

Colonialism and Institutional Practices in Agriculture: Some Observations on Agricultural Research in Kasaragod

Prakash Kumar K

Research Scholar in History, Kannur University, Kannur, Kerala, India

Abstract: Colonialism had no uniform method of intervention and form of exploitation. It is dynamic and the forms of intervention changed according to the needs and requirements of colonial state and according to the nature of the region conquered. Kasaragod, which was once become the southernmost taluk of colonial South Canara witnessed some effort of the colonial state to transform the agricultural landscape by establishing coconut research stations for the scientific study of coconut cultivation. Kasaragod had a rich tradition of paddy cultivation which was cultivated in both low lying as well as in high land hills and hill slopes in the name of 'kumeri' or shifting cultivation.. In the beginning of the 20th century the colonial state opened research stations on major crops like coconut which satisfy colonial needs.

Coconut is popularly known as "*kalpa vriksha*" which means the "Tree of Heaven". There is not even a single part of the coconut palm which is to be considered as useless. There was a huge increase in the demand for coconut products in world market in the beginning of the 20th century. It was considered as a fruit tree like jack, mango etc. And hence, the extent of coconut was very less in this region. In order to increase the production of coconut, four research stations were opened in kasaragod based up on different soil properties. Irrigation is totally dependent on monsoon and the area had no irrigation projects. One of the initial aims of research was the possibility of raising coconut under dry system of cultivation. Coconut can be considered as a trend setter to the new agrarian order of Kerala economy which does not need regular care and labour and also indicate the shift from paddy based agrarian order to more market oriented commercial agriculture. The village and village life which once revolved around paddy and its manifold production activities had gradually wiped out from the region which also wiped out the age old tradition of mutual dependence and mutual co existence.

Keywords: Colonialism, Agriculture, Science, Coconut, Kasaragod.

1. INTRODUCTION

*"The chief industry of India has always been agriculture, but it was not until about the year 1870 that the Indian Government directed systematic attention to fostering and improving Indian agriculture. Since that time there has been established in every province of India a department of agriculture, which collects and distributes early information concerning the crops, controls or advises upon model and experimental farms, introduces new agricultural appliances, tries new staples, and has established institutions for teaching the chemistry and science of agriculture."*¹

The study of the agricultural conditions of different localities and the proposal of measures to remedy such defects as they may present occupies a central theme among the officials of agricultural department of the British Colonial government from the second half of the 19th century onwards. The above mentioned quotation clearly shows the intervention of the colonial state in the field of Indian agriculture and the need for establishing institutions for teaching the "chemistry" and "science" of agriculture. It shows the notion that, Indian agriculture needs the lessons from science and production can be multiplied with the application of scientific knowledge in the field of agriculture. Experiment and observation are the two essential processes through which modern science develop knowledge of everything. In the case of agriculture, the colonial state realised the importance of agriculture and the need for its development only in the last decade of the 19th

century, resulted in the creation of experimental farms and research stations with the intention to conduct studies on major crops. Much has been written² on the promotion of crops like cotton, tea, indigo etc. and the efforts of the British to create knowledge on crop production through experiment, South Canara in the Madras province of British India witnessed the attempt of the colonial state to develop knowledge on coconut cultivation.

The Oxford English dictionary defined the term “institutionalisation” as “The action of establishing something as a convention or norm in an organization or culture.” If we accept this definition, we can see that, with the establishment of research stations and experimental farms, the colonial state tried to create new practices and methods that would multiply her income from agriculture. It was during the colonial period that, coconut production had transformed from being largely a homestead grown product for consumption to that of a product for the market. 20th century witnessed the opening of research stations in Madras province on various crops, among them coconut occupies special attention. With the creation of coconut stations in Kasaragod Taluk, studies on coconut had begun. Coconut, being a crop, fairly unfamiliar to western science, initial attempts were to study the morphology of the palm, its floral biology, manurial requirements and cultural practices, introduction of varieties etc. “The centre of the subject of crop production must always be the plant itself, which obviously can only be effectively studied in relation to the soil in which it grows, to the condition of village agriculture under which it is cultivated and with reference to the economic uses of the product.”³

