CHAPTER-III

THEORETICAL PERSPECTIVE AND PROFILE OF ERODE DISTRICT

3.1 THEORETICAL PERSPECTIVE

3.1.1 INTRODUCTION

The changing economic order in the context of Globalization and Liberalization of world trade in the sphere of agriculture has opened up new vistas of growth. Spices sector is one of the key areas in which India has an inherent strength to dominate the global markets. Spice is defined as a strongly flavoured or aromatic substance of vegetable origin, obtained from tropical plants and commonly used as condiments or employed for other purpose on account of their fragrance and preservative qualities. Condiment consists anything of pronounced flavour used to season or give relish to food or to stimulate appetite.

Spices constitute an important group of agricultural commodities that is virtually indispensable in culinary art apart from culinary purpose, spices are also used as flavouring agents in beverages, active ingredients in Ayurvedic medicines, Colouring agents in textiles and in cosmetic products.

Recorded history elucidates the extreme facilitation of the rest of the world for the tabled wealth of India – the variety of spices. As a result of recent WTO regime, quality competitiveness has emerged as the prime mover of international food marketing. The present dispensation, of course, widens the access to global markets, for the value-added form of spices which has become a thrust area with tremendous potential. The value-added product can be simple as a clean, graded form or it can be a completely different product such as dehydrated curry powder, spice oil, and oleoresin. Urbanization and changes in food habits at the global level are all favourable factors that have opened up tremendous growth potential for value-added spices.
Indian share of the world trade is estimated as 45 – 50 per cent by volume and 25 per cent by value. The present annual production of spices in the country is 3 million tonnes from over 2.5 million hectares. The lion’s share (90 per cent) of the spices produced in India is absorbed in the domestic market and only 10 per cent is exported to over 150 countries.

3.1.2 GENERAL DESCRIPTION

Turmeric (\textit{Curcuma longa}) (Family: \textit{Zingiberaceae}) is a widely used condiment in India with many medicinal properties. It is used as a condiment, dye, drug, cosmetics and is also used in religious ceremonies. It is grown on an area of 2.23 lakh hectare in India with total production of 11.7 lakh tonnes during 2010-11. It passes through several processes to obtain the turmeric powder which is finally used for consumption. The raw turmeric undergoes many different steps during the process of obtaining the turmeric powder. India is also an important exporter of turmeric in the world. The important states cultivating turmeric are Andhra Pradesh, Tamil Nadu, Orissa, Karnataka, West Bengal, Gujarat, Meghalaya, Maharashtra and Assam. Out of these states, Andhra Pradesh alone occupies 35 per cent of the area under turmeric and accounts for 47 per cent of the national production.

Turmeric comes from the root of \textit{Curcuma longa}, a leafy plant in the ginger family. The root, or rhizome, has a tough brown skin and bright orange flesh. The spice is also sometimes called 'Indian saffron' thanks to its brilliant yellow colour. Indian turmeric has been known to the world since ancient times. Several unique properties of Indian turmeric make it the ideal choice as a food flavour, an effective ingredient in medicines and cosmetics, and as a natural colourant. With its rich curcumin content, which imparts the distinctive yellow colour, and other inherent qualities, Indian turmeric is considered the best in the world. India is today the largest exporter of turmeric to discerning countries like the Middle East, the UK, the USA and Japan. Some of the well-accepted varieties are: 'Alleppey Finger' and 'Erode turmeric' (from Tamil Nadu), 'Rajapore' and 'Sangli turmeric' (from Maharashtra) and 'Nizamabad Bulb' (from Andhra Pradesh). India also exports turmeric in powder form and as oleoresin.
3.1.3 HISTORY/REGION OF ORIGIN

Turmeric, with its brilliant yellow colour, has been used as a dye, medicine, and flavouring since 600 BC. In 1280, Marco Polo described Turmeric as "a vegetable with the properties of saffron, yet it is not really saffron." Turmeric has been used medicinally throughout Asia to treat stomach and liver ailments. It is also used externally, to heal sores, and as a cosmetic.

3.1.4 SENSORIC QUALITY

In fresh state, the rootstock has an aromatic and spicy fragrance, which by drying gives way to a more medicinal aroma. On storing, the smell rather quickly changes to earthy and unpleasant. Similarly, the colour of ground turmeric tends to fade if the spice is stored too long.

