

LEC. 1

SCOPE AND IMPORTANCE OF FRUIT CULTIVATION, NUTRITIONAL, COMMERCIAL, INDUSTRIAL AND MEDICINAL IMPORTANCE OF FRUIT CROPS

Importance of fruit growing

Cultivation of fruit crops plays an important role in the prosperity of any nation. It is generally stated that the standard of living of the people can be judged by per capita production and consumption of fruits.

Fruit crops are capable of giving higher tonnage of yield per unit area than other field crops. For example, a wheat crop produces on an average 12-15 tonnes from an area of one hectare in two crops per year. Even a hybrid rice variety can give only a maximum of 24 tonnes from one hectare land in three crops per year while a banana crop can yield 35-40 tonnes per hectare. Papaya gives 100-150 tonnes per hectare in 2 ½ years which works out of 40-60 tonnes per year and mango gives 25 tonnes from a hectare. From grapevine, a quantity of 60-80 tonnes per hectare in two harvests per year can be obtained under tropical climate.

Fruits are found to be a rich source of vitamins and minerals. For example mango, papaya and jack have the important constituent the beta carotene which is actually the precursor of vitamin A.

Mango and papaya fruits have been estimated to be very good sources of readily available beta-carotene, 1990 ug per 100 g in mango and 880 ug per 100 g in papaya. While bajra supplies only 132 ug of beta-carotene per 100 g, wheat supplies hardly 64 ug per 100g. It is disheartening to know that raw rice which is the major energy source in South Indian diet does not possess any carotene at all.

According to recent research results many phytochemicals found in fruits act as powerful antioxidants protecting cells and organs from damage caused by free radicals, neutralizing their damaging effects. They are the biologically active substances in plants that give them colour, flavour, odour and protection against not only diseases affecting the plants but also human being. Consequently hundreds of such plant substances are being investigated now for their role in preventing cancer and other degenerative diseases. Some of the promising phytochemicals which act as antioxidants are bioflavonoids (Vitamin P), phenolics, lycopene, carotenoids, antioxidant vitamins (C and E) and glucosinolates.

Oranges, lemons, limes and grape fruits besides being principal sources of vitamin C and folate are rich in a class of phytochemicals called limonoids. This antioxidant has been found to be very effective against cancer.

Sweet orange is the most common food recommended for a patient suffering from very high fever. It has a cooling effect as well as it is easily assimilated. Peyan, a variety of banana fruit is administered to patients suffering from chicken pox as it brings down the high temperature of the body.

The potential of fruit crops in the growth of national economy is noteworthy. The prosperity of the country lies in building up its foreign exchange reserves. Being a country having varied climatic conditions ranging from tropical to subtropical and to temperate, India has very immense potential for the production of different fruits and their export. During 1998-99, 1.18 lakh tonnes of fruits and nuts valued at Rs.24,714 lakhs were exported from India. During 2002 India ranked second in annual production of fruits with 48.57 million tonnes accounting for about 10.3% of total world fruit production.

Recent policies of the Government of India to encourage export of fruits and their products by announcing concessions to the fruit industry such as reduced air freight charges and exemption for storage charges for refrigerated air cargo at international airports have encouraged a number of private entrepreneurs / corporate bodies and NRIs to go in for planting larger area under fruit crops with an aim to export fruits and fruit products.

The foregoing account is given with a view to emphasize the growing importance of the fruit industry. As could be seen from the details given therein, the fruit culture is vital to the health and economy of the nation, from the stand point of increased food production, nutrition, trade and fruit based industries.