



Salt Production Trend in Thoothukudi District

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Abstract : India produces nearly 24 million tonnes of raw salt annually, out of which 20 percent is exported mainly to Japan, China, US and Indonesia. Salt producing states in India, in order of production, are Gujarat, Tamil Nadu, Rajasthan, Maharashtra, Andhra Pradesh, Orissa and West Bengal. Salt lands are leased out to different types of producers, viz., public, private, cooperative and individual manufacturers. The other categories of salt producers include the licensed private salt works having more than 100 acres, those having between 10-100 acres, licensed co-operatives and unlicensed private salt works. In Tamil Nadu, Thoothukudi is the largest producer of salt with an average estimated production of 16.17 tonnes of salt per annum. This paper gives a comprehensive picture of the current salt production scenario in Thoothukudi district. The study is descriptive in nature and is based on secondary data obtained from Annual Administration reports of Tuticorin circle collected from the Assistant Salt Commissioner, Salt Department, Thoothukudi. This research paper shows a clear picture of salt production trends for ten years from 2003-04 to 2012-13 and also reveals the prevailing productivity conditions of salt in Thoothukudi district with effect to rainfall. It also provides insight into various improvements that could be done to promote production in the salt industry in the years to come.

Keywords: Salt production, salt industry, Thoothukudi.

1. Introduction

Salt (NaCl) is one of the oldest commodities used in man's food and occupies valuable position in the history of human civilisation. Salt during the ancient times was used as an important commodity entering into international trade all over the world and it was used as a weapon to conquer enemies by cutting its supply. As the time advanced, uses of salt increased and the method of producing salt has also undergone significant changes. In modern times salt has about 14000 known uses from food to industry to de-icing. Almost sixty percent of salt production in the whole world goes to industrial usage. Only the remaining forty percent is used for miscellaneous purposes that major constitutes the application in the form of food additives. India produces nearly 240lakhtonnes of raw salt annually, out of which 20 percent is exported mainly to Japan, China, US and Indonesia.

2. Salt Industry in India

Indian protests against the salt tax began in the 19th century and remained a major contentious issue throughout the period of British rule. Salt Satyagraha by Mahatma Gandhi in March, 1930 changed the whole context and salt was excluded from taxation. In India, salt producing states, in order of production, are Gujarat, Tamil Nadu, Rajasthan, Maharashtra, Andhra Pradesh, Orissa and West Bengal. The average annual production of salt is sufficient to meet the requirements for human consumption and industrial use, leaving a surplus for export. The Salt Commissioner's Organisation with its headquarters at Jaipur is headed by the Salt Commissioner is responsible for all activities. The Salt Organisation is responsible for monitoring production, distribution, supply of salt and administration of Salt Cess Act, 1953 and Rules made thereunder. Salt is manufactured mainly by solar evaporation of seawater, sub-soil brine and lake brine. Sea salt constitutes about 70 per cent of the total salt production in the country. Salt is being produced in 52 districts in the country. Private sector continues to contribute significantly in the production of salt. 90.3 per cent of the salt is produced by the private sector. Public or joint sector contributes about 1.5 per cent and the rest 8.2 per cent by the co-operative sector during 2012-13. The current annual requirement of salt in the country is estimated to be 60 lakh tonnes for edible use and 65 lakh tonnes for industrial use. Besides about 15 lakh tonnes of salt is exported every year.

3. Thoothukudi – Salt Capital of Tamil Nadu

In Tamil Nadu, common salt is produced in large quantities in the districts of Thoothukudi, Nagapattinam, Ramanathapuram and Kanyakumari. Thoothukudi district produces substantial quantities of edible salt for consumption basically in South India. It is one of the ideal locations for producing salt as its climate, soil and availability of brine are great assets for producing quality salt. Salt production is carried out on an area of 25,000 acres where about 50,000 workers are involved in the process, directly and indirectly, and the region produces about 25 lakh tonnes of salt every year. Normally, salt production starts either in the first week or in the middle of February and goes on till September. Salt could be a finished product only when water in salt pan reservoir reaches 24 degree baume (density). It would require three weeks or a month to achieve full production. Since the salt industry lacks skilled workforce, it is a challenging task to produce quality salt.

