

INTRODUCTION

Sweet potato belongs to the natural order Convolvulaceae and is of the Morning Glory family. Unlike the Irish potato it is not a tuber but it is a root. It is a perennial crop but it is not treated as such in cold regions where frosts occur (17 p.83).

It is generally propagated by means of seed sprouts and vine cuttings. Except for breeding purposes it is seldom reproduced from seed obtained from fertilization of its blossoms. Sweet potato does not flower in cold countries (1 p.7) but flowers quite profusely here and set seeds. Flowering as well as setting of seeds seem to have been influenced by the climate, dry conditions favouring such phenomena. The variety Black Rock which flowered sparingly in the previous years flowers quite profusely and set seeds this year.

As regards the use of seed sprouts or vine cuttings as planting material, the latter is better in the sense that the sweet potato 'roots' formed from vine cuttings are more free from diseases (1 p.12, 3 p.17). But it should also be remembered that it takes more time to get vine cuttings and where the length of growing season is short, it may not be advisable to wait for the vine cuttings.

Even with cuttings it has been shown by Galang (35 p.97) and

Roque (22) that apical cuttings give higher yield than the basal cuttings. As the differences mentioned are large, only apical cuttings should be used wherever possible.

Cultivation.- Sweet potato is planted either on ridges or on the flat. Each has its own advantages regarding insect attack, cost of making ridges, efficient drainage and cost of harvesting. But higher yields have been obtained from planting on ridges (43 p.12).

Uses.- The roots form an important table food while the vines are fed to cattle (15 p.891, 34 p.378). In Philippines the shoots or young leaves of the vine are also eaten as "spinach" (25 p.128, 34 p.379). The culls, cut and partly rotted roots are used as feeding stuff (37). Alcohol can be manufactured from sweet potato and for that purpose quite a large quantity is grown (26, 38). The starch obtained from sweet potato is also very good for laundry work (25 p.129).

Food value.- As regards its food value it compares very favourably with Irish potato. It may even be regarded as better because it contains less water, higher percentage of available protein and higher percentage of available carbohydrates (3 pp. 12 & 16, 2 pp. 22-23).

Having decided the questions of soil, climate and manure the most important point to consider in the profitable raising of sweet potato is the choice of the suitable variety. It may be mentioned here in passing that the soil requirements of sweet potato are not so exacting and that it will grow on quite a variety of soils. Of course, a soil with light loam at the top and porous clay subsoil seems to be ideal (13). The manurial problem is not so acute (42 p.2, 44 p.1, 46 p.2) as in crops like maize although it does not mean that judicious manuring will not pay. In fact profitable return has been obtained by applying per manure up to 10 tons per acre (47 p.27). But a heavily manured soil will tend to increase the vegetative growth and a poor

yield of roots can result (34 p.379).

A suitable variety should have the following major qualities:-

(a) palatability.- This is placed even before yield capacity as a high yielding variety will not be of much use if it is not palatable. A quality test should therefore accompany any variety trial.

(b) yield.- It needs no comment; a high yielder will bring more return to the farmer.

(c) good storage.- Following the law of supply and demand the price of sweet potato is lowest at the harvest time when it is most abundant and rises appreciably in the later part of the season provided the quality remains the same. It is therefore more profitable for the cultivator if he can hold up the stock and spread his supply without much loss due to disease, shrinkage and pest. Apart from environmental factors that influence the storage, some varietal characters are the firmness of the skin and water content of the root. With a good variety, the skin should not peel off by light rubbing. Those having lower water content will shrink less than those with higher water content.

Other field characters may also be mentioned. A good variety should 'take' quickly and uniformly. Without excessive vegetative growth, a good variety of sweet potato should cover the ground well and thus suppress weeds and conserve moisture. It should also be not too long lived as moisture conditions may not be favourable or insect attack may be serious.

It is therefore quite clear how important it is to get a suitable variety for the particular locality and this can only be achieved by conducting properly designed experiments supplemented by quality tests and storage tests.