3.1.5 MAIN CONSTITUENTS

Turmeric contains an essential oil (max. 5%), which contains a variety of sesquiterpenes, many of which are specific for the species. Most important for the aroma are turmerone (max. 30%), ar-turmerone (25%) and zingiberene (25%). Conjugated Diarylheptanoids (1,7-diaryl-hepta-1,6-diene-3,5-diones, e.g. curcumin) are responsible for the orange colour and probably also for the pungent taste (3 to 4%).

3.1.6 CURCUMIN

Curcumin is the biologically active component of the turmeric plant, a member of the ginger family. Besides its well-known culinary history turmeric is what gives curry dishes their distinctive colour and flavour. Turmeric has been used in Ayurvedic medicine for several thousand years in India for a number of medical conditions.

In the Ayurvedic system of medicine, turmeric has been prescribed for the treatment of common colds, coughs, jaundice, and upper respiratory disorders.

East Indian healers have used turmeric as an anti-viral agent as well. Researchers published a study that indicated curcumin from turmeric as an ally in the treatment against HIV.2 The information in the study was suggestive at best, but the in-vitro results
could not be overlooked; curcumin was effective in inhibiting the replication of HIV in both acutely infected and chronically infected cells.

Turmeric has traditionally been used as a stomach aid as well. Scientists have isolated oils from the root of the turmeric plant, which have the ability to reduce excess gas in the stomach and intestines. Cineol, camphor, and linalool are also found in turmeric extracts and they have anti-spasmodic properties (this would explain the common Asian prescription of turmeric powder for stomach aches). An additional oil found in turmeric extracts is Borneal, a substance that helps indigestion.

Perhaps the most exciting application of turmeric (or its isolated active ingredient curcumin) is as an anti-inflammatory agent. Chinese and Indian systems of medicine have used turmeric both topically and internally to fight inflammation. Scientists have found that curcumin inhibits hyaluronidase activity. Hyaluronidase is an enzyme that is released by the body to protect itself at the site of an injury, but the continued release of this enzyme then causes inflammation and infection. Regular consumption of curcumin can keep the hyaluronidase levels in check.

One application yet to be frequently prescribed by health professionals is curcumin's use to combat arthritis-related inflammation. In fact, a very effective protocol against arthritis may be the combination of curcumin with glucosamines. A suggested dose of curcumin would be a 500 mg. extract four to six times per day along with 1500 mg. of either glucosamine sulfate or glucosamine hydrochloride.


In summary, curcumin may be helpful as a common cold aid, an anti-viral, a stomach and intestinal soother, and an anti-inflammatory agent. Turmeric, the source of
curcumin extract, is extremely well tolerated, and has been used on a daily basis by many Asian cultures.

### 3.1.7 ORIGIN AND DISTRIBUTION

It is a native of India. Apart from India, it is cultivated in Pakistan, Malaysia, Myanmar, Vietnam, Thailand, Philippines, Japan, Korea, China, Sri Lanka, Nepal, East & West Africa, South Pacific Islands, Malagasy, Caribbean Islands and Central America. In India, it is cultivated in the States of Andhra Pradesh, Maharashtra, Orissa, Tamil Nadu, Karnatak and Kerala.

Turmeric is a tropical crop cultivated from sea level to 1200 meter Mean Sea Level. It grows in light black, black clayey loams and red soils in irrigated and rainfed conditions. The crop cannot stand water-logging or alkalinity.

### 3.1.8 USES

Turmeric is used to flavour and to colour foodstuffs. It is a principal ingredient in curry powder. Turmeric oleoresin is used in brine pickles and to some extent in mayonnaise and relish formulations, non-alcoholic beverages, gelatins, butter and cheese etc. The colour curcumin extracted from turmeric is used as a colourant.
Turmeric is also used as a dye in textile industry. It is used in the preparation of medicinal oils, ointments and poultice. It is stomachic, carminative, tonic, blood purifier and an antiseptic. It is used in cosmetics. The aqueous extracts has biopesticidal properties.

