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DISTRICT

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Abstract

Kanyakumari District is purely agricultural and solely depends upon agricultural income for its economy. The geographical settings and the soil of Kanyakumari are the main cause for its full fledged agricultural development. The irrigation Projects like Kodayar Irrigation Scheme, Chittar I and Chittar II played a vital role for the increased paddy cultivation. After the construction of dams and canals not only the wet cultivated land area but also the paddy cultivation had faced a tremendous increase. However this situation also faced a setback in the recent past as agriculture being neglected by the local population. Most of the paddy cultivated lands are converted into marriage halls, hospitals, houses, and plots. In this paper an attempt is made to study the condition of paddy cultivation in Kanyakumari District.

INTRODUCTION

Kanyakumari District is unique for its concentration on agriculture and promotion of agricultural economy. Agriculture was the mainstay of the people and more than eighty per cent of the people depend on agriculture either as renters or as tenants or as labourers. By and large it was subsistence agriculture in which every family produced for its living. Agriculture is, and always has been, an activity involving a close interaction with the environment. Soil, climate and topography, hydrological, biological condition together, extract a major control upon forming operation and profitability of agriculture.

SOIL

Land or soil has deciding influence over the other factors of production. Quality of soil often determines the quantity as well as the quality of the crops. The soil of Kanyakumari District is mostly loamy and assumes sandy or clay character depending on the accumulation of waste on the surface. The depths of the soil vary widely. Valleys and low lying areas where the waste from the surrounding hills accumulates, the soil is fairly deep and such places often support vegetation. On the hills, slopes and elevated grounds which are subject to heavy waste, the soil has a characteristic of yellow or reddish or reddish yellow in color on the tops and higher slopes of hills where the waste is excessive, the ground is rocky and the soil is shallow and hard. The prevailing soils of Kanyakumari District are predominantly red ones, poor in lime, potash and iron oxide and low in phosphorus. Alluvial soil, found in some parts of Nanjilnad, is comparatively fertile with more organic contents than the soils of Kalkulam and Vilavancode.

Topography also should be taken into account before determining the soil-crop relation. Undulating land provides little facility for progressive farming. The lands

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of Kanyakumari District form three distinct types - the highlands, the midlands and lowlands. The highlands and lowlands are unsuitable for paddy cultivation. Even in the midlands, a considerable big portion, omitting the Nanjilnad valley is disagreeable to wet cultivation, owing to their elevated nature and rugged terrains. So cultivation is restricted to the small patches in between the undulating hillocks.

PADDY

Paddy is the principal crop of Kanyakumari District and the staple food of the people. The paddy cultivation is much the same as in other parts of India, though the condition or rainfall and manure are different except in the Nanjilnad where the rice cultivation is very ancient and well regulated and may therefore be said to have reached a most perfect state. The paddy cultivation in the other parts of the country is of a very primeval kind and the crops are generally precarious. The paddy fields depend upon the falling rains for water and this being a most unsteady natural agent and the result is often very unsatisfactory. The rain sometimes comes too soon or too late sometimes too scanty or too heavy. Variation in paddy yield is attributed much too insured irrigation. Irrigational requirement of paddy depends on the soil composition, moisture, and surface topography, duration of the crop, climatic

factors, irrigation technique and the design of the delivery system.

The southern taluks of Kanyakumari District enjoy the benefit of an almost perfect system of irrigation, but manure is their great stumbling block and every day it is becoming more and scarcer. The jungle valleys on the other hand, have no end of manure in them. This is a great advantage, but the labour is scanty and the ploughing is difficult, which process requires strong cattle for which however and for the workers the climate is unfavorable.

Normally, two crops of paddy viz., *Kanni* and *Kumbham* are raised in Kanyakumari District. The first crop is a short duration one, ranging from 110-120 days. It is sown dry in 2/3 area with the help of summer rains by the end of April or the beginning of May every year and treated as wet crop with the onset of south west monsoon or the receipt of water in the channels, whichever is earlier. In the balance 1/3 area, dry nurseries are raised with the help of summer rains during May and then transplanted with the help of water received from channels during June. The rainfall during August and September is low and during that period, the harvesting of the first crop paddy is done.

The second crop viz., *Kumbam*, starts with the raising of wet nurseries in August, which is longer in duration from

150 to 175 days, transplanted during September – October and harvested during February – March. These are known as *Kanni-poo* and *Kumbha-poo* respectively. After the *Kumbham* crop the lands are left idle for about a month or more, fully exposed to the effects of the sun and winds. Late in the month of April, the field is ploughed for the first time and the stubbles left in the previous reaping are gathered and burnt. The field is then ploughed thrice continuously and levelled with a rake. Big clods or lumps of earth if any are broken into small pieces and the field smoothed and levelled with a rake once more. Manure consisting generally of cow – dung ashes and alluvium is then spread from ten to twenty bandy – loads per acre according to the means of the cultivator. In some parts, sheep are penned on the fields and the leaves and branches of any jungle shrub or weed obtained in dry waste lands of fallows are also used as *Udayam*, as it is called in the vernacular, the ordinary quantity being about 100 lbs for an acre.

