

Evaluating the Importance of Natural Rubber in the Plantation Economy of Kerala



Economics

KEYWORDS: Agriculture Income, Trends, Area, Production, Productivity

Rajesh R

ABSTRACT

Among the major plantation crops, natural rubber occupies a pivotal role in terms of cropping area as well as in generating significant share in agriculture income of the state. In this context this article tries to understand the importance of natural rubber in the plantation economy of Kerala by looking in to therelative importance of natural rubber in terms of area, production and productivity trends of natural rubber in Kerala vis-à-vis to the all India performance of natural rubber. The article also tries to evaluate the contribution of agriculture in the state GDP as well as the growth in agriculture income over the years while also attempts to capture district wise variation if any in the area and production of natural rubber in Kerala.

I Introduction

Plantation crops like rubber, cardamom and pepper as well as paddy, coconut occupies a predominant portion of the total cropping area and thereby contributing enormously to the agriculture income of state. Among the major agriculture crops, natural rubber occupies a pivotal role in terms of cropping area and share in agriculture income. In this context this article tries to understand the importance of natural rubber in the plantation economy of Kerala by looking in to the relative importance of natural rubber in terms of area, production and productivity trends of natural rubber in Kerala vis-à-vis to the all India performance of natural rubber. The article also tries to evaluate the contribution of agriculture in the state GDP as well as the growth in agriculture income over the years while also attempts to capture district wise variation if any in the area and production of natural rubber in Kerala.

II Contribution of Agriculture to Kerala State GDP

During 2011-12, the contribution from primary, secondary and tertiary sectors to the GSDP at constant prices (2004-05) was 9.48 per cent, 20.22 percent and 70.30 per cent respectively. At current prices, the primary, secondary and tertiary sectors contributed 15.11 per cent, 21.05 per cent and 63.22 per cent respectively to the GSDP during 2011-12 (Economic Review, 2013)

Even though the share of agricultural in the total state GDP declined, agriculture income experienced an increase. Agriculture income in the state increased from 10781.3 crore in 1990-91 to 1220.5 crore in 2011-12 thereby increasing 13 percent during the past 12 years. At the same time the share of agriculture to SDP declined sharply from 23.14 percent in 1990-91 to 7.17 in 2011-12. Period after 2000-01 witnessed steep decline in the share of agriculture in the total SDP of the state. Agriculture share in total SGDP declined almost 60 percent during the period from 2000-01 to 2011-12 whereas agriculture income during the period from 1990-91 to 2011-12 showcases a positive trend.

Figure 2.1 Agriculture Income in Kerala and Share of Agriculture Sector of Kerala to SDP of Kerala



Source: Agriculture Statistics, 2005 to 2013

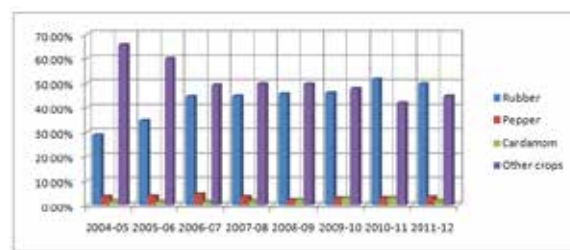
Economic Review, Various Issues

This trend is the outcome of an increase in the agriculture commodity prices and because of the increase in productivity irrespective of the fall in area of agricultural commodities. In the case of the share of real agricultural income to SDP reveals the expansion of industrial and service sector of the economy and also change in the occupational structure of the economy. These structural and occupational changes in the economy are good signs while looking through the prism of development. But the sustainability of an economy with too much reliance on service sector oriented growth remains a question mark in the political and economic discourse of the state.

III Income Share of Main Agriculture Crops in Kerala

The composition of various crops in the total agriculture income of the state also witnessed some drastic shift during the period. The period witnessed the emergence of rubber replacing coconut as the principal income generating crop in the state.

Table 2.2 Income Share of Main Agriculture Crops in Kerala



Source: Agriculture Statistics, Various Issues

Fall in production, increasing vulnerability to diseases and fall in price of coconut resulted in the fall in the income share of coconut in the state. Share of coconut in the total agriculture income of the state declined from 65 percent in 2004-05 to 44.73 percent in 2011-12.