3.1.9 TURMERIC (CURCUMA DOMESTICA VALET)

Turmeric is a very important spice in India, which produces nearly the whole world's crop and uses 80% of it. Turmeric usage dates back nearly 4000 years, to the Vedic culture in India, when turmeric was the principal spice and also of religious significance. In today's India, turmeric is still added to nearly every dish, be it meat or
vegetables. Turmeric is part of all curry powders. Due to Indian influence, turmeric has also made its way to the cuisine of Ethiopia.

In South East Asia, the fresh spice is much preferred to the dried. In Thailand, the fresh rhizome is grated and added to curry dishes; it is also part of the yellow curry paste. Turmeric is sometimes confused with saffron because of similar staining capabilities, although saffron gives a more orange colour. Since turmeric does not share the fascinating aroma of saffron, it is not an acceptable substitute or even alternative to it. The so-called white turmeric is a closely related plant (zedoary), whose fresh rhizome is not so much used as a spice, but eaten as a very tasty vegetable.

3.1.10 STORAGE OF TURMERIC

The country's sole turmeric exchange in Sangli district, Maharashtra, boasts of secrets gained through a centuries old practice storing turmeric in pits. These underground pits for storing turmeric stretch out in the open fields of the villages of Haripur and Sangalwadi in the Sangli district of Maharashtra it is possibly the most unique agri-commodity storing system in the country. After clearing the loose soil covering the pit, it is left open for about two to three hours. One cannot enter the pit until one finds out if there is any oxygen within. To ascertain this, a lantern is lowered into the pit. If the lantern does not go off, it is safe to enter the pit. It is this ingenious storing system, devised probably 200 years ago that has turned Sangli into a major trading centre for turmeric. Today, the country's sole turmeric exchange is in Sangli. Measuring 18 to 20 feet deep, the pits are considered the best storing areas for turmeric. Raw turmeric sold by farmers is stored in these underground pits for three to four years. These pits provide the best storage facility for turmeric as the quality of the commodity remains unchanged. This storage system has an added advantage in that the turmeric hardens and matures while in storage.
Figure 3.2: India Map on areas with Turmeric Cultivation in India

3.1.11 TREND IN INDIA'S SPICE EXPORTS

Board has formulated and implemented a three-tier quality certification programme conforming to Hazard Analysis and Critical Control Point (HACCP). Award of Spice House Certificate for good manufacturing practices, award of Logo for quality of the product and accreditation under ISO 9000 for international acceptance are the three certification systems adopted by the Board. Yet another area of activity centered upon by the Board is Value Addition. India can now boast as the monopoly supplier of spice oils.
and oleoresins the world over. In the case of curry powders, spice powders, spice mixtures and spices in consumer packs, India is in a formidable position. The consistent effort of the Board during the last one-decade has improved the share of the value-added products in the export basket to more than 55%.

3.1.12 PRICE MARKET

Turmeric prices have witnessed a phenomenal rally from Rs 4705/quintal in October 2013 to Rs 7192/quintal in February 2014, a rise of approximately 55 per cent. Since February 2014 prices have been drifting lower and have touched a low of Rs 6111/quintal in October 2014. Prices have traded lower over the last couple of months on new crop prospects and lower demand due to poor quality of arrivals in the spot market.

Figure 3.3 : Monthly Average Prices

![Monthly Average Prices](image)
India is the largest producer and consumer of Turmeric in the world, but in spite of that India has the largest share in world exports. The top export destinations of Indian Turmeric are the U.A.E., Bangladesh, Malaysia, Iran, the U.K. and the U.S.A. Exports of turmeric have risen significantly since 2011 due to efforts taken by the Spice Board of India on quality control. Many of the developed countries like the USA, the UK and Japan are taking much interest in purchasing Indian turmeric due to high degree of quality consciousness being followed by the Indian exporters.

Turmeric exports have fallen to 77,500 tonnes in 2013-14 from 88,513 tonnes in 2012-13 as exporters have kept away from the market due to limited availability of quality stocks. Turmeric exports are expected to continue the rising trend in 2014-15 on expectation of quality arrivals in the current season. Exports are forecasted to touch 80,000 tonnes in 2014-15.
As per the market sources exports of turmeric have been sluggish over the past few months due to lack of good quality arrivals in the spot markets. Exports are likely to pick up from April 2015 on expectations of good quality arrival from the new crop.