Even though in some of the wet lands of Kanyakumari District paddy is cultivated twice a year (double crop lands), in some other places it is cultivated only once in a year (single crop lands). In the case of the latter, sowing is done in the month of June – July the plants (nurslings) are plucked and transplanted in July –

August and the harvest is reaped in January – February. In the case of the double crop lands, there are two crops namely *Kanni-poo* and *Kumbha-poo*, taken in the year. Seasonal cultivation that is known as *Kannipoo* is a great success with the two varieties of paddy ASD16 Ambasamuthram, and TPS4 Thirupathisaram. The second seasonal cultivation known as *kumpapoo* is successful with TPS3 and *Ponmani* CR10009.

Kanyakumari District is predominantly an agricultural area depending mainly on both the north–east and south–west monsoons. It receives a fairly good rainfall in both the seasons. The only major river on this region is Tambraparani, otherwise known as Kuzhithuraiyar. This river has got two major tributaries namely Kodayar and Paraliyar. There are many tributaries to Kodayar of which Chittar I Chittar II are major tributaries. The origin of the main river Tambraparani is Western Ghats and the river flows within Kanyakumari District for a length of 59.2 Km. and confluences with the Arabian Sea near Thengaipattanam which is at a distance of 56 Km. from Cape Comorin, the southernmost tip of India.

Irrigation in Kanyakumari District is carried out with the supply of water available both from the source of dams and tanks. Irrigation works are classified as

major, medium and minor according to the lands irrigated by such works. The major irrigation work in the area is the Kodayar Irrigation Project under which the waters of Kodayar, the Paraliyar and the Pazhayar are harnessed and used for irrigation purposes in Kanyakumari District.

The Kodayar Irrigation System consists of two dams namely Pechiparai and Perunchani and a network of Channels for irrigating 23900 ha. The scope of the system is to divert the Kodayar water to Paraliyar and augment supply to the Channels taking off from Paraliyar and thus to feed the Channels in Kalkulam, Agastheeswaram and Thovalai Taluks.

The Kodayar system comprises of four reservoirs, viz., with a combined live storage capacity of 233. I m.cu.m., Kodayar Left Bank Canal a pick – up anicut known as Puthan Dam, Thovalai Canal, N.P. Canal, Ananthanar Channel and P.P. Canal. In addition, there is the Pattanamkal Canal taking off from Kodayar Left Bank Canal, Radhapuram Canal (in Tirunelveli District) which is an extension of Thovalai Channel.

Adjacent to the Kodayar and Paraliyar basins, there are two distinct and separate small basins called Pazhayar basin and Valliyar basin in which irrigation was practised over thousand years. In the Pazhayar basin, irrigation was carried on through two Channels viz., Ananthanar and

Nanjilnad – Puthanar Channel taking off from the river Pazhayar by two anicuts across the drain at Surolacode and Chattuputhur.

Because of these irrigation projects the area under cultivation had increased. The expansion in area under wet cultivation appreciably increased the crop output. The two basic ways of augmenting agricultural production are intensive and extensive cultivation. Increase in market demand together with improved transport facilities led to extensive cultivation. The pressure of population in fact practically brought all available lands under plough, favouring growth of production.

Increase in paddy output was substantially had increased due to the intensive farming operations. Because of the scarcity of land and higher physiological density, cropping intensity was much more important than extensive cultivation. Since the supply of land being inelastic, accelerated growth in production was possible through increased different types of cropping. Construction of distributary channels not only increased the area under irrigation but also improved the chances of intensive cropping. Double crops and sometimes three crops were raised under conditions of insured irrigation facilities. This additional land use aspect of irrigation resulted in the growth of production.

Since the man-land ratio was very unfavourable, the rise in yield per acre was also of significant importance in the increase in production. By enabling fuller utilization of the existing inputs and encouraging the feasibility of application of more or better quality inputs, irrigation had facilitated the increase in yield rate. It is generally accepted that the use of high yielding seed varieties, chemical fertilizers and an assured supply of water comprised an input package that have led to the phenomenal growth in output. But, the High Yielding Varieties Program had limited scope owing to the traditional approach of the farmers. The application of scientific methods of cultivation failed to make much headway under conditions of uneconomic holdings, chronic indebtedness of the peasants and lack of capital to invest on improved implements and chemical fertilizers. Hence, the increase in the total output of paddy was more due to the expansion in area, intensive agriculture and a general improvement in the yield rate. Improving situation of owner cultivation also had substantial impact on the total output.

