Chapter III

THE LANDS
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The entire Tamil landscape was divided as kurinji (hilly region), mullai (forest), marudam (plough land), neidal (littoral) and palai\(^1\). Among them, it was believed that, when the first four divisions lost their fertility the result will be a useless land called palai. Though the four regions were having their own natural yields, marudam land alone was suitable for agricultural operations in a conventional manner\(^2\). In this regard it will be proper to have an estimate of the facts about the land, because it will enliven the study of the agrarian life. The land, due to its economic value, was utilized for multifarious purposes such as donations, grants, tenancy, transfer, endowment etc. So the possession and occupational rights of lands too met with transitions from time to time. The Tamils were wise enough to call the lands by different names, such as payal nilam, kalar, uvar etc. Such facts indicate the role of the farmers in them. Indirectly they expose the agrarian life. So it is necessary to have the nomenclature and the meanings prompted by

\(^1\) Tolkappiyam, Porul: 5.
them. It should also worth to note here that such an analysis will widen the scope of understanding the complexities of the agrarian life of the then Tamils.

The catalogue of lands:

Marudam region was a renowned and remarkable one for its paddy fields called Vayal. The Vayal denoting agricultural fields was of different types. The land where the shady trees grew was known as Sōlai. For obtaining a lengthy and permanent yield from the mango, tamarind trees etc., available in the Sōlai, much efforts were undertaken. To maintain the cattle they had a specific type of land viz., vanpulam, which was used as pasture land. In the same way the pastureland was also known as kanru meipai. The flower garden was named as sōlai. The land of the grooves of coconut was maintained in the name of teingusōlai. Such facts also reveal that the Tamils attached stress such things mainly on economic grounds. They to grow gardens of flowers used the pretty old

6. 562 of 1920.
land, which had lost its fertility. This too supports the economic background of the agrarian life. The flowers collected from ka and Pūndansūlai might have been sold for making garlands to be used in temples or festive occasions during auspicious times. Thus making garland was also a subsidiary industry.

While kalani was the general name assigned to paddy and sugarcane fields in marudam and neidal regions also it was called by the same name. They had a separate field by the name nārāṇkāl, as it is available even today, for using the seeds to grow for transplantation. It is obvious from the above facts that the agriculturists were capable of understanding the varieties of lands for growing different varieties of commodities. This could be attested by the following facts also.

11. Ibid., 209:2.
The lands were classified into nansei (wet land), punsei (dry land) mensei (black soil) and meyppal (barren land)\textsuperscript{14}. Puludhibāḍu\textsuperscript{15} was the wasteland assigned for digging canals. The nansei was called nir nilam and the punsei was known as kollai nilam\textsuperscript{16}. Sei was also the name, which referred to the nensei land. Tuḍavaipāḍu\textsuperscript{17} was generally the cultivable land\textsuperscript{18}. The uneven land was known as parru\textsuperscript{19}. Palanam was yet another name of the cultivable land\textsuperscript{20}. They were well aware of the fact that no paddy will grow in the mullai region. Kāvu was the name assigned to the land of thorny bush where thorny plants and low shrub with sharp spines alone were available and it was treated as an useless and waste land\textsuperscript{21}. The different names assigned to various kinds of lands used for the growth of various items will also substantiate the above fact.

The field was commonly termed as vayakkai\textsuperscript{22}. The black soil where

