

I N T R O D U C T I O N

In most tropical countries, period of excessive food supplies alternate with that of food scarcity every year. The period of excessive food supplies corresponds to the harvesting time when the market is so glutted that there is little or no gain to the farmer on the sale of his produce. The period of food scarcity is the growing season when there is no supply in the market and prices are very high.

The reason for this alternating period of want and excessive supply is because most of the food crops, particularly the root crops do not store well and coupled with this, there are no good storage techniques. To meet therefore the demand in the growing season and to even out the supply of food crops throughout the year, the storage period will have to be increased on one hand and maturity hastened on the other hand with all the help and guidance science can offer. Good storage techniques and a method of bringing crops to early maturity therefore become a prime necessity. The question arises as to which of the tropical food crops should receive attention first.

The yams (Dioscorea spp.) occupy an important place among the subsistence crops grown in the tropics. It provides a staple food for the natives of the wetter parts of West Africa, latitudes 4° to 10°N. In Nigeria, these latitudes cover the whole of the southern and a considerable part of the northern provinces. Yams are a popular food crop in Puerto Rico. They are used commonly there as a substitute for potatoes especially among the less well-to-do classes, and continentals often prefer them to potatoes (37). Yam is also an important food in the East Indies. It is used by the hill people of the Philippines as a substitute for rice, while there is evidence of yam cultivation in India over 350 years ago. (9)

Because of its importance, several attempts have been made on yams to increase the yield, improve the storage; to grow

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it out of season and to hasten its maturity. The Straits Settlement, the original home of the yams has been the seat of studies in their botany (10), while West Africa (29, 40, 42), the Philippines (17) and the West Indies (8, 43, 24, 11), have contributed towards improvements in cultivation, rotational problems, length of growth period, storage period and chemical breaking of dormancy. The fact that this crop is so commonly grown by the peasants in the tropics, its remarkable freedom from diseases and pests, its high yield and palatability justify further studies into its storage and cultivation as a means of solving the problem of food scarcity at certain periods of the year in the tropical countries.

Previous work on this line at the Imperial College of Tropical Agriculture (11) has been on the effects of growth regulating substances on Lisbon yams and the present writer follows on this line both to confirm the previous work and apply the findings practically and commercially. In many cases, the present worker started from where the last worker - Mr. V.O. Chukwueke - ended, and at times drew on his experience and findings. Since the present work was carried out under Trinidad conditions, it is proper to describe here the normal yam cultivation in Trinidad. The description applies to Lisbon yam, the most commonly grown yam in Trinidad (43).