PART I

A. INTRODUCTION

The Eggplant (Solanum melongena), also known as aubergine in France, brinjal in India, melongene in the West Indies or Guinea squash in America, is a low growing bushy plant of about two or three feet in height. Although it is a perennial, it is mainly grown as an annual. Plants older than a year generally do not produce as good yields or the better quality of fruit as younger plants.

According to Cobley (1956), the plant originated in India and the East Indies. In this, Cobley is supported by Shoemaker (1953) who also mentions China as another centre of origin. Thompson & Kelly (1957) and Knott (1955) also give India as the original home of the plant whilst Herklots (1947) names the East Indies.

Solanum melongena belongs to the family Solanaceae. The stem is usually hairy and there are large alternate leaves which may be covered with dense hair. The inflorescence is cymose with the flowers either borne singly or in clusters. The flower has a large five-lobed calyx which persists on the fruit; there is a five-lobed violet corella tube, five large stamens whose anthers dehisce by apical pores, and a bilocular ovary containing many ovules. The fruit is a berry with many kidney-shaped brown seeds inside it.

The eggplant is grown for its fruit which is cooked or eaten as a vegetable. The colour, shape and size of the fruit vary considerably but the usual shapes are oval or oblong and generally the colour is dark purple or yellowish-white. The plant matures in three to four months and continues fruiting for another 8 - 12 weeks. The fruit is harvested well before it is fully mature. By leaving the fruits on till they reach full maturity the yielding capacity of the plant is reduced; but another reason for the relatively early harvesting is to safeguard the quality of the fruit. The semi-mature fruit has a higher content of carbohydrates,

mature fruit has a higher content of carbohydrates, proteins, Calcium iron, Caretene and vitamin C than the fully mature fruit which is more fibrous.

The eggplant requires a long growing season and for success-production, high temperatures in the order of 70° F – 80° F and a moderate rainfall are needed. Since it can tolerate fairly heavy rains, the plant is grown in the rainy season when it is warm, rather than in the cool, dry season.

The crop is not exacting in its soil requirements, but it is at its best on well - tilled soils which have a high humus content. The crop is intolerant of waterlogged conditions so that ~~an~~ a rich, free - draining, sandy loam is ideal for its cultivation.

The crop, though fairly hardy, is susceptible to the attack of various pests and diseases. There are many widely distributed wild and cultivated plants related to the eggplant so that unless proper rotations and good methods of sanitation are engaged the incidence of insect pests and diseases may be very high. The insect pests include aphids, a leaf roller, flea - beetles (Epitrix sp.), lace - wing bugs (Corythaica monacha), crickets and various cater - pillars. The chief fungous diseases are anthracnose, root rots (Fusarium spp. and Colletotrichum attramentaria), and bacterial wilt (with Fusarium and Verticellium spp. as secondary parasites) which seems to be most serious root disease in the West Indies. The most troublesome insects in Trinidad are undoubtedly mole crickets, flea - beetles and lace - wing bugs.

From enquiries made amongst market gardeners in the neigh - bourhood of the College, some information on eggplant growing in Trinidad was collected. The eggplant is one of the most profitable vegetable crops and is grown in the rainy season as a rule. The seeds are broadcast on well - prepared seedbeds of about 24 feet long by 4 feet wide. In about six weeks after sowing the seedlings are

transplanted out into their permanent sites in the field. Slightly raised cambered beds are popular and the spacings vary only slightly. The rows are either 3 feet or as much as 4 feet apart and the inter plant distances in the rows 2 feet 6 inches or 3 feet. A large handful of pen - manure is usually put around the base of each plant at planting - time and is gradually incorporated with the soil. Two weeks after planting out moulding is done, the moulding being repeated two or three times at roughly 3 - weekly intervals between mouldings. Moulding encourages rooting at parts of the plant covered up with soil and also provides support against strong winds. Side - dressings of Sulphate of ammonia are given three times during the growing season but complete fertilisation is growing as a practice. A programme of regular spraying to control insects is being appreciated and adopted.