\begin{itemize}
\item \textsuperscript{14} Ibid., No.679.
\item \textsuperscript{15} T.N. Subramanian (Ed.), \textit{Thirty Pallava copper plates}, p.187.
\item \textsuperscript{16} 9 of 1894.
\item \textsuperscript{17} \textit{Kāsakkudi copper plates}, L. 118.
\item \textsuperscript{18} 236 of 1894.
\item \textsuperscript{19} N. Venkatesan, \textit{Varalārīl Villiyānuṟu} (1973), p.82.
\item \textsuperscript{20} \textit{Puranānuṟu}, 61:4.
\item \textsuperscript{21} Ibid., 328:2, 337: 14, 366: 21 and 258: 1.
\item \textsuperscript{22} \textit{Pudukkottai state inscription} No. 99 and \textit{Dalavoypuram copper plates}, Sloga 37.
\end{itemize}
cotton was growing called by the name paruthi vayakkal\textsuperscript{23}. It is worth mentioning here that the black soil was preferred for growing cotton. Betel was always grown in a separate field\textsuperscript{24}. Kaḷarvalar indu indicates that sandy region was utilised for growing date\textsuperscript{25}. Ėripuram was considered a suitable area for cultivating millets\textsuperscript{26}. It is worth to note that even superior variety of any grain will never sprout in dry lands. The fertile land which enjoyed the benefit of constant irrigation facilities by an ūraṇī, viz., a water tank was known as anīkūrī\textsuperscript{27}.

As the Tamils were hardworking and eamest labourers, who were not lagging behind to work, were capable of converting the fallow land called tiruttu, the thorny and bushy lands viz., tūru\textsuperscript{28} into cultivable lands. It was customary practice among them to name the lands assigned for big canals as periya vayakkal and the land located below the sluice of tank as kijtūmbu\textsuperscript{29}. For the easy demarcation of lands the Tamils utilised such

\textsuperscript{23} Dalavoypuram copper plates, Lines 212-214.
\textsuperscript{24} Pudukkottai state inscription Nos. 345, 393, 404, 412, 439, 441, 454, 456, 622, 624, 647.
\textsuperscript{25} Perumbânârruppadaï: 130.
\textsuperscript{26} Purananūru: 231:1.
\textsuperscript{27} 345 of 1930-31.
\textsuperscript{28} N. Venkatesan, op.cit., p.83.
\textsuperscript{29} S.I.I., Vol. XIII: 96.
identifications. Thus by naming the lands as mentioned above they were also to exhibit their master mind.

The main objective of the farmer was to utilise the land totally for obtaining yields by some form or other. It is unique to note that the lands served as exchange objects to solve the social problems such as clearance of sects etc. The names assigned to such kinds of lands suggest that the possessive rights as well as the right of enjoying the outcome of the lands served as measures for fixing up the ownership of the land. It is also evident that private individuals, rulers, temple, authorities, village councils etc., had their own rights and privileges to enjoy the benefits of lands. Further, though the land-tax was the major source of income of the state, exemptions were granted from that tax for various reasons to different sets of people a various occasions and they also assisted the analysis of the different trends in the agrarian life. In that context a study of such names will enable one to have an estimate of the agrarian life in a different manner.

The terms *koilnattam* and *ünnattam*\(^{30}\) indicate that there were separate lands for temples and for common public. The income gained

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30. N. Venkatesan, *op.cit.*, p.84.
from them was used for the common public expenses. Even the fallow or barren lands were helpful for public and welfare activities and they were assigned to sincere and landless peasants for carrying out the cultivation. It was in the form of a tenancy possession and he was expected to pay a portion of the income as a rent for having used the place\textsuperscript{31}. Such facts reveal the faith of the ancient Tamils over agriculture. In addition to that it is obvious that sincere and earnest devotion of the farmers in their profession as a primary occupation. They did not want to waste even a bit of land, for food was the essential commodity. So they assigned the dry lands to the temples even for growing flower gardens\textsuperscript{32}. Importance was assigned to land. Hence it was donated to the temples as the gift of God. The lands granted and gifted to temples were called by various names such as \textit{Thiruviḍayāṭṭam}, \textit{Tirunāṟathukkāṇi}, etc. This was a common feature among the Pallava, Pandya and Chola rulers. This transaction of land as donation to God was carried out mainly to appease God. The kings used to donate lands to temples as \textit{Devadānam}\textsuperscript{33} etc., for their maintenance by the incomes from the land. Agricultural activities were

