/ha) leads to higher yields in both varieties, whereas at low nitrogen levels (0, 25 Kg N/ha) control of vine growth reflected lower yields since turning over of vines prevent the development of adventitious roots which hinders exploitation of soil fertility.

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