From the second half of the 19th century onwards the government started experiments on cash crops like cotton, tea, indigo, tobacco etc after realising India’s potentialities as an agricultural country.⁴ The first material step taken by the British government for the improvement of agriculture in Madras presidency was the establishment of an experimental farm at Saldalpet in 1865. In the records of colonial government, South Canara was described as an agricultural district⁵ and paddy constitute the major share of her produce. “Rice is by far the largest crop, about four fifths of the cultivated area being under it. Next the coconut palm, which occupies an extent of nearly 25,000 acres. This palm is a favourite object of cultivation among the inhabitants of South Canara and of the adjoining district of Malabar and a number of trees can be seen in front of almost every house.”⁶ We have different types of colonial records that deal with various aspects of revenue and agricultural matters. Crops are classified as food and commercial crops and colonial state tried to generate reports stating the present condition of these crops in regular intervals for the better management of affairs. The tragedies of famine compelled the state to think about food crops which resulted in the experiments of foreign seeds like Carolina paddy and Madagascar paddy, but none of these experiments showed the superiority of these western seeds above the indigenous varieties of rice seeds in south India. Many of these experiments failed because of the regional variations of agricultural conditions. On the other side the opportunities of world trade turned the focus of the colonial state towards cash or commercial crops cotton, Indigo, Cashew nut etc. and propagated its cultivation. The diverse geographical and natural conditions and subsequent different agricultural products resulted in crop specific researches and naturally the west coast district of Madras presidency which consists of both Malabar and South Canara in which the principal crop is rice followed by other crops like Coconut and arecanut, spices, fruits and vegetables.

The colonial attempts of the creation of knowledge on people, nature, geography and everything in the colony and its classifications and arrangements on European layers were also applicable in their reports on Indian agriculture. For example, in the season and crop reports of the Madras presidency, compiled every year, agricultural products are classified under cereals and pulses, oil seeds, drugs and narcotics, fodder crops, orchards and garden products, vegetables and fruits etc. We cannot see any separate indication of coconut production in its extent and output in all these official reports and includes only as an item under fruits and vegetables like mango, jackfruit etc.

In the society and economy of west coast region, especially in the area which comprises of modern Kerala, coconut occupies an important role in the life of the people not only as a product, but also as a tree that provides everything for life. The stem is used for construction purposes where as its leaf is used for both thatching roof of houses and buildings and as a fuel for burning. People make oil from its nut and used coconut shell as a fuel for fire which is very powerful and long lasting. Coir is produced by using fibre from *chakiri* or outer crest of the nut. Tender coconut is considered as a nourishing refreshing drink and its presence is indispensable for every holy occasions. But the colonial state realised the economic value of coconut (as coconut nut) in the 20th century and trees bearing coconuts are considered for fixing land tax from a particular area. .

It was in such circumstances; especially in the beginning of the 20th century the state initiated the creation of knowledge on the cultivation of coconut and propagated its cultivation with the intention to multiply her benefits from agriculture.

“Colonial rules and measures codified agriculture inside political economy. Farming was considered as an enterprise and agriculture as a subject defined by input - output accounting.”⁷

It is a fact that Indian agriculture was integrated with world capitalist system and its needs and requirements are progressively began to influence the nature and methods of agriculture in India.⁸ In the beginning of the 20th century, the demand for coconut had increased considerably. With the increased demand for coconut products in the European market in the beginning of the 20th century resulting from the expansion of the European soap and edible oil industry and with the introduction of better road and rail connectivity and increased shipping facilities in India... “Prior to First World War, when the Indian oil crushing and soap industries had not developed, India had net exportable surplus of copra and coconut oil, but since 1920, the position has reversed. The production falls short of her requirements and the only solution appears therefore, to step up the production, if the industries based on coconut oil are not to be starved and internal prices are to be kept at reasonable level.”⁹ This economic prospect led to the opening of four coconut research stations in Kasaragod taluk of South Canara district in Madras presidency in the year 1916. “By all records, probably, this must be the earliest case of organized systematic research on coconut the world over.”¹⁰

2. HISTORIOGRAPHY

We have some references about coconut in historical works as a product of utility and as an article of trade, among them, *Hortus Malabaricus* needs special mention. It explains the features of coconut, the various stages of its development and its manifold utilities.¹¹ The writings of Fancis Buchanan, William Logan and the *South Canara Manual* of Sturrock J. etc. provide information on the state of agriculture and the crops cultivated including coconut in Malabar and in South Canara. Historians who studied Medieval Kerala economy and society mention coconut as a commodity of trade along with spices and arecanut.¹² M.R. Raghava Varier, in his *Medieval Kerala, Sworupa Neethiyude Charithrapadangal* (Malayalam) explains the presence of coconut cultivation in Kerala from middle of the 10th century.¹³

P.K. Balakrishnan in his *Jathivyavasthayum Kerala Charithravum*¹⁴ (Malayalam) made a historical note on coconut cultivation in Kerala and argued that, coconut cultivation, as we have it today, started in Kerala only in the middle of the 19th century and the rate of increase in coconut cultivation multiplied in the 20th century. The studies of historians like K.K. N. Kurup, K.G. Vasantha Madhava, N. Shyam Bhat, M.T. Narayanan etc. also help us to understand the general pattern of agriculture and its production relations on the eve of colonialism.