The turmeric season of 2014-15 is set to witness a good bull run in the near future on expectations of a drop in production this year coupled with lower carry forward stocks in the spot markets. Exports are also going to play a key role in 2014-15 as it has been witnessed a drop in the previous year due to unavailability of quality stocks. Looking at the current factors of demand and supply it is viewed that one can buy the April contract for a target of Rs 8500-9000/quintal.

3.1.13 TURMERIC IN ERODE DISTRICT

- A major portion of the produce (80% of Tamil Nadu production) is sold in Erode centre and the arrivals at other markets are limited as such.
- Major items of export from the District are handloom products, dairy products, turmeric, raw cotton, rice etc.
- Erode being one of the prominent trading centers in the State is well connected with transport and communication except for airport. The nearest airport is at Coimbatore.

3.1.14 MARKETING OF TURMERIC IN ERODE

Dr. A.T.N. Abubacker (2011) stated about the Marketing of Turmeric in Erode, in which spices constitute an important group of agricultural commodities, which are indispensable in the culinary art. India is the largest producer, consumer and exporter of spices. The International Spices Organization listed out 109 important varieties of spices in the world. Out of 109 varieties, 53 major spices are produced in India. Hence India is called the 'Land of Spices'. The major spices of the India are pepper, cardamom, chillies, turmeric, ginger and clove. India is the largest producer and exporter of turmeric in the world. India only meets out 46 per cent of the total demand for turmeric in the world.

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1 Dr. A.T.N. Abubacker stated Marketing of Turmeric In Erode, Kisan World, April 2011, Vol.38, No.4.
In India turmeric is cultivated in the states of Andhra Pradesh, Tamil Nadu, Kerala and Karnataka. Turmeric production in the states of Andhra Pradesh and Tamil Nadu jointly account for 76 per cent of the total turmeric production in India. Tamil Nadu State is ranked second, next to Andhra Pradesh among the turmeric producing states in India. Erode district is well known for the turmeric not only in Tamil Nadu, but also in India.

Erode district is the second largest marketing center for turmeric in India. Turmeric business was started 600 years ago in Erode. Hence Erode is called as the "Turmeric City". Erode district accounts for a significant share of 36.65 per cent to the total area under turmeric cultivation in the Tamil Nadu State. Similarly, its contribution to the total turmeric production in Tamil Nadu was 48.51 per cent. Productivity of turmeric was 5555 Kg/per hectare in the Erode district, which is higher than the state level productivity of 4156 Kg/per hectare.

3.1.15 PROSPECTS OF TURMERIC PRODUCTION

Next to Cotton and Sugarcane, turmeric is an important commercial crop grown in India. The analysis of secondary data related to area, quantity and value of turmeric production in India shows an encouraging trend, as the climatic conditions, fertility of the soil, rainfall and cultivation practices are highly favourable in the majority of states of India. The expansion of area under turmeric cultivation will enrich the existing quantity of turmeric production in the country. Though price fluctuation may exist due to instability in the market, these can be eliminated by effective export promotional measures taken by the government. Promoting turmeric cultivation in the country will enhance the inflow of foreign exchange and improve the economic condition of the Indian farmer.

3.1.16 LIVELIHOOD

The small and marginal farmers are certainly going to stay for a long time in India though they are going to face a number of challenges. Therefore, what happens to small and marginal farmers has implications for the entire economy and people’s livelihoods. But, they can adequately respond to these challenges only if there is efficient marketing system for handling their small surpluses. Otherwise, they will only be losers in the
process of globalization and liberalization. The viability of the small holdings is an important issue and promoting agricultural diversification towards high value crops through an efficient marketing system which is argued to be one of the means through which this can be achieved.

3.1.17 MARKET POTENTIAL

The scheme for the development / strengthening of agricultural marketing infrastructure, grading and standardisation was launched on 20 October 2004. Under this scheme, a credit-linked investment subsidy is being provided on the capital cost of general or commodity-specific marketing infrastructure for agricultural commodities and for strengthening and modernisation of existing agricultural wholesale markets, and rural or periodic markets in tribal areas. The scheme covers all agricultural and allied sectors including dairy, poultry, fishery, livestock and minor forest produce.

