

Some economic spices of India

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It is a matter of gratification that our country is blessed with a number of useful spices like pepper, cardamom, clove, nutmeg, cinnamon, ginger and turmeric. An indication of the present position of spices in the country is presented below :

Names of spices.	Acreage.	Annual crop production in lbs. ('000).
Pepper	1,00,000	25,000
Cardamom	1,20,000	9,000
Ginger	12,000	9,600
Turmeric	50,000	1,50,000
Clove	200	200
Nutmeg	300	105
Cinnamon	400	1,000

By far the largest proportion of pepper production is from this country; cardamom, ginger and turmeric also have gained importance and rank high in the country's commerce. According to the available marketing reports, the annual export of spices to foreign countries is 1,51,000 cwts. of pepper, 10,500 cwts. of cardamom, 31,000 cwts. of ginger and 43,200 cwts. of turmeric. The position of clove, nutmeg and cinnamon however, remains very unsatisfactory. Although some of these spices are later introductions, the progress they have made over the last two and a half centuries and the position they have attained is far from satisfactory.

Distribution: The distribution of the spice-growing areas of this country can be indicated as: 1. The narrow belt of the low-lying country in the West Coast extending from Cape Comorin to the Ratnagiri Dt. in Bombay, which mainly grows cloves. 2. The humid hilly tracts of the Nilgiris, Lower Palnis and Tirunelveli are suited for a number of spice crops, particularly nutmeg, cardamom, clove and cinnamon. 3. The low-lying wet zones of Wynaad, Coorg, Mysore, Travancore, Cochin and Tirunelveli. The main commercial crop here is cardamom. 4. The wetter areas of Malabar, South Kanara, Coimbatore, Madura and Tirunelveli are known to cultivate ginger on a large scale. 5. The dry districts like Guntur, Cuddapah and parts of West and East Godavari, Salem and Coimbatore grow turmeric on a large scale.

Outside the limits of this province, cloves, cardamoms, turmeric and ginger are cultivated on a comparatively limited scale in Bombay, the Shan States, U. P., Bengal and the Punjab. It is estimated that out of about 2,87,000 acres covered by spices in the country over 2,46,000

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acres are confined to the South Indian Provinces and States. It is therefore needless to over-emphasise the importance of spice production in this part of the country. Although the progress of the spice industry has been satisfactory in respect of a few spices, the progress made by other spices reveals that there is room for considerable improvement of the spice trade in this country.

Imports and exports: In pepper, cardamom, ginger and turmeric, India can claim an enviable position in the world market. She has not only been able to meet her own internal requirements but has also been able to maintain a consistent export trade for decades past. On an average, India exports annually about 1,50,000 cwts. of pepper, 30,000 cwts. of ginger, 43,000 cwts. of turmeric and 10,500 cwts. of cardamom, worth in all about two crores of rupees. At the same time, with cloves, nutmeg and cinnamon, India has been dependent on Ceylon, Burma and Java even for its bare domestic requirements. This contrasting picture, obviously, indicates that no sustained efforts have been made by the Indian planters and the State in respect of the latter crops. The probable causes for the slow progress made in this respect are examined below :

Handicaps and difficulties: Two and a half centuries have passed by since the introduction of cloves, nutmeg and cinnamon in this country but the area covered by these spices hardly exceeds 800 acres today. Coffee, which was introduced a century later now covers 65,000 acres of cultivated land in South India alone. Such a disparity between the first group of crops and the latter naturally means that the former have not appealed to the Indian planter on account of (1) the extra care and nursing that the crops require in the nursery (2) the abnormal pre-bearing period associated with these plants as a result of seed propagation, which often culminates in disappointment caused by a disproportionately large number of male nutmeg trees. (3) The unhealthy and malarial conditions of the regions to which these crops are best suited, (4) want of adequate transport and residential facilities to enable effective supervision and profitable marketing. It is not, therefore, a matter for surprise that pepper, ginger, turmeric and cardamom with their easier methods of vegetative propagation and more convenient areas of production have gained the favour and fancy of the planters. But this does not mean that the country should be allowed to remain perpetually dependent on foreign lands where also these spices are produced under similar conditions.