Dr. N. Shyam Bhat who studied the first sixty years of colonial rule in South Canara argues that, “The economy remained basically agricultural and the colonial government did not bring about any change in its technology or performance.”¹⁵ It is true that, it is only after 1880, that the State took some attempts to concentrate on the development of agriculture on an all India scale.

3. COCONUT CULTIVATION IN SOUTH CANARA

Coconut have been widely cultivated in Travancore and Malabar in the beginning of the 19th century, where as in South Canara, the extent of its cultivation was very limited. We have several references about the state of coconut in South Canara from the beginning of colonial rule. The records show that coconut is not cultivated as an extensive plantation basis in South Canara. Dr. Fancis Buchanan, who visited South Canara in January 1801, provided certain information on the cultivation of coconut in South Canara. He says while explaining the appearance of the country in *Hosso durga* that, “the country near the sea, is low and sandy; such of it is rice land, intermixed with which is much sandy land, too poor, the native say, to produce coconut palms. The whole appears to be much neglected, owing to a want of inhabitants”¹⁶. While dealing with the export of commodities in the area from kavvay to mangalore, he says, rice is the grand article of export followed by supari or betel nut. Pepper, sandal wood, cinnamon turmeric etc. were the other articles of trade.¹⁷ The absence of coconut in the list of export shows that the product is not available for market.

Sturrock. J, who prepared *South Canara District Manual* in 1894, provided some information on the state of agriculture in South Canara. He says that, next in importance to rice comes the coconut, of which there are extensive plantations all along the coast line. “Coconut plantations extent along the coast line of South Canara in tolerably extensive plantations and scattered trees are grown on the banks of fields and other favourable spots throughout nearly the whole district.”¹⁸ The coastline in South Canara is very narrow and in some places the width of the coastline is very short. Naturally, it reduces the possibilities for the existence of extensive coconut garden along the coastline.

The economic prospect of coconut cultivation is more manifested in Travancore and in Malabar. It is worth remembering that a leaflet called '*Cultivation of Coconut*' was published by the state of Travancore in 1869 for the use of the people explaining the best practices to be followed by the farmers in coconut cultivation.¹⁹ The land revenue settlement which was introduced in South Canara in 1902 – 1903 increased the rate of assessment up on coconut tree up to 100% (from 4 annas to 8 annas). "There must be many cases where the rent of the trees standing on the bunds of the paddy fields more than covers the wet assessment on the field."²⁰

4. RESEARCH ON COCONUT

Organised agricultural research was initiated in the first decade of the 20th century when agricultural colleges and experimental stations were started in the most important tracts in the Indian peninsula. According to Deepak Kumar, "what museums to natural history, experimental farm were to agriculture"²¹ The research work on coconut started with the opening of four research stations in the Kasaragod taluk of the South Canara district in 1916 as a result of the decision of the government of madras that, a detailed study of the coconut in all its aspects should be undertaken on the west coast where the crop is cultivated extensively and where the income derived from the trade in its products and by-products is considerable. "In order to obtain representative soils on which coconuts are generally cultivated on the west coast, three separate blocks of land were acquired and three sub stations have been started near the village of Nileshtar. Sub station No. 1 is a laterite soil, sub. station No.2 is a red sandy loam and No. 3 is a coarse sandy soil. After acquiring these vacant lands, preparation for the planting of coconut was carried out. Seed nuts were procured from specially selected trees in well grown garden in Malabar."²²

It is not possible to conduct experimental work on coconut in vacant lands; a fourth station consisting of an existing garden was also acquired for preliminary investigations and experiments. It is situated in the Kudlu village, north of Kasaragod town. "This station therefore may be looked upon largely as a place where experiment can be made to find out how best to conduct experiments on the other three stations, which are now to be planted up"²³

The official report says that, "The South Canara district was preferred because the scope for the development of the crop is greater in the district in having extensive areas quite suitable for the crop and the people being ignorant of the right system of coconut cultivation."²⁴