3.1.18 RURAL PRIMARY MARKETS

Periodic markets are the major rural markets in India. Rural Primary Markets include mainly the periodical markets known as haats, shandies, painths and fairs which are estimated to be more than 21,000 to a maximum of 47,000 in the country. Inspite of the development of permanent shops, these play an important role in the rural economy. They are the oldest trading institutions in existence. These markets provide an opportunity not only to purchase consumer goods but also to sell surplus agriculture and allied produce. The producers sell their produce directly to the consumers or to small rural retailers. The goods traded are generally of inferior quality and the volumes are low. These markets are largely unregulated and are generally held once a week. These are located in rural and interior areas and serve as focal points to a great majority of the farmers – mostly small and marginal for marketing their farm produce and for purchase of their consumption needs.

3.1.19 MARKETING CHANNELS

Agricultural commodities move in the marketing chain through different channels. The marketing channels are distinguished from each other on the basis of
market functionaries involved in carrying the produce from the farmers to the ultimate consumers. The length of the marketing channel depends on the size of market, nature of the commodity and the pattern of demand at the consumer level. The marketing channels for agricultural commodities in general can be divided into four broad groups as:

(i) Direct to consumer;
(ii) Through wholesalers and retailers;
(iii) Through public agencies or cooperatives; and
(iv) Through processors.

### 3.1.20 BARRIERS

Lack of infrastructure like storage, transportation, telecommunication, quality control, packaging, price risk management, integration of spot markets with commodity exchanges, pledge financing through a chain of accredited storage and warehouse receipt system, cool chains, market-led extension, and conducive framework for promotion of contract farming are some of the other important constraints for competitive agricultural marketing system in the country.

### 3.1.21 MARKET CHALLENGES

There are several challenges involved in marketing of agricultural produce. There is limited access to the market information, literacy level among the farmers is low, multiple channels of distribution that eats away the pockets of both farmers and consumers. The government funding of farmers is still at nascent stage and most of the small farmers still depend on the local moneylenders who are leeches and charge high rate of interest. There are too many vultures that eat away the benefits that the farmers are supposed to get. Although it is said that technology have improved but it has not gone to the rural levels as it is confined to urban areas alone. There are several loopholes in the present legislation and there is no organized and regulated marketing system for marketing the agricultural produce. The farmers have to face so many hardships and have to overcome several hurdles to get fair and just price for their sweat. The globalization has brought drastic changes in India across all sectors and it is more so on agriculture,
farmers and made a deep impact on agricultural marketing. It is basically because of majority of Indians are farmers. It has brought several challenges and threats like uncertainty, turbulence, competitiveness, apart from compelling them to adapt to changes arising out of technologies. If it is the dark cloud there is silver lining like having excellent export opportunities for our agricultural products to the outside world.

3.1.21 MAJOR BARRIERS AND CHALLENGES FACED BY THE SMALL FARMERS

- Lack of Active Support from the State Horti/Agri Departments
- Non-Availability of Quality Planting Materials
- Inadequate Knowledge on Better Post-Harvest Practices
- Lack of Adequate Infrastructure for Quality testing, Packing and Storage
- Non-Availability of Organic Certification Facilities

3.2 DISTRICT PROFILE

3.2.1 PROFILE OF ERODE DISTRICT

Erode District lies on the extreme north of Tamil Nadu. It is bounded mostly by Karnataka State and also River Palar covers a pretty long distance. To the East lies Namakkal and Karur districts. Dindigal district is its immediate neighbour to the South and on the West, it has Coimbatore and The Nilgiri districts, as its boundaries. Thus Erode district is essentially a land-locked area having no sea-cost of its own. Erode District is situated between 10°36’ and 11°58’ North Latitude and between 76°49’ and 77°58’ East Longitude.

The district can be portrayed as a long undulating plain gently sloping towards the river Cauvery in the south-east. The two major tributaries of river Cauvery viz. Bhavani and Noyyal drain the long stretch of mountains in the north. A part of the eastern boundary of the district is formed by river Cauvery, entering the district from Salem and flowing in a southerly direction.
3.2.2 HISTORY OF THE DISTRICT

Erode district, a part of Coimbatore, has its history intervened with that of Coimbatore because of its close linkage with the erstwhile Coimbatore district. It is very difficult to separately deal with the history of Erode region.

