

GINGER CULTIVATION IN THE KANDY DISTRICT

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GINGER is an everyday requirement of the people. It is used largely in medicine and as a spice for flavouring and seasoning. The part used is the rhizome of the plant in its fresh or raw state (amu inguru) or when dried (veli inguru). Ginger is one of the chief drugs of the *vederalas* (Ayurvedic medical men) and there is hardly a disease for which it is not prescribed in some form or other.

A large quantity of dry ginger and ginger products is imported into the Island.

Ginger is grown in villages for home use. Nearly every village compound grows a few plants. Ginger cultivation, in recent years, has extended very appreciably in the Kandy district, particularly in Yatinuwara, in villages bordering Kadugannawa and Peradeniya, where it is considered one of the best-paying minor products. Ginger cultivation is also scattered in parts of Harispattu and Tumpane. Efforts have recently been made to extend the cultivation, especially in Harispattu. In Yatinuwara gardens from $\frac{1}{4}$ arce to 5 acres in extent have been planted with ginger. A recent census has revealed that during 1931 there are between 200 to 250 acres planted with ginger in Yatinuwara alone, and that there are many individual fields of from 3 to 5 acres.

In 1918 when investigations into the question of ginger cultivation in Kandy district were initiated, there were only about 80 acres planted with ginger and gradually the extent has increased and if small plots in village compounds are also reckoned, the extent under ginger at the present time can be stated to be about 400 acres.

Ginger is an annual crop. Planting begins in April and the crop is ready to be harvested from the end of December to February. If not raised in the first year, it will continue to grow and produce a larger crop of a better quality. Sometimes the crop is not raised and is allowed to remain in the soil for a few years. A large extent planted in 1930 was not lifted as the ruling prices were below normal. This year, too, it seems likely the crop will not be lifted.

Soils ranging from a light loam to heavy alluvium are considered most suitable for the crop. An essential condition is that the land on which ginger is grown should be well drained and it is to be observed that ginger is preferably grown on sloping land. The best results have been obtained in rich loamy soils that are capable of easy draining and on loams with about 30 per cent of sand. The soil for ginger is prepared with care. The land is cleared of all growth and tilled to a depth of 8 to 9 inches. It is then worked into fine condition.

Good size plump rhizomes from the previous crop are used for seed. These are stored in a cool place till needed for planting. Pieces of the rhizomes or sets, which contain 2 or 3 "eyes" or buds, are planted about three inches deep at about a foot apart. These are then covered lightly and a good application of straw, paddy chaff, or dried leaves, is given to keep the soil cool and moist. The seed rate varies very considerably. Some cultivators plant up to 2,000 pounds per acre but the average seed rate may be put down at from 1,200 to 1,500 pounds. The weight depends largely on the size of the rhizomes planted.

Sometimes a good quantity of well-decomposed cattle manure is spread over the soil as the plants grow up. The land is kept free of weeds till the plants have grown sufficiently themselves to smother the growth of weeds. Usually one or two weedings are given. Watering is not resorted to unless a very severe spell of dry weather sets in during the growing period.

If planted about the end of April and conditions and cultivation methods adopted are satisfactory, the main crop is ready to be raised by December. When the leaves begin to wither the rhizomes have attained a stage ready to be lifted. Before raising the crop, the withered leaves and stems are cut off. If at the period there is much rain, lifting is delayed. Harvesting can be spread over a period of three months from the time the ginger is ready, but, if a long period of very wet weather intervenes, the crop is not raised but allowed to grow for a second season. Ginger left in the ground for a second season's growing produces a heavier crop. The influence of this practice upon the quality of the produce however wants investigation. The yield per acre varies according to soil and other conditions and treatment afforded. A yield of fourfold is a fair average crop. Under good and satisfactory conditions yields of sixfold have been obtained. On the average the yield varies from 60 to 100 hundredweights per acre.

The cost of cultivating an area, including harvesting, has been estimated at about Rs. 200. To this has to be added the

cost of seed ginger which may be anything between Rs. 150 to Rs. 300 according to prevailing prices. Against this, taking an average crop of 80 hundredweights of green ginger which will sell in an average year at about Rs. 15 per hundredweight, a profit of about Rs. 500 can be made per acre. But, owing to heavy imports of Indian ginger in some years, the prices fall to Rs. 5 per hundredweight, and sometimes, it is a matter of difficulty to sell green ginger at all. There have been years, however, when ginger sold at Rs. 25 to Rs. 30 per hundredweight. In one year the price went up as high as Rs. 40 per hundredweight. There seems no reason why Ceylon could not produce all its own requirements of ginger. An improvement in the quality of the present material is a first necessity.

The common form in which locally grown ginger comes to the market is in its raw, green or fresh state (*amu inguru*). Very little curing or drying is done locally. The possibilities with dry or cured ginger are immense. Ceylon imports ginger and ginger products to the value of about a lac of rupees.

In 1930—2,889 hundredweights of dry ginger valued at Rs. 66,175 were imported, from British India alone. The whole of the Island's requirements can easily be met if growers would take to drying at least a part of their crops. The main reasons why the product is put on the market in its raw or green state are: (1) need for quick money; (2) lack of knowledge of proper curing methods, and the expense of curing. Ginger can be kept fresh from 3 to 4 months or even longer after removal from the soil, if carefully stored in a cool dark room. The rhizomes are heaped up and covered with dry leaves or straw which is kept moist. The heaps are broken up at intervals of about a fortnight and are re-made after removing any decaying or spoilt rhizomes. In this way the ginger is kept in its raw condition, but, considerable precaution is, however, needed to avoid deterioration in this practice and, perhaps, it is one by which an originally good article eventually often obtains a bad name.

In Ceylon very little ginger is cured or dried. The best locally dried ginger compares poorly with the imported article, and reports received on samples forwarded to London are unfavourable. There are several processes of drying. The commonest method is to dry the ginger in the sun after any adhering earth has been removed. This is then soaked in water to soften the ginger so as to enable the removal of the outer skin. The ginger is carefully peeled of its skin and washed in soft water after which it is spread out evenly and thinly on clean mats in the sun to dry in gentle heat. The process of drying is repeated for

3 or 4 days, until the ginger is well and uniformly dried. During the early stages of drying care is required to see that every part of the rhizomes gets evenly dried. If during the process of drying the ginger is exposed to rain or becomes moist or damp, it will get mildewed and lose colour.

Another method of curing is to steep the ginger in boiling water for about half-a-minute before the sun-drying process begins. The Jamaica method was tried locally some years back with satisfactory results. The rhizomes were lifted and the hanging roots were carefully removed without injuring the rhizomes which were then lightly dried and the adhering earth rubbed off. The ginger was then boiled or scalded. The skin was carefully peeled off and immediately after the clean ginger was exposed to the sun and a gradual process of morning sun-drying was followed for six days, or until the ginger was hard and attained a sharp breaking stage. This method of preparing ginger for the market produces best results.

CONCLUSION

In some years, as happened during the 1930-1931 season, growers have had to dispose of their fresh crops at a loss. It is therefore necessary, in the interests of ginger cultivation, that everything possible should be done to put on the market a readily saleable product and to investigate thoroughly the possibilities of manufacturing ginger products locally.

A move in this direction has now been made in Yatinuwara by the formation of a Ginger Growers' Union, and trials with imported types of ginger and manuring tests are being planned.

As stated before, the entire needs of the Island can be met locally and if the Ginger Growers' Union organises its work on proper lines, there is a hopeful future for this industry.