During the corresponding period the share of rubber in the total agriculture income of the state increased from 28.65 percent in 2004-05 to almost 50 percent in 2011-12. Increase in area of cultivation, higher production and productivity and increase in the price of rubber in the commodity market played an important role in the emergence of rubber as the principal income generating crop in the state.

IV Area-Production-Productivity trends of Natural Rubber

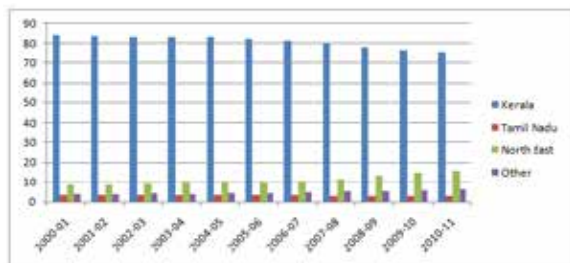
This section looks into the area production and productivity trends in Kerala in comparison to the all India performance. An attempt is made to look into district wise variations in terms of

the above mentioned trends.

V Relative Contribution of Various States in terms of area

Even though the area of natural rubber in traditional rubber growing states like Kerala and Tamil Nadu increased during the period, there is a visible fall in the share traditional rubber growing states in the total area of rubber production in the state.

Table 2.3 Percentage share of area of natural rubber in various states in India



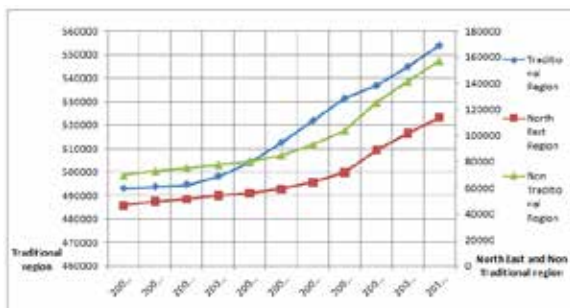
Source : Rubber Board,2012

Share of Kerala in total area of rubber in the country fell from 84.3 percent in 2000-01 to 75.1 percent in 2010-11. Share of natural rubber in Tamil Nadu reduced from 3.3 percent in 2000-01 to 2.8 percent in 2010-11. In the case of north east region comprising of Tripura, Meghalaya and Assam, the share in total area of rubber plantation in the country increased remarkably from 8.4 percent in 2000-01 to 15.8 percent 2010-11. During the period from 2000-01 to 2010-11, there was an increase of 88 percent in the area of rubber plantation in north east region.

VI Share of Natural Rubber in India –Traditional v/s Non Traditional Regions

Area of natural rubber in the country increased significantly during the period from 2000-01 to 2010-11. Kerala and Tamil Nadu falls under the category of traditional regions whereas states like Assam, Tripura, Meghalaya, Maharashtra, Karnataka, Goa falls under the category of non-traditional regions. In the traditional rubber growing states like Kerala and Tamil Nadu the area of natural rubber increased from 493075 Ha in 2000-01 to 553995 Ha in 2010-11. Among the two states, in Kerala alone the total area increased from 474365 Ha in 2000-01 to 534228 in 2010-11.

Table 2.4 Area Hectare in Traditional and Non Traditional Regions-India



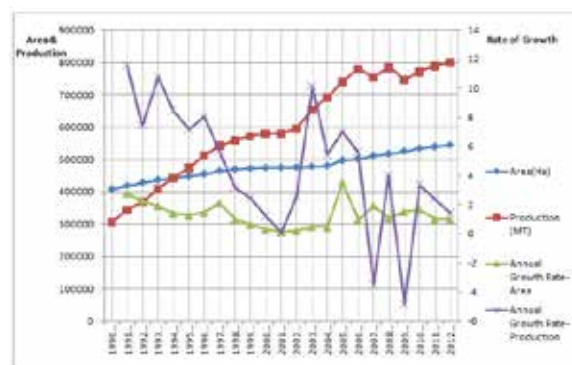
Source: Calculation based on Rubber Board Statistics, 2005 to 2012

In the north east region, considered as the major non-traditional rubber growing states like Tripura, Meghalaya and Assam had a significant increase in the area of rubber plantation during the period. The area of rubber plantation in the states increased from 46885 Ha in 2000-01 to 113685 Ha in 2010-11.

