

## INTRODUCTION.

The Sweet Potato (Ipomea batatas) is a root crop which is grown in most countries in the tropics. It has become the staple food in Sumatra, Malayan Archipelago, New Guinea, and various other South Pacific islands, and together with yams and cassava, it forms a major source of starch for the population of tropical countries. In the United States of America, where large acres of the crop are grown, it is regarded as a vegetable of second in importance only to the Irish potato, and its value as a food crop, even to European peoples, cannot be overlooked. In fact Hand & Cockerham (1921) give twenty two different recipes for domestic cooking of sweet potatoes, ranging from baked sweet potatoes and sweet potato bread, to sweet potato muffins, and sweet potato with rasins and marshmallows.

The Sweet potato is a member of the family Convolvulaceae, and is a perennial plant, though is usually cultivated as an annual. Its centre of origin is doubtful, as although thought to be of North American origin, it was described in Chinese books before the discovery of America. (Hand & Cockerham, 1921.) However, it is generally agreed that it originated in North America as there are more varieties found there than in China, though Taubenhous (1923) has put forward a theory that it is perhaps indigenous to both eastern and western hemispheres. Recent work by Ting, Keho & Miller (1957) has disproved the theory that Ipomea batatas was derived from the tropical American plant Ipomea Tiliaceae by means of cultivation, on the basis of chromosome numbers, and the inability to achieve a single interspecific cross from over 3000 attempts between I. batatas and other tetraploid and diploid species of Ipomea. They found the chromosome numbers

of I. tiliaceae to be  $n = 30$ , compared with  $n = 45$  in I. batatas. Thus the search for the ancestral species of the modern sweet potato needs to be further explored.

Like the Irish potato, the sweet potato seldom produces viable seeds, and propagation is normally by tuber, or the vine. The plant has fairly long trailing vines which root freely at the nodes when planted. The leaves vary in shape according to the variety. The main difference, which is not always appreciated, between Ipomea and Solanum, is that the sweet potato is a true enlarged root, whereas the Irish potato is a tuber of underground branches and rhizomes. Ipomea likes a climate of liberal rainfall with warm nights and abundant sunshine throughout the growing season, with preferably less moisture in the two months preceding harvest. Light well drained sandy loams are best, but these should not be too fertile, as there is then a tendency for the plant to produce vines at the expense of the roots (Miller 1932). A growing period of at least 130 days is essential for maximum yields, although this varies somewhat between varieties.