The annual report of coconut station 1917 -18 says that, "the selection of an existing garden of sufficient area was a matter of some difficulty, because usually coconut gardens are very much sub divided and the treatment given to the trees depends very much on the industry of the owner or tenant; and when it is stated that a single tree may be the joint property of two or more persons, one can understand where the difficulty lies, The garden ultimately selected was in a very neglected condition and the occupying tenants had, through lack of attention and control on the part of the owner, paid no attention for many years either to manuring the trees, cultivating the garden or maintaining the fences. The only trees which had received any attention were those in the immediate neighbourhood of tenant's houses. These received house refuse, etc."²⁵

"In this tract, there is a long belt of coconut, but the care and attention bestowed on the gardens is miserably poor."²⁶ From all these observations it is very clear that, in the beginning of 20th century, the peasants in this region are not industrious in coconut cultivation on a plantation basis and extent of coconut is very less while comparing it with Malabar and Travancore. It is confined mainly in the coast line and on the banks of rivers and paddy was extensively cultivated as a wet crop as well as dry crop. In the description of Francis Buchanan, there were no detailed observations on the existence of coconut plantations like that which he noticed in Malabar area.

In all the four research stations different types of investigations have been made and among them in the initial years of research, the most important was the possibility of raising coconut under a dry system of cultivation. There was no large scale irrigation projects in South Canara and agriculture was totally depend upon monsoon and the particular geography consist of hills and hillocks, which is scattered throughout the district may be the cause of this type of investigation.

J. S. Patel, in his *Report on Coconut Enquiry in India* (1934), recorded that, "in South and North Canara, there are fairly good second class lands available for planting coconut without reducing area under paddy. But here, the general notion that, the coconut requires irrigation even when grown up limits the possibilities for expansion."²⁷ So, the experiments in dry cultivation will open up vast possibilities for the expansion of the area. "There is sufficient room in South Canara alone for planting up at least about 200,000 acres of coconut,"²⁸ According to him, the prevailing system of land tenure is

also a limiting factor. "Most of the land lords change the lease of their land annually, and under such tenure the cultivating tenant has not sufficient security to plant coconut plant in his land."²⁹ Another probable factor limiting the expansion of the coconut area is the inability of the average riot to wait to reap the result of what he plants, as there is a long interval between the time of planting and the time of bearing when he would have practically no income.

We have some references in the official reports about native response towards research activities. "Considerable progress was made in the VII circle (which includes Malabar and South Canara districts) in spreading the dry system of cultivating coconuts. In addition to the 40 plots cultivated in this way last year, 131 plots in South Canara and 30 plots in Malabar were brought under this method."³⁰ "The demand for seed nut increased during the year and 2450 nuts and 2750 seedlings were distributed from the coconut stations."³¹ In the report for the year 1925 -26 says that, "one hundred and forty demonstration plots have now been established scattered throughout the length and breadth of South Canara and a very satisfactory feature of this work is that only one of these plots is maintained at government expense. Seventeen are financed by local boards, while the rest are paid for the ryots themselves. The demand for the seeds is so great that it cannot be met: 6689 seed nuts and 2993 seedlings were supplied from the experiment stations during the year 1925 - 1926."³²

The development of hybrid varieties involving tall and dwarf types is a major landmark in the annals of coconut improvement. The first hybrid was produced by crossing local West Coast Tall with the Chowghat Dwarf Green and the hybrids were planted at Nileshwar in 1934 for evaluation. H.C. Samson published *The coconut palm: The science and practice of coconut cultivation* (1923), which deals with the various aspects of the nature and development of coconut palm and J.S. Patel authored *The Coconut-A Monograph*, published in 1938 by the Government of Madras, reveals the excellence of their scholarship.

5. CONCLUSION

The effort of the colonial state to transform the agricultural production in India in the beginning of the 20th century, in its long run, in the case of Kerala, resulted in the collapse of the paddy based production system and the socio economic structure based upon it. In the second half of the 20th century, Kerala witnessed tremendous socio economic changes with the introduction of land reforms, the decline of joint family system, the development of education and overseas migration etc. In this new society, the priority of Agricultural crop was determined on the basis of market and peasants give up their interest in paddy cultivation and began to plant more and more coconut and other cash crops like areca nut and rubber. In 1959, the area of rice cultivation in Kerala was 18, 99,000 acres and coconut occupied 11, 36,000 acres where as in 2009, rice cultivation was reduced to 5, 78,246 acres and coconut occupied 19, 23,967 acres.³³ Thus, we can say that the research activities of the coconut research stations started in 1916 developed knowledge on various aspects of the systematic cultivation of coconut facilitated the spread of coconut cultivation in the second half of the 20th century replacing the position of paddy cultivation.