In the other non-traditional rubber growing states including Karnataka, Goa, Maharashtra also the area of rubber plantations increased substantially during the period from 2000-01 to 2010-11. During the period the area of plantation in these regions increased from 22710 Ha in 2000-01 to 43880 Ha.

Trends in Area, production and Productivity of Rubber in Kerala vis-à-vis India Area and production of rubber plantation in the state increased manifold during the period 1990-91 to 2012-13. Area of natural rubber plantation in the state witnessed a uniform growth throughout the period from 1990-91 to 2012-13 even though the annual growth rate after 1997-98 remained below 1 percent most of the time. In terms of area, the 407821 Ha in 1990-91 to 545000 Ha in 2012-13 thereby experiencing a growth of 33 percent during the period. Total area of rubber plantation was 539565 in 2011-12.

Table 2.5 Area and Production of Rubber in Kerala from 1990-91 to 2012-13

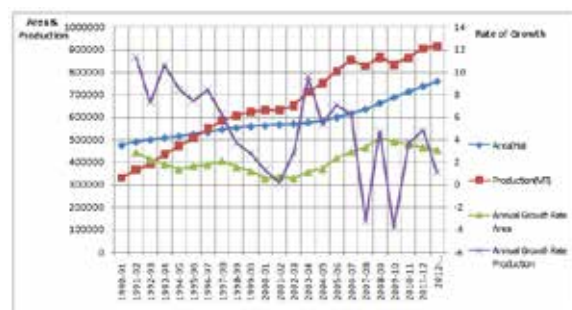


Source: Calculated from Rubber Board Statistics, Various Issues

In terms of production phenomenal growth was witnessed during the period. Production numbers increased 160 percent from 307521 in 1990-91 to 800050 in 2012-13. While looking deeper in to figure, it is visible that there has been a steady increase in production of natural rubber over the years. The state was able to achieve this high growth even though in the year 2007-08 and 2009-10 the production growth fell in to negative zone. Introduction of high yielding variety of natural rubber and more scientific nature of farming may be attributed as the main reason for the increase in rubber production.

State experienced an annual average growth of 1.33 percent in terms of area and 4.52 percent in terms of production output during the period from 1990-91 to 2012-13. Annual growth rate of production increased almost 6.59 percent during the ten years from 1990-91 to 2000-01 whereas in the next twelve years from 2001-02 to 2012-13 the annual growth rate declined more than half to 3.16 percent.

Table 2.6 Area and Production Rubber in India from 1990-91 to 2012-13



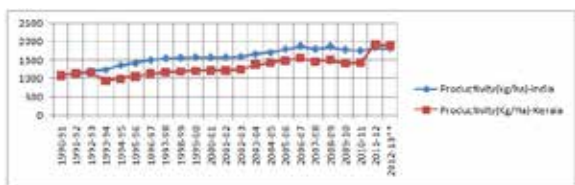
Source : Calculated from Rubber Board Statistics, Various Issues

Taking into consideration the Indian scenario, similar positive trends are visible in terms of growth of area and production of natural rubber during the period from 1990-91 to 2012-13. In terms of area, rubber sector in the country increased from 475083 Ha in 1990-91 to 757520 Ha in 2012-13. There was an increase of 59 percent in the total area of rubber plantation in the country during the period from 1990-91 to 2012-13. The total area of rubber plantation witnessed 34.6 percent growth during the period from 2000-01 to 2012-13 whereas during the period from 1990-91 to 1999-00, the rubber sector witnessed only 17 percent growth in area of plantations.

In terms of production, country experienced substantial increase in output from 329615 MT in 1990-91 to 913700 MT in 2012-13. Overall during the period rubber produced increased 177 percent. When we sub divide the growth in to two periods from 1990-91 to 1999-00 and from 2000-01 to 2012-13, the figure explains that production increased more than 88 percent during 1990-91 to 1999-00, whereas during the period from 2000-01 to 2012-13 the percentage of growth declined around half to about 45 percent.

The figures are quite significant in the context that the area of rubber plantation substantially increased during the period from 2000-01 to 2012-13 and production increased considerably during 1990-91 to 1999-00. But overall the average growth of area and production during the period from 1990-91 to 2012-13 stood at 2.14 percent and 3.06 percent respectively.