![Erode District Map](image)

Figure 3.5: Erode District Map

Together with the area comprised in Coimbatore district, it formed part of the ancient Kongu country known as "Kongu Nadu" history of which dates back to the Sangam era. It is found that in the early days, this area was occupied by tribes, most prominent among them being the "Kosars" reportedly having their headquarters at 'Kosamputhur' which is believed to have in due course become Coimbatore. These tribes were overpowered by the Rashtrakutas from whom the region fell into the hands of the
Cholas who ruled supreme during the time of Raja Chola. For a few years, the area remained under Vijaya Nagar rule and later under the independent control of Madurai Nayaks. The rule of Muthu Veerappa Nayak and later that of Tirumalai Nayak were marked by internal strife and intermittent wars which ruined the Kingdom. As a result of this, the Kongu region in which the present Erode District is situated, fell into the hands of the Mysore rulers from whom Hyder Ali took over the area. Later, consequent of the fall of Tippu Sultan of Mysore in 1799, the Kongu region came to be ceded to the East India Company by the Maharaja of Mysore who was restored to power by the company after defeating Tippu Sultan. From then, till 1947 when India attained independence, the area remained under British control who initiated systematic revenue administration in the area.

3.2.3 LAND AND LAND USE PATTERN

As per revenue land records, the total geographical area of the district is 572,264 hectares. Of those 199,389 hectares have been brought under cultivation as net area sown. This accounts for 34.8 per cent of the total area of the district. Area sown more than once is 25,397 hectares i.e. 12.73 per cent of the total net area sown. Total cropped area is 224,786 hectares i.e. 39.2 per cent of the total area in the district. Forests account for 227,511 hectares i.e. 39 per cent of the total area. Cultivable waste has been reduced to mere 1707 hectares in the district. Less than 9.2 per cent of the total area is put to non-agricultural use (53,004 hectares). However, 14.5 per cent is accounted for by fallow lands (83,368 hectares). Trees, crops, groves, orchards etc. together account for about 0.6 per cent of the total area in the district. Of the 199,389 hectares brought under cultivation, 25397 hectares are sown more than once, thus enhancing the total area cropped to 224,786 hectares. If this is taken into account, the percentage of total cropped area to total area of the district will work out to 39.2 per cent thus resulting in better utilization of available land resources in the district.

3.2.4 AGRICULTURE

Though noted for trade and industry, the district is by no means backward in the field of agriculture. Close association and link with Coimbatore district which has the
advantage of two premier agricultural institutions viz., the Agricultural College and the Research Institute have helped the rioters to keep abreast of developments in agricultural methods and practices and also improved strains of seeds. The publicity and developmental activities launched by the agricultural institutions in Coimbatore penetrated far and wide in Erode district. Added to this was the propaganda and demonstration organised by the agricultural department. Availability of irrigation facilities coupled with the awareness of improved methods of farming helped the agriculturists to forge ahead. Though the soil is not the best, utilisation of improved methods of cultivation and improved seeds together have helped the agriculturists in the district to maximise their output. Paddy accounts for 86,939 hectares. Next to Paddy is corn which is raised in more than 11240 hectares.

Pulses are not much cultivated in the district. Only 31498 hectares are used for raising pulses. Among condiments and spices, turmeric and chilies are significant. **Cultivation of turmeric extends over 14533 hectares.**

Among the non-food crops, oil seeds constitute the major item. 55.23 per cent of the total area under non-food crops is accounted for by oil seeds. A total of 95018 hectares is under oil-seeds cultivation and of these groundnuts account for 55696 hectares while gingili accounts for 24,084 hectares. Ground-nut is the most popular oil-seed raised here.

Among other non-food crops raised here, the most important items are cotton, sugarcane and tobacco. Sugarcane is raised in 30903 hectares. Cotton is grown in few hectares while tobacco is raised in 4923 hectares in the district. In respect of all commercial crops also improved varieties have been adopted by the farmers and this has helped them to maintain high yields.