REFERENCES

- [1] *Memorandum on Some of the Results of British Administration in India During the Past Fifty Years of British Rule in India*, Superintendent, Government Printing, Calcutta, 1911, p.65.
- [2] M.S. Ranadhawa, *A History of Agriculture in India*, Vol. III, 1757 -1857, David Ludden (ed.) *Agricultural Production and South Asian History*, New Delhi, 2006, Deepak Kumar and Bipasha Raha (ed.), *Tilling the Land, Agricultural Knowledge and Practices in Colonial India*, New Delhi, 2016 .
- [3] Albert Howard and Gabrielle L. C. Howard, *The Application of Science to Crop Production*, Madras, 1929, p. 1.
- [4] Deepak Kumar, *Science in Agriculture: A Study in Victorian India*, p. 21, [pp 20 – 48], in, Deepak Kumar and Bipasa Raha (Ed.), *Tilling the Land, Agricultural Knowledge and Practices in Colonial India*, New Delhi, 2016.
- [5] Sturrock. J., *Madras District Manuals South Canara*, Vol.1, Madras, 1894, p.192.
- [6] Harold A Stuart, *Madras District Manuals, South Canara* Vol. II, Madras, 1895, p.162.
- [7] David Ludden (Ed.), *Agricultural Production and Indian History*, in, David Ludden (Ed.), *Agricultural Production and South Asian History*, (Second Edition), New Delhi, 2006. P. 4

- [8] Bipan Chandra, *Essays On Colonialism*, New Delhi, 2006.
- [9] *Memoirs of the Department of Agriculture Madras*, Madras, 1955
- [10] Choudappa. P (etal.), *CPCRI , Hundred Years of Excellence*, Kasaragod, 2016, p.1.
- [11] Manilal K .S, *Horthus Malabaricus* (Malayalam), Vol.1, p.p 1- 13, Thiruvananthapuram, 2008.
- [12] for more details, see, Raghava Varier and Rajan Gurukkal, *Kerala Charithram*, Part 2, Shukapuram,2012, Ganesh K. N, *Keralathinte Ennalekal* (Malayalam), Thiruvananthapuram, 1997.
- [13] M.R. Raghava Varier, *Madhyakala Keralam, Sworupa Neethiyude Charithrapadangal* (Malayalam), pp. 46-47, Kottayam, 2016.
- [14] P.K. Balakrishnan, *Jathivyavasthayum Kerala Charithravum* (Malayalam), Kottayam, 2017.
- [15] N.Shyam Bhat, *South Canara (1799-1860)*, New Delhi, 1998, p. 188.
- [16] Francis Buchanan, *A Journey from Madras through the countries of Mysore, Canara and Malabar 1800 -1801*, Vol. III, , London, 1807.(here New Delhi, 1999), p.111.
- [17] Ibid, p.p. 58- 59.
- [18] Sturrock J., *Madras District Manual, South Canara*, Madras, 1894, p.204.
- [19] C.R. Rajagopalan, *Manninte Lavanyam prathirodham*, (Malayalam), Thiruvananthapuram, 2016, pp.135-162.
- [20] *Statistical Appendix for South Canara District Manuals*, Madras, 1905, p. 24.
- [21] Deepak Kumar, *Science and the Raj, A Study of British India*, New Delhi, 2015, p.89.
- [22] Annual Report of the Coconut Stations in the Kasaragod taluk of South Canara District 1917 – 18, Thalassery, p.1-2.
- [23] Ibid., p. 3.
- [24] Annual Report of the coconut stations in the Kasaragod taluk of South Canara District 1925 – 26, Thalassery, 1926. p. 18
- [25] Annual Report of the coconut stations in the Kasaragod taluk of South Canara District 1917 -18, Thalassery, 1918, p. 2.
- [26] opp. cit. p. 19.
- [27] Patel J.S, *Report on Coconut Enquiry in India*, Madras, 1934, p.141.
- [28] Ibid.
- [29] Ibid.
- [30] Report on the operations of the Department of Agriculture 1924 -25, Madras, 1925. pp. 39-40.
- [31] Ibid.,p. 40.
- [32] Report on the operations of the Department of Agriculture 1925 -26, Madras, 1926, pp.61- 62.
- [33] Economic Review for the years 1959 and 2009, Kerala State, state Planning Board, Trivandrum.