Table 2.7 Productivity of Rubber in Kerala and India from 1990-91 to 2012-2013



Source : Calculated from Rubber Board Statistics, Various Issues

Productivity of natural rubber in Kerala increased from 1079 kg in 1990-91 to 1931 kg in 2012-13. Most of the period from 1990-91 to 2012-13, per hectare productivity of natural rubber in the state was below the national average. In the year 2011-12 and 2012-13 the productivity of natural rubber in the state surpassed the national productivity numbers. Productivity in the state stood at 1931 kg and 1903 kg in the year 2011-12 and 2012-13 respectively whereas national productivity of rubber during the period was 1841 kg and 1813 kg respectively. Introduction of hybrid variety of rubber and more extensive practice of scientific farming are the major reasons for the increase in the productivity of rubber

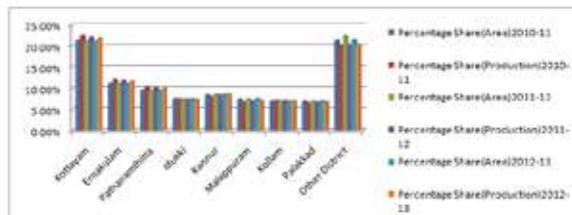
In the last 22 years from 1990-91 to 2012-13, the average productivity of natural rubber in the country stood at 1576 kg whereas Kerala's productivity figure was around 1317 kg during the corresponding period.

VII District Wise Share of Natural Rubber in Kerala

The section looks in to the relative performance of various districts in the state in terms of area, production and productivity of natural rubber. Rubber occupies a predominant position

in the agriculture economy of the state in terms of acreage and production. Except Alappuzha, Wayanad and Thrissur almost all other districts are comprise a decent share in the production of rubber in the state. Kottayam, Ernakulum and Pathanamtitta are the major rubber producing districts in the state.

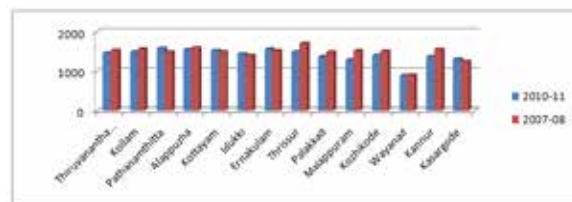
Table 2.8 Share of districts in Kerala in terms of Area and Production of Natural Rubber



Source: Agriculture Statistics, Economic review-Variou Issues

Kottayam district leads in the state in terms of acreage and production of rubber. Around 21.78 percent of the total rubber plantations in the state belong to Kottayam district in 2012-13. Kottayam is followed by Ernakulam and Pathanamtitta districts with an area of 11 percent and 9.37 percent of the total rubber plantations in the state. With respect to production also Kottayam comes first with 21.78 percent of the total rubber production in the state followed by Ernakulam and Pathanamtitta districts during the corresponding period. Both these districts together produce 21.5 percent of the total rubber production in the state during 2012-13.

Table 2.9 District wise Productivity of Natural Rubber Productivity in Kg/Ha



Source: Agriculture Statistics, Various Issues

During 2010-11, the per hectare yield of rubber is the highest in Pathanamtitta district with an average yield of 1579 kg per hectare whereas in Kottayam the productivity per hectare stood at 1514 kg. Lowest productivity of natural rubber is in Wayanad district with per hectare yield of 894 kg. State average of productivity is also significantly on the higher side with 1442 kg per hectare.

Area, production and productivity of natural rubber both national average as well as state's performance has improved substantially over the years. Improved variety of crops and modern agriculture practices has improved the productivity of these commodities in the case of Kerala as well as all India level. Low labour absorption and relatively better price for natural rubber has resulted in the increase in area and production of natural rubber in the state. Overall trends indicate that the area, production and productivity of natural rubbershowcase a promising picture and the growth of natural rubber sector is pivotal to the agrarian economy of Kerala.

REFERENCE

Economic Review (2013) Kerala State Planning Board, Government of Kerala | Rubber Board Statistics (2014) Rubber Board, Government of India
Agriculture Statistics (2013) Government of Kerala