4. Need for the Study

Salt is an important product without which food seems tasteless. Though it is added in small quantities to our food, its production involves huge capital and labour. Thoothukudi district is called the salt capital of Tamil Nadu as it is the largest producer of salt in the state. Therefore, it is necessary to understand the performance and role of salt industry in the area. Hence, the researcher has made an attempt to study the trends in production of salt in Thoothukudi district.

5. Research Objectives

The following are the objectives of the study

1. To know the production of salt in Thoothukudi district for ten years from 2003-04 to 2012-13
2. To know the land resources available for salt production
3. To understand the trend of salt production in Thoothukudi district with comparison to rainfall

6. Research Design and Methodology

The present study is descriptive in nature which relies exclusively on secondary data and it aims to reveal the performance of Thoothukudi district's salt industry for ten years from 2003-04 to 2012-2013.

6.1 Scope of the Study

Seventy percent of Tamil Nadu's salt production is from Thoothukudi district. It has lot of underground saline water that can be used for extracting salt from 1500 salt pans. It provides large scale employment to many labourers. This research is carried out in the areas of Thoothukudi district as it is much suited for salt production.

6.2 Data collection and analysis

Only secondary data obtained from the Assistant Salt Commissioner, Salt Department, Thoothukudi are used in this study. It includes the Annual Administration reports of Tuticorin circle for 10 years from 2003-04 to 2012-2013. Further, other secondary data is collected through books, magazines, journals and websites.

Microsoft Excel 2010 is used to analyse the data. The tools used for analysis are Growth ratio, Average annual growth rate, Compound annual growth rate, Bar chart and Line chart. Adequate findings, appropriate suggestions and conclusions are given based on the various tools applied for data analysis.

7. Results and Discussion

The present study mainly focuses on the production of salt in Thoothukudi district. It also reveals the land resources availability and impact of rainfall on salt production in the study area.

The changes in production trends are also shown with the help of the respective growth rates.

7.1 Land resources for salt production in Thoothukudi district

Salt industry is a major source of livelihood to many people including manufacturers, traders, brokers and workers of the areas in and around Thoothukudi district. A vast area of land is occupied by the salt industry for its production

activities by individuals as well as government holdings. As the climate induces salt production, good quality of salt could be obtained here. The following table (Table 1) shows the available land resources in Thoothukudi district that is utilised for salt production and its growth rate over ten years.

Table 1- Land resources for salt production in Thoothukudi district

Year	Area cultivated (hectares)		
	Organised	Unorganised	Total
2003	3376.77	2589.99	5966.76
2012	3209.07	4235.84	7444.91
Growth ratio (%)	-4.97	63.55	24.77

Source: Annual Administration Report Tuticorin circle 2003-04 to 2012-13.

During the period of study (2003-04 to 2012-2013), the total area for salt production in Thoothukudi district is increased by 24.77 per cent, however a decline in growth is shown in the organised sector by -4.97 per cent whereas the unorganised sector shows a growth of 63.55 per cent. Organised sector includes the government recognised units of salt production which are liable to pay salt cess of Rs.3.50 per metric tonne. The unorganised sector refers to all those individual manufacturers producing salt from the non-licensed sector units. The salt industry is characterised by a major share of salt from the unorganised sector with 4235.84 ha of land for salt production.

7.2 Impact of rainfall on salt production

Rainfall plays an important role in determining the quality of salt produced. It is so powerful that salt production could not be undertaken for months together when there is rainfall. Almost three months duration is required to bring back the whole scenario for production. The following chart (Chart 1) shows the impact of rainfall on production of salt in Thoothukudi district.

Chart 1- Impact of rainfall on salt production



Source: Annual Administration Report Tuticorin circle 2003-04 to 2012-13. District Statistical Handbook Thoothukudi district 2014-15.

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From the above chart, salt production for 10 years in Thoothukudi district from 2003-04 to 2012-13 is shown. Salt production shows an increasing trend in this region. Salt production and rainfall of Thoothukudi district is plotted which shows the trend of salt production changing with the trend of rainfall. More rainfall results in decreased salt production. In the year 2012-13, 42.62mm of rainfall is recorded which has facilitated maximum salt production of 1658866 tonnes. Therefore, in this region rainfall is a dominating variable for salt production.