**3.2.5 IRRIGATION**

The sub-soil in most parts of the district being sandy and surface soil thin and of poor quality, the farmers have to depend heavily on irrigation facilities. The uncertain aspects of North-Eastern monsoon and not too favourable contribution from the South-
West monsoon make the plight of local agriculturists miserable. The chief sources of irrigation in the district are the canals and wells and these constitute the main stay of the farmers. The main sources of irrigation are the canals and wells. Canals under various irrigation projects together help to irrigate about 98,805 hectares of land while the wells irrigated 68,570 hectares. Areas irrigated by tanks and springs and channels are negligible. The net area irrigated under various sources together constitutes 58.9 per cent area irrigated to total area sown in the district. The net area irrigated in the district totals to 209,432 hectares.

Rivers in the Western Ghats fed mostly by the south-west monsoon are the chief sources of irrigation in the district. These rivers are Cauvery and Noyyal. Apart from these main rivers, there are a few uncertain jungle streams which also contribute towards better irrigation and drainage in a small way. The main irrigation projects in the district is the Lower Bhavani project. The completion of Lower Bhavani project under First-Five-year Plan has boosted the irrigation resources considerably.

3.2.6 INDUSTRIES AND TRADE

In the industrial map of Tamil Nadu, Erode district has a place of unique importance with 40.32 per cent of population depending on non-agricultural sector. Industries and trade naturally occupy a place of prominence in the economy of the district. Industries that flourished in early days in the area were handloom weaving, carpet manufacturing, cart manufacturing, oil-pressing, brass vessel manufacturing etc. Though these industries flourished well in the early days, the advent of modern times changed the fate of some of these well established ancient industries. However, the industry still survives here and load-carrying carts are still manufactured. Similarly, Bhavani which was noted the world over for its very beautiful carpets, has shrunk into insignificance and the industry is almost non-existent now. Bhavani, Erode and Gobichettipalayam continue to occupy an important place in the field of oil-pressing. The industry which has been able to totally withstand the onslaught of modernisation has been the handloom weaving. Erode and Chennimalai still hold their sway and the district is noted for its handloom products, which include cotton sarees, bed-spreads, towels, furnishing fabrics etc. Two other important production centers are Bhavani and Jambai.
The cotton textile industry in Coimbatore and handloom industry in Erode district have encouraged the growth of various ancillary industries to meet the needs of the textile mills. Chennimalai, Erode, Gobichettipalayam etc., are important centres where cotton ginning is carried on a large scale. There are also important dying works in Erode, Chennimalai and Bhavani. A number of factories engaged in cotton fabric printing are functioning in Erode. Rice milling is yet another industry which has been able to hold its own. Erode, Bhavani and Perundurai are the centers where a number of rice mills are flourishing. These mills carry on lucrative trade in the west coast. A number of lorries carrying boiled rice ply between the centers and the delivery point in Kerala. There are a number of leather tanneries in Erode area. Large quantities of leather are brought here for tanning and later exported to foreign countries. The Government has also come forward to provide incentives to small entrepreneurs. Industrial estates have been set up at Erode and other places where full facilities are offered to small industrialists. Small units have been set up here for the manufacture of steel furniture. There is also a unit at Erode for the manufacture of bolts, nuts and screws. Both manufactured items as well as agriculture commodities are included in the trade items. Major items of export from the district are handloom products, dairy products, raw cotton, rice etc. A large number of lorries, carrying various items into and from the district ply day in and day out.

3.2.7 POLICY MEASURES AND INITIATIVES BY THE SPICE BOARD

Spices exports have registered substantial growth during the last five years, registering an annual average growth rate of 21% in value and 8% in volume. During the year 2010-11, spices export from India has registered an all time high both in terms of quantity and value. In 2010-11 the export of spices from India has been 525,750 tonnes valued at Rs.6840.71 crore (US $ 1502.85 Million) as against 502,750 tonnes valued at Rs.5560.50 crore (US $ 1173.75 Million) in 2009-10, registering an increase of 28% in dollar in terms of value and 5% in volume. India commands a formidable position in the World Spice Trade with 48% share in Volume and 44% in Value.
3.3 CONCLUSION

The WTO accord has made producers in different countries of the same commodity to compete with each other. The Indian spice producer has to increase yield levels in many spices making it available high-tech producing technologies. In export front, there is an increasing demand for value-added spices which India can make use of with the already available technologies. Demand for natural colour and seasoning and flavouring agents are also likely to have a surge in export of spices, especially in the light of demand for Indian culinary specialities in Europe; the US and the Far East.
REFERENCES


2. Working Committee Report, supra n.4, p.80.