\textsuperscript{31} 495 of 1918.
\textsuperscript{32} 110 of 1929.
carried out in those lands by payment of wages to the paid servants. The lands assigned to Siva temples were known as *tirunāmattuk-kaṇi*\(^{34}\) and the lands granted to Vishnu temples were known as *tiruvidaiāttam*.\(^{35}\) Stones having the mark of a trisul indicated the lands assigned to Siva temples and stones of *tiruvali* marked that of the Vaishnava temples.\(^{36}\) Such facts are strengthened by the fact that lands were divided on the basis of the deities and at the same time they were graded on the basis of the yield after proper surveying.\(^{37}\) There were nearly 14 grades of lands.\(^{38}\) So it is clear that the activities of the farmers might have been varied according to the gradation of lands. Further it is worth to note that the rulers of that age did not show any special privileges to the temple lands with regard to surveying and assessing the tax. The tax-exempted lands were known as *Iravili* lands.

The income from the public lands was always used by the state for the execution of specific public welfare activities. So such public lands

\(^{34}\) Ibid., No.707.
\(^{35}\) Ibid., No.707.
\(^{37}\) Ibid., Vol. VIII, No. 701.
\(^{38}\) Ibid., Vol. VII, No. 701.
were known as ūrpuḍu. In addition to the actual agricultural community viz, the Vellāḷas the other communities too had the right to enjoy the lands of the public and that was known as ūrmanaṅjigam (uncultivated fallow land left under the control of the public). The fallow land kept under the custody of the village sabha (council) was called by the name sabha maṅjigam. The above facts reveal the existence of the tenancy system during the ancient Tamilnadu. But no details or other facts pertaining to the tenancy measures are made available.

The devadāna lands granted to the temples were also known as melukuppuram. The donated lands known as kuḍinīkkidēva-dānam inform that tax exemptions were granted for the maintenance and up-keep of the temples. The name iraiyili lands called such lands. But tax exemption was granted mainly for various purposes at the will and decision of the rulers. It should be remembered here that the income from agriculture was useful for different purposes served for the cause of many deeds beyond the actual purpose of having food materials.

39. 44 of 1903.
40. 4 of 1890.
Padagam was generally the name of a specifically measured land. Errippat was the land donated for the maintenance of the public tanks from the income, which they obtained from the land-assigned. Salabhogam was another kind of land granted for the maintenance of the choultries, which fed the people who utilised such choultries. In addition to the facts seen earlier about the lands donated to temples, Tiruvdaippuram was the gifted-land of the Vishnu temples and Devabhogasala was the common name of the lands generally donated to the temples. It is worth to mention here that the tax-free lands granted to Jain temples were commonly known as pallichanda iraiyili. At times, yields from particular kinds of lands were used for charitable purposes and such lands were named as dharmadana iraiyili, and maddappura iraiyili were the tax-free monastic lands. Thus the lands were utilised for carrying out their regular routines by different religious institutions.

44. 170 of 1895.
46. Ibid., 7 of 1926-27.
47. Ibid., 175 of 1972-73.
49. P.S.I., No.530.
50. Ibid., 124, 439, 440 and 127 of 1914.
51. Ibid., 376.
suggests that persons might have been employed for wages for carrying out the different agricultural services before harvesting yield to be utilised for the purposeful and meaningful services.

It is worth to note that private individuals were also honoured by the assignment of lands for their dedicated services and unique activities to the common public and the state. In that respect it should be noted that lands assigned to the dependents of persons, who had fallen in battles, were called by the name 

\textit{iraiyili udirappat}\textsuperscript{52} lands offered for leading a happy and joyous life. They might have engaged themselves in agrarian life or might have employed experts for various agricultural operations. Thus agrarian life was blended with the lives of people of various walks and politics.

