

GINGER CULTIVATION

BY

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It is accepted on all hands that for any commodity to sell successfully in the market it should be of the best quality possible. Many of the commercial products marketed in India and exported to foreign countries like England, France and America, are often-times condemned on the score that they are only second or third rate in quality. If, therefore, a product should find a ready market outside and fetch a very good price it is essential that it should be prepared in the most careful manner. One such product which is prepared in fair quantities on the West Coast, and which requires improvement both in respect of cultivation and method of preparation is ginger. The importance of paying adequate attention to the manufacture of this product on the West Coast can scarcely be over-stressed because a fairly good percentage of the bulk of the world's supplies of dried ginger is at present produced within Malabar, Travancore, and Cochin, and a major portion of the product that is exported now is considered very inferior in quality to that produced for example in Jamaica. It is stated that the United Kingdom alone would absorb increased supplies of ginger and would pay better prices for it, if it could only be better in quality. In view of this circumstance it may be advantageous to draw the attention of present and potential producers of this crop to the best methods of cultivating the plant and preparing the yield for the market.

Soil and Climate. The essential requirements as regards climate for the successful cultivation of ginger are a good rainfall and a high temperature during the growing period. Fortunately for the West Coast the existence of these two conditions leaves nothing to be desired. But the one very important thing that the cultivators of these parts do not fully realise is that ginger is an exhaustive crop and unless manures are readily applied in suitable doses to the soil, the yield will be materially reduced. The ginger plant will not stand water stagnation at all and does not thrive in very gravelly or very sandy soils. The soil best suited to this crop is a rich vegetable loam. During cultivation the land must be thoroughly drained, for if at any time water collects about the rhizome, the latter is sure to rot. Virgin forest lands after clearing by fire and removal of stumps can be successfully utilised for ginger cultivation but care should be taken to abundantly manure the soil, each time a crop is raised, for otherwise the land will soon get depleted and will produce practically nothing after three or four crops.

Application of Manures. It is with regard to the methods of manuring this crop and preparing the final product that a reform is immediately necessary on the West Coast. The manures that are commonly employed at present are an application of some green leaves and cowdung at the time of planting followed by a periodical dressing of liquid manure prepared by keeping cattle manure in suspension. The latter process coupled with the invariably unsatisfactory nature of the drains often results in the incidence of a

disease commonly known as 'black rot' which causes considerable damage to the crop. The 'black rot' attacks the underground parts of the plant and brings about partial if not entire decay of the rhizomes with the result that not only is the yield very adversely affected but also the final product becomes extremely inferior in quality. The principal constituents removed from the soil by ginger are lime and phosphoric acid, and hence it is essential that the crop should be well-dressed with fertilisers containing these two ingredients. A number of field scale experiments conducted by the Travancore Agricultural Department have demonstrably shown that an application of lime at the rate of 600 lbs. per acre just before planting followed by the dressing of a manure mixture of 2,000 lbs. of oil cake, 600 lbs. of fish guano and 600 lbs. of ashes, per acre in two instalments, one about 4 weeks and the other about two months after planting would not only materially increase the outturn but would also improve the quality of ginger and prevent 'black rot'. Experiments carried out by the Jamaica Agricultural Society with a view to ascertaining the most suitable manures for ginger have shown that a mixture composed of lime with 10 per cent each of soluble phosphates, ammonia and potash salts applied at the rate of 1 ton per acre gave the best results. It is therefore imperative that for obtaining better yields the cultivators on the West Coast should alter their present mode of manuring and adopt either of the above two manure mixtures making slight modifications if any to suit local conditions.

Lifting the Rhizomes. Another matter to which the attention of the cultivators of this crop should be drawn is in regard to the method of lifting the rhizomes out of the ground when they are ready to be taken. It does not seem to have been sufficiently realised at present that the slightest injury done to the rhizome when it is lifted out tends to reduce its market value enormously. In Jamaica, which produces perhaps the best grade ginger in the world the practice is to twist the rhizomes out of the ground very carefully with a fork or hoe. Careless digging with *mamotties* often results in several of the rhizomes either partially damaged or completely mutilated.

Preparing the Final Product. It is in the preparation of the final product that the greatest attention should be paid but the West Coast cultivators do not seem to have realised this sufficiently well. They should bear in mind that it is the quality of the final product that always determines its ready sale and price. A good percentage of the product that is prepared for export now is unpeeled dry ginger and consequently 'rough' and graded as second or third rate. White peeled dried ginger fetches a price which is at least 50 per cent more than the unscraped dry ginger and the cost and labour involved in scraping, washing and drying will be more than amply compensated for, not only by the increased price which this product will fetch but also because the 'peelings' obtained during scraping which are wasted now constitute a valuable by-product. Laboratory investigations of these peelings show that they contain between 4 and 5 per cent of essential oil on the moisture free material and that this oil has all the normal characteristics of oil of ginger. On the basis of this examination it is reported that carefully prepared dry 'Peelings' are likely to find a good sale at the rate of about 60 shillings per cwt. in foreign markets. It would therefore be much more profitable to prepare scraped white dry ginger and to carefully preserve its peelings instead of exporting the products as such after drying without peeling.

To Prepare best white Ginger. For the preparation of the best white ginger the rhizomes when lifted out of the ground should at once be rid of their

fibrous roots and should be thoroughly washed free from all mud and dirt. The rhizomes should not be allowed to lie in heaps for a long time as they are likely to ferment and undergo decomposition. As soon as the rootlets and excess of dirt and soil have been removed the ginger should again be thrown into water ready for 'peeling'. This is best done by means of a knife consisting merely of a narrow straight blade riveted to a wooden handle. The use of the hands, spoons broken pieces of pottery, etc., which are commonly employed for the purpose is sure to destroy the cells immediately below the skin which contain most of the essential oil upon which the pleasant aroma of the best quality ginger depends. As the rhizomes are peeled they should again be thrown into water and washed. It should be noted that the more thoroughly the washing is done the whiter will be the resulting product. It would be better if the peeled rhizomes were allowed to remain in water overnight and a small proportion of lime juice at the rate of about half a pint to seven or eight gallons of water were added to it at this stage. Some planters in Jamaica do this and they get an exceedingly white finished product. After being thoroughly washed in the manner above described the rhizomes should be dried in the sun preferably on a platform of levelled ground covered with cement. For obtaining the highest grade ginger uniform drying is essential and to achieve this each rhizome should be turned over by the hand at least on the first day. It is better to put the ginger out early at sunrise and take it in soon after sundown instead of leaving it in the drying yard during night time. In this manner completely dried ginger of very good quality could be obtained in about a week's time. The finished ginger is usually graded according to the size and colour of the rhizomes the best grades consisting of large 'hands' and free from even the smallest traces of mildew.

The best grade ginger when exported to foreign countries often fetches a price varying between £ 125 and £ 150 per ton depending upon market fluctuations. This clearly shows that if the cultivation of ginger is carried on more scientifically and if the dried ginger is prepared properly care being taken to collect and preserve all the 'peelings' in the manner outlined above, there is considerable scope for a very profitable enterprise in this direction, much more than what is obtaining at the present day.—*The Hindu Illustrated Weekly*.