In spite of occasional fluctuations conditioned by the seasonal factors, the paddy production has recorded a fairly good growth rate. Paddy production steadily increased since the full utilization of the

Kodayar Project. Between 1951 and 1961, the total paddy production marked a sharp increase of approximately 50000 tons. In 1956 – 57, it was 67476 tons and in 1960 – 61, it raised to 106880 tons. The phenomenal increase during this period was attributed to the extension of areas under wet cultivation and intensive farming activities. During the agricultural year 1964 – 65, the total turn out of paddy faced a slight set back and during 1969 – 70 it further declined. In 1969 – 70, the paddy production was 83180 tons. This declining situation was apparently caused by shortages in the supply system.

During the agricultural year 1971 – 72, the total output of paddy had recorded the highest production level of 152390 tons. This significant increase was due to the Chittar – Pattanam Channel Scheme. In 1974 – 75 the paddy production had declined to 137000 tons. No doubt, this regressive trend was marked by the interaction of composite factors, both natural and human. Thus, from 67476 tons in 1956 – 57 the total turn out of paddy had increased to 152390 tons. This phenomenal increase in the growth of production was obviously increased by the irrigation projects.

Since the extension of wet cultivation, there was substantial increase in the number of persons employed in

agricultural works. Conversion of dry lands and expansion in wet cultivation provided more annual work days. Double cropping enabled them to get almost undisturbed work spread over the whole year. In 1916, there approximately 1, 24,000 agricultural workers distributed over the taluks, the highest in Agastheeswaram and the lowest in Thovalai. Their wage was somewhere near fifty six paise; almost the entire portion of which was spent by them for their food items. Though the wages paid was not enough, the improving chances of employment initiated the beginning of economic betterment.

With the expansion in area under irrigation, thanks to the extension of feeder channels and improvement in the main channels the employment rate of agricultural labourers increased considerably. Correspondingly the wage rate also increased between 1921 and 1931 and there was a steady increase in wages. The significant secondary benefits generated by irrigation in the labour demand and wage rate devoid influenced the non – wet areas too. Dry villages which were devoid of irrigation facility due to geographical conditions also recorded an increase in the number of annual work days, because the neighbouring wet villages could absorb a substantial portion of them. During peak seasons villagers from the dry part of the

west migrated to Nanjilnad. Since harvest season in Nanjilnad advanced earlier than the west, they could engage themselves in both the places. There was increase of work days for the dry village workers who were under severe distress owing to poor employment. Goldsmith, Carpenters, Blacksmiths, Washermen and others also enjoyed the secondary benefits of irrigation.

In recent years, the duration of the work hours has been considerably reduced quite below the eight hours' time and their boycott call during peak seasons offer them what they desire. In several cases they dictate terms and conditions for work. They are harassing the employers in different ways and are capable of playing with the fortunes of their employers. Consequently, the labourers in Kanyakumari District are the highest paid in Tamilnadu. Labour shortage during peak seasons is quite common. Alternative employment chances and large scale exodus of labourers to neighbouring Kerala state substantially contribute to this unique situation. As a result, the labourers here are mostly above the poverty line, a peculiar feature in the entire State.

However, the economic freedom and social status earned because of increased production rate had a negative impact on agriculture in Kanyakumari District. The tenant-labourers, who became the land

owners, wanted their children to be the white collar job holders. As their social status has improved, they do not want to work in the field any more. They desire to produce their generation as computer-engineers, doctors, teachers, professors, bankers and administrative officers but not as the tillers of the soil.

The attitude of the land owners coupled with the indifferent attitude of the labourers towards physical work affected the agriculture sector a lot. It has its echo on agricultural production and even the net cultivable land area. As a result, most of the wet lands in Kanyakumari District are converted into houses, hospitals, hotels, wedding halls and rubber estates.

The following table shows the decrease of cultivable lands and agricultural production in Kanyakumari District in recent years.

CROP	2007-08	2008-09	2009-10	2010-2011	2011-2012
PADDY - I	10131	8928	8533	8425	8251
PADDY - II	10207	9258	8909	8564	8366
TOTAL	20338	18186	17442	16989	16617

From the above table it is concluded though the paddy cultivation and the total cultivable area that was increasing till the 1990 began to decrease in the recent past. It is considered that the conversion of paddy

cultivated area into rubber, coconut and other money crop cultivating areas and the construction of houses and other buildings are the major causes for the rapid decline of cultivable area in Kanyakumari District.

FINDINGS

- Now-a-days, agriculture is neglected. Crop production rate particularly paddy production rate is declining steadily.
- Some of the cash crops like rubber, coconut are cultivated instead of paddy.
- Further encroachments also become a major threat to agricultural production.
- Hospitals, Marriage Halls and Industries are constructed in the agriculture lands.

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