The \textit{iraiyili} or tax-free lands assigned to private individuals were known as \textit{iraiyili kara\textsuperscript{k}ilama}\textsuperscript{53}. This tax-free cultivation right indicates the transfer of rights to private individuals by the state. Likewise

\textsuperscript{52} P.S.I., No. 411.
\textsuperscript{53} Ibid., 332 and 376.
vaidiyapatti\textsuperscript{54} was the land granted to the physicians by the state. Kalangupuram, Uvachchapuram and Kallamudipuram\textsuperscript{55} were the lands assigned to trumpeters, conch blowers and drummers respectively. These facts indicate that during the medieval period, to give regard to the different varieties of officials, lands were granted. Such facts also expose the idea that lands were granted as a salary\textsuperscript{56} and it was equal to that of the Jivitham lands assigned to servants who were in the courts of the Chola rulers. The term Jivitham that indicates life suggests that land-grants were made as salaries for life. It informs that they earned their livelihood from the yields of such lands and they enjoyed them throughout their lifetime. Hence it was not a hereditary property. So it is obvious that individuals and their services were recognised.

Thus from the catalogue of lands as seen above, it is obvious that land, the basic prerequisite for agrarian life, was utilised in many ways for the continuance of the life of the various kinds of people of the society. Further the qualities and treatment of agricultural activities were not

\textsuperscript{54} Ibid., 575.
\textsuperscript{55} Ibid., 30, 89, 90, 490 etc.
\textsuperscript{56} A.R.S.I.E., 1925-26, No. 270.
uniform and identical through the ages. They differed according to time and need.

**Sand reclamation:**

Availability of waste, arable, fallow and barren lands was a common feature to avoid the wastage of land, to satisfy the needs of agricultural yields to the mass and to create more employment opportunities to the public. The needs for widening agricultural areas actually felt by the ancient Tamils. The need and the introduction of the reclamation of lands will attest such facts. Efforts were taken for the reclamation of waste and fallow lands mainly for the sake of the welfare of the people.

During the ancient period various endowments were created in temples for different purposes. Further the private individuals purchased the wastelands and after reclamation they granted them as donation to the temples and they served as additional endowments. From the income of the lands provided as additional endowment after reclamation, the share received was called the *servaram*; and the temples-share was

known as cirukkudivaram\textsuperscript{58}. The tax-free wasteland called vanjikam was also reclaimed lands and donated to temples\textsuperscript{59}. The already announced dēvadānā wastelands were also reclaimed by private individuals and donated to temples for making flower gardens\textsuperscript{60}. Such efforts suggest not only the importance assigned to agricultural pursuits but also expose the relationship that existed between religion and agriculture. The common people made arrangements through the states for the donation and grant of temples to the states.

Reclamation was possible when the irrigation facilities were increased due to raised banks and bunds of the tanks and construction of canals from the rivers\textsuperscript{61}. The above measures enabled them to clear the forestland and to convert them in to cultivable lands. So deforestation was a measure to improve agriculture. Even the dry-lands were transformed into wetlands by increasing the irrigation facilities and also by removing the defects in them\textsuperscript{62}. The widened jungles having lot of hedges were cleared and converted into cultivable lands. For improving the irrigation

\textsuperscript{58} 164 of 1929.
\textsuperscript{59} 176 of 1923.
\textsuperscript{60} 259 of 1918, 149 of 1928 etc.
\textsuperscript{62} Ibid., No. 533.
facilities certain lands were donated and they were called as ēripāṭṭi.**

Private individuals adhered to the practice to purchase the fallow lands kept under the custody of Īrsabha. Such lands after reclamation were donated to temples for the conduct of regular rituals. The state servants too concentrated on agriculture. They were used to purchase the quantum of wastelands known as purru and terri from the sabha and made them fit for cultivation by providing ample irrigation facilities. Even devadāna wastelands were reclaimed for the maintenance of individuals by making flower gardens from the income of the land. Lands were endowed after reclamation, which was under the control of government servants like sthanikas. Such facts indicate the linkage between the rulers, ruled, temples and servants of the state in the economic pursuits of the state.

Thus due to the importance assigned to agriculture, it was a customary practice among the ancient Tamils to reclaim wastelands and

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65. 86 of 1909.
66. 359 of 1918.
to convert them into cultivable lands. Such efforts will expose the agrarian life in the background of lands and their transactions.

