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A Short note on Ginger Cultivation in the West Coast

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Ginger is one of the cash crops of the dryland farmer on the west coast occupying about 15,000 acres, with about 13,000 acres in Malabar district and about 2,000 acres in South Kanara district. Even though this is raised purely as a monsoon crop under somewhat similar conditions of soil and climate, the system of cultivation adopted in these two districts differs very widely. While the Malabar system is well known and has been published in departmental leaflets, the system adopted in South Kanara is practically unknown. This short note therefore attempts to describe briefly the two systems of cultivation.

Malabar System: With the receipt of summer showers in April the dry land receives four to six ploughings and the soil is brought to a fine state of tilth. Small raised beds 3 ft. wide and about 10 ft. in length are formed with 1 ft. space between beds. Small shallow pits are made on the bed 9" apart either way for planting seed material. In the month of May, a handful of mixture of cattle manure and ash is laid in each hole on which ginger bit weighing about 1/2 oz. with two sprouts is placed and covered with soil. The quantity of mixture applied comes to about 8 to 10 tons of cattle manure and 2,000 lb. of ash per acre and the seed rate varies from 800 to 1,200 lb. per acre. The beds are immediately provided with a thick layer of mulch with green leaves-preferably *Nuxvomica* at about 10,000 to 15,000 lb. per acre.

One weeding is done when the crop is about one and half months old and the beds are again mulched and earthed up slightly. The practice of giving a third mulching and slight earthing up is also in vogue when the crop is about three months old. The crop comes to harvest in December when the leaves start withering. All the dry twigs about the plant are removed and the rhizomes are lifted with mammutties or digging forks and cleaned free of mud and roots.

During the harvest, good healthy rhizomes are selected carefully for use as seed for the next years' crop. This seed is generally preserved in small pits dug in shade. A layer of sand or paddy husk is spread at the bottom and the rhizomes are packed over it.

The mouth of the pit is closed with a plank providing some empty space and the pit is sealed with mud plaster. A small outlet is sometimes provided for aeration. The pit is opened in May before sowing when rhizomes would have germinated well and be ready for planting. It is stated that under this method of storage, sometimes there is considerable loss due to soft rot.

The produce intended for sale is generally cured, bleached, dried and sold in the market as dry ginger. The process consists of removing the outskin on the surface of rhizomes, washing and soaking in water for a day, washing in clear lime water and drying for a week in the sun. By this process ginger of white colour is obtained. About 20–25% of the wet produce is recovered as dry ginger after curing and drying. This process of curing and drying is generally done by the farmers and the major portion brought to the market in the form of dry ginger known as Chukku.

South Kanara System: As in Malabar, in this district also the land receives four to six ploughings with the receipt of summer showers in April and the soil is brought to a fine state of tilth. Just before the onset of monsoon in May, a mixture of cattle manure and burnt earth is applied in lines 3½ to 4 ft. apart in the form of a layer about 2 inches thick and rhizomes weighing about 1—1½ oz. each with about half a dozen sprouts, are placed 12 inches apart in the line with all the sprouts lying along the line, and earthed up, the ridge being about 6—8 inches high. The rate of mixture applied initially consists of about 4 tons of powdered cattle manure and 2 tons of burnt earth or sudumannu. A second earthing up is given 4—5 weeks after the first, in the sixth leaf stage after a top dressing of burnt earth at 1 ton per acre – when the ridges are 15—18 inches high. A third and final earthing up is given applying about 1 ton of burnt earth when the ridges are raised by another 6 inches bringing the total height of the ridge to about 2 ft. As in Malabar the crop is ready for harvest by December when the leaves begin to dry up.

The crop is harvested in three stages according to the nature of the produce required. A small portion is harvested in September in a tender stage when the produce is sold for the preparation of ginger preserves, which industry has considerably developed in this district and for which there is a good demand. The major area is harvested in December and sold and shipped to Bombay in the green state. There is no regular system of curing and drying by the

growers. But a few merchants take to curing the produce in the method adopted in Malabar whenever there is no demand from Bombay for the green produce, and a very small percentage of the total produce is cured in this district.

The produce intended as seed for next year's crop is retained in the ground and harvested in February when it is considered to be fully mature and packed loosely in coconut-frond baskets with a lining of spear grass inside. The baskets are kept in the open air under shade on a raised platform to ward off white ants. Though there is some loss due to dryage, the seed keeps well by this method and the rhizomes develop good sprouts by the end of May when it is required for planting.

The total yield of green rhizomes ranges from 8000 to 10000 lb. per acre under both the systems of cultivation and after curing and drying it ranges from 1600 to 2000 lb. per acre.

The main differences between the two systems of cultivation described above are summerised below.

	Malabar system.	*South Kanara system.*
Planting	In small raised beds with 9″x9″ spacing using ½ oz. ginger bits.	In ridges with 1′ in the row of 3½–4 ft. between rows using ginger bits of 1-1½ oz.
After cultivation	Providing a heavy mulch of green leaves twice or thrice at intervals with slight earthing up.	Earthing up twice to form high ridges with no mulching at all.
Manuring	Only initial manuring at planting	Besides initial manuring, applying burnt earth twice before each earthing up.
Storing seeds	In closed pits.	In baskets kept open under shade.

Besides the main differences in the system of cultivation noted above, the South Kanara system offers the following advantage:

(1) The preparatory cultivation is easier in the absence of bed formation.

(2) Lower seed rate involving a saving of about 200–300 lb.

(3) The elimination of green leaves for mulching which considerably reduces cost of cultivation and releases the limited quantity of green leaves for application to paddy.

(4) Easier harvesting operation.

(5) The formation of well developed thicker rhizomes, the individual weight of rhizome ranging from 15—24 oz. as against 8—16 oz. in the Malabar system.

(6) Lower cost of cultivation yielding higher margin of profit.

There is also a keen aversion for the use of fertilisers like Ammonium sulphate which is supposed to adversely affect the keeping quality of the produce. It is also believed that the application of burnt earth and periodic earthing enable the formation of well developed rhizomes. In Mangalore market there is good demand only for such well developed rhizomes and merchants do not readily come forward to purchase the smaller sized thinner rhizomes obtained by the Malabar system, which is mainly converted into dry ginger in Malabar district.

Investigations on the merits of these two systems of cultivation, the optimum spacing to be adopted under the local system of planting, the influence of nitrogen and potash on yield and keeping quality and the merits of the two systems of storage deserve to be undertaken.