It is a fact that in most orchards, clove and nutmeg trees are given a secondary place and the extent of attention bestowed is nothing short of neglect. Even so, from the condition of the existing plantations of these spices, one can easily judge that the production of clove and nutmeg is comparatively easy. The fact that these spices still flourish, strewn and scattered under neglect, right from the West Coast up to the foot-hills

of the central districts, is not only a proof of their hardy nature, but also that they have got acclimatised large in areas of land suited for their culture. Further, the preliminary trials conducted at fruit centres in Araku Valley and Wynaad have indicated that these un-utilised regions are well suited for the cultivation of these spices. It is obvious, therefore, that space has not been a limiting factor for their progress; but if these areas had been properly managed the country's output would have been several fold of what it is now.

Suggestions to overcome handicaps: The difficulties therefore lie in other directions. Finding out easier and more reliable methods of propagation is one of the primary criteria. Preliminary propagational trials made at the Burliar Fruit Station have indicated the possibility of grafting cloves on its stock, and that of nutmeg on *Myristica beddomei* and the successful rooting of cinnamon shoots by layering. Germination trials conducted at the same station have also disclosed that the low germinations of nutmeg and clove seeds can be increased to 97 per cent and 60 per cent respectively. The unhealthiness of the tract no doubt presents a serious handicap, when the planter could bestow so much attention on coffee or tea under similar conditions, these spices should deserve at least an equal attention, considering the economic gains.

The high cost of transport is often mentioned as one of the stumbling blocks in the way of progress of these spice crops. Although one cannot entirely deny this, it cannot be gainsaid that the same factor is applicable to a number of other crops like fruits, and drugs which are grown under the same set of conditions, but it has not stood in the way of their progress. It would be seen from the data furnished below on the cost of production of a pound of clove, that transport by itself does not contribute so much towards swelling up the cost of production as the other items.

Approximate cost of producing of one pound of dry clove (in the 10th year of bearing) in a village near Burliar Fruit Station:

	Rs.	as.	ps
Cost of plant material	0	2	10
Cost of culture (inclusive of irrigation charges) ...	0	3	6
Charges on harvesting and transporting ...	0	0	7
Curing charges etc. ...	0	0	2
Total ...	0	7	1

It is no doubt to be admitted that the net cost is subject to variation depending upon the degree of accessibility or otherwise of the place where the spice is cultivated. Thus it is obvious that sustained efforts do not seem to have been made in the improvement of spices, on the imaginary fear of handicaps and hindrances. In order that the country may get the maximum benefits out of these crops a serious endeavour is called for on the part of Indian planters on the lines above indicated.

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Conclusions: (1) The paper deals with the economic and commercial importance of some of the important spices of India. (2) A brief survey of the causes of the success and failure of the respective spice crops has been made. (3) The possible methods of crop culture which would go to set off the factors handicapping the progress of the spice industry have been indicated. (4) An appeal to the planter to make a serious endeavour to make good the deficiency in the spice crop production is made.

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Transmission of research on pest control

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Every cultivated plant or tree has its own specific insect enemies, and agricultural products, which, are grown and stored at so much expense and trouble, are also not exempt from the depredations of insects. It has been computed that over 200 species of insects occur as major pests and that the damage caused by them both in the field as well as the godown, deprives the ryot by about 10 to 15% of his legitimate earnings. It has also been estimated by various authorities that the overall food deficit for the entire country is from 7 to 15%. It would thus seem as if the entomologist by himself might be able to wipe out food deficit in the country by controlling insect damage to crops.

The Entomological Section of the Madras Agricultural Department was organised during the year 1912. The work has not always been quite an enviable one since it consists in organising a regular, unrelenting warfare against Nature, who, while having blessed us with her unlimited and bountiful resources, has also created the myriads of insect foes for us to contend with. Perhaps the chief handicap which has all along been felt was the inadequacy of staff, to transmit what little had been achieved by way of research, promptly and in time to the door of the ryot in times