**Administration of lands:**

As rightly observed by S.Krishnaswamy Aiyyangar\(^68\) and R.Gopalan\(^69\), administration of land as a common feature, was under the control of the village council’s viz., sabhās. The mahāsabhā popularly called, as perünkūri was in-charge of the administration of the rural lands\(^70\). The mahāsabhā regulated the income from the lands and distributed them for varied kinds of public activities. Public lands controlled by the village-assemblies were also donated to temples by kings. There are references about ərivinlīyōgam, kalanivinlīyōgam etc., which means funds distributed for maintaining tanks and fields. The village-assembly called "sabha" maintained them\(^71\). The amount donated by individuals gained by the individuals through the exemption of taxes on particular lands was kept under the custody of sabhā. That money was

\(^70\) 268 of 1923, 32 of 1910 etc.
\(^71\) 111 of 1931, 689 of 1904 etc.
used for purchase of lands for the maintenance of local temples. The sabhās also involved in agricultural activities and regulated the water-supply for irrigation through channel. The village assemblies also had the privilege of maintaining the gifted-lands. The lands were used for other purposes such as grants and donations to execute common activities. Such lands were purchased which were in the possession of the sabha. It is obvious that village assemblies were mainly responsible to maintain the lands of the respective villages. They were well aware of the different varieties and quantum of lands available in particular villages due to the maintenance of records. As pointed out by C.Minakshi the tanks, wells, the streams and channels were running through the villages, the common path way and the common land and manru, which were considered as common property of the villages. For desilting the irrigation tank and raising the bunds of the tank the interest accrued on

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73. 440 of 1907.
75. 48 of 1914.
the endowment made for the temple fund was utilised by the sabhā\(^{78}\). The landed possessions of those people who migrated to other areas from a particular region were forfeited by the village assembly and transferred to others for cultivation\(^{79}\). In the same way the inappropriate common village land was sold by the sabhā by sabāvilai or public sale to the other residents of the villages\(^{80}\). The sabhā had the right to exchange the lands for other purposes other than the one for which it was allotted\(^{81}\). Such facts stand to prove the various measures employed in the transfer and transactions of the rural lands. The above facts not only indicate the responsibilities of the village sabhā but also disclose the fact that they administered and transacted the village-lands. But they were executed through various vāriyams such as ṥrivāriyam, tōṭavāriyam etc. created through the election called, and the systems of lots of Kudavōlai mūrali\(^{82}\).

The village assemblies were the custodians of the financial administration of the local lands and cultivation of lands. The assemblies

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78. 84 of 1898.
79. 531 of 1921.
80. 396 of 1922.
81. 580 of 1920.
were directed to set apart a specified sum from the income of the village lands for the worship and conduct of regular rituals in a temple⁸³. After the collection of the land revenue they had to send the accrued amount of land-taxes promptly to the state treasury without any delay⁸⁴. The great assembly paid the taxes for the temple lands and a member of the kalani vāriyam of the village served as a coordinator of such activities. It is worth to note that even the members of the assemblies enjoyed the privilege to donate public lands to temples⁸⁵. The sabhā, which regulated the agricultural activities of the lands, was empowered to collect one nāli of grain on each basket of harvested grain as ūrāchi⁸⁶. The sabhās appropriated a particular sum from its income for the maintenance of the village irrigation tank⁸⁷. Permission was also accorded to the assembly to investigate the validity of the authority in which the private individuals possess the lands for their personal use⁸⁸. The Sabhās had the right to collect a tax called ēri āyam from those who used the public tanks for

⁸³ 356 of 1927.
⁸⁴ 178 of 1915.
⁸⁵ 157 of 1916.
⁸⁷ 156 of 1942-43.
⁸⁸ 216 of 1907.
irrigation purposes. Further with a specified sum appropriated from the common fund the sabhās streamlined the various agricultural activities in their respective villages. As the sabhas were entrusted with the right of collection of different taxes, land-tax was the specific and significant among them.