7.3 Growth Rate of Salt

Salt is an essential ingredient and a part and parcel of life. Thoothukudi stands first in producing salt all over Tamil Nadu. It is a major supplier of salt for various purposes including edible and industrial use to all the states of South India. Annual growth rate (AGR) is the change in the value of a measurement over the period of a year. The following table (Table 2) shows the average annual growth rate of salt production in Thoothukudi district.

Table 2 – Average annual growth rate of salt in Thoothukudi district

Year	Production (tonnes)	Annual growth rate
2003-04	1394861	
2004-05	1381138	-0.98
2005-06	1451269	5.08
2006-07	1167166	-19.58
2007-08	1142961	-2.07
2008-09	1063095	-6.99
2009-10	1526471	43.59
2010-11	1504611	-1.43
2011-12	1619926	7.66
2012-13	1658866	2.40
Average annual growth rate (%) 2.77		
Compound annual growth rate (%) 1.75		

Source: Annual Administration Report Tuticorin circle 2003-04 to 2012-13.

From Table 2 it is clear that the annual growth rate for salt production each year compared to the previous year has declined during the years 2004, 2006, 2007, 2008 and 2010 with -0.98, -19.58, -2.07, -6.99 and -1.43 per cent respectively. The annual growth rate has increased for the years 2005, 2009, 2011 and 2012 with 5.08, 43.59, 7.66 and 2.40 per cent respectively. The period 2009-10 has recorded

the maximum annual growth rate of 43.59. With comparison to the previous chart (Chart 1), it is evident that reduction of rainfall in the current year (2009-10) compared to the last year has led to increased production. The average annual growth rate for the ten years from 2003-04 to 2012-13 is 2.77 per cent which explains that there is a growth rate of 2.77 percent salt production every year. **Compound annual growth rate (CAGR)** is the annualised average rate of growth between given years, assuming growth takes place at an exponentially compounded rate. Here, it is used to determine the production trends of salt industry in Thoothukudi district for 10 years. CAGR denotes that salt production grows every year at a compounded rate by 1.75 per cent.

8. Findings and Suggestions

The present study is undertaken to understand the production of salt in Thoothukudi district. Salt production is carried on since ages here as it is a generation activity done by the workers through solar evaporation process. Many salt manufacturers and traders are engaged in salt producing and marketing activities to their customers spread over South India. Thoothukudi district produces a significant quantity of salt sufficient for home consumption as well as export. The climate here is best suited for salt production. This study justifies the fact that rainfall affects the production of salt to a major extent. During rainfall, the insufficiency is compensated by importing salt from Gujarat through sea. The purity and quality of salt manufactured in Thoothukudi area is a little less comparatively, as it is exposed to the industrial effluents in air and water causing sediments on uncovered salt along the salt pans and dull shades of white colour in salt respectively. There is a constant growth rate in salt produced as a large number of units are involved in production and also the Salt department provides assistance to many small and medium scale producers in producing quality salt. Due to lack of advancement in technology in the salt industry and reducing labour contribution, the salt is produced here relatively less than its original efficiency. With the corrective measures done, salt industry in Thoothukudi district could improve its manufacturing capacity and provide more employment to the unskilled rural and skilled urban population.

9. Conclusion

Thoothukudi district is the major salt producer in the state and contributes 30 per cent of the total salt production of the country. The district has a coastal line of 163.5 kms and is a great source of brine required for salt production. Salt

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production is induced here due to the climatic conditions which favours good quality salt to be produced within the stipulated period of time. The main factor influencing salt production here is rainfall. The production seems to be high when there is less or no rainfall. Decreasing trend is seen growth rate of organised area whereas for unorganised areas it is positive. Hiring labour is also costly and difficult to find workers to carry out salt farming. Growth is seen in salt production with the positive indication from average annual growth rate and compound annual growth rate. Government must come forward to concentrate more on salt production by promoting the mechanisation in salt industry, which has more scope for production thereby improving export earnings.

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