

ABSTRACT

Aspects of tuberisation were investigated in six cultivars of sweet potato in Trinidad.

Total and marketable tuber yields were analysed in terms of yield components, tuber number and tuber weight, which are interpreted as end products of the tuberisation process. The relationship between the yield components, and the importance of each in the determination of yield and its variability were investigated.

A growth and development study of the adventitious root system was carried out during the entire growing season. The initiation and growth of the tubers was studied in relation to other parts of the root system, and the plant. Growth of tubers was analysed in terms of tuber size and weight, and was related to the development of total and marketable yield in the different cultivars.

Anatomical investigations of the different root types throughout growth helped to ^{clarify} ~~classifiy~~ the developmental relationships between them. Cellular processes involved in tuber initiation and growth were outlined in relation to the morphological development of the tuberous root and its specialisation as an organ of storage and propagation.

Studies on the response of the underground portions of the plant to attack by a larval pest were made, and the extent of tissue damage was related to production of total and marketable yields.

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