The land revenue income and other incomes public resources were sent directly to the central treasury only through the village assemblies. The sabhās enjoyed the right to receive a specific sum from the temples for carrying out many welfare activities in their respective areas. They had the power to announce concessions and remissions in the dues of the temples in terms of income received from the lands. It is unique to note that certain lands were granted to the assemblies to be maintained by them for melting out the expenses of that area. The income from that land could be used for annual dredging of the tank. Such activities of the

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90. 74 of 1898.
93. 292 of 1908.
94. 11 of 1898.
village sabhas will indicate the relationship, which prevailed between the state and agrarian system through private individuals and temples.

Beyond the above measures, it is also a must to estimate the activities of the private individuals in the upkeep and maintenance of the irrigation tanks. They were given an annual grant of 70 kāḍi of paddy as remuneration for their services95. Even private individuals had the rights and privileges to execute projects for the maintenance of irrigation tanks96. If the private individuals failed to clear of the tax-debts it caused the transfer of the right of possession of the lands to somebodyelse97. The private landowners had to pay taxes such as īrai, echchōru, uriduvaripādu etc98. Like the private individuals the officials of the government also had their roles to play in the administration of and upkeep of agricultural lands. For instance the samantās were required to dig tanks for promoting irrigation facilities99. The village headman was directed to construct sluices for the regulation of irrigation. The private individuals who were employed by the state in the administration of

96. 21 of 1934.
agricultural activities were given lands in lieu of their salary. The private individuals were permitted to exchange their lands with other lands gifted to state with the consent and permission of the kings. Thus the private individuals were adopting their own techniques in carrying out agricultural operations and had their rights to have their share in the administration of lands.

The kings as the possessor and head of all the lands had their role in the administration of lands; for they were the authorities to make regulations relating to lands of private individuals. The kings settled the cases relating to lands of private individuals and public servants by direct activities. For instance, Raja Raja, the great, (985 A.D. to 1014 A.D.) interfered in the case caused due to the sale of land of a private individual and the temple authorities of the Parvathi Pagar temple of Tanjore. King Rajendra (1014-1040 A.D) the great also ordered the transfer of the land of a private individual to a temple for, the former failed to pay the taxes regularly. The king granted remissions of taxes on the devadāna

100. 355 of 1927 and 346 of 1927.
lands on payment of a fixed sum of money by the temple\textsuperscript{103}. The kings even prevented certain members of the agrarian community from involving in certain subsidiary industry associated with agriculture. For instance the \textit{lalavas}, who were toddy tapers, were forbidden from collecting toddy from the Palmyra as well as coconut trees\textsuperscript{104}. The detention or recovery of fines relating to lands in the absence of the payment of land revenue was also the prerogative of the rulers\textsuperscript{105}. The kings for the maintenance of irrigation tanks also ordered collection of levy\textsuperscript{106}. The kings to exchange lands among private individuals at their request granted permissions. The kings exempted some lands as Irayili or tax-free lands from certain taxes such as \textit{veḷāṇvahai} could revoke the previous orders by passing another one and it had to be recorded by \textit{Tirumandiraōlai}\textsuperscript{107}.

\textbf{Preservation and protection:}

The ancient Tamils were well aware of the fact that preservation and protection of agrarian pursuits at different stages will enhance the

\begin{thebibliography}{99}
\bibitem{103} 122 of 1914.
\bibitem{104} \textit{E.I.}, Vol. XXII, p.262.
\bibitem{105} \textit{Ibid.}, XXIV, p.262.
\bibitem{106} \textit{A.R.S.I.E.}, 1937-38, No.369.
\bibitem{107} \textit{Ibid.}, 1926-27, No.248 and 1965-66, No.435.
\end{thebibliography}
yield, which in turn will assign prosperity. They knew fully well that if proper care is not given to every activity in agriculture they will have to bear with the loss of prosperity as well as income. Further to make the ploughing operation a prosperous one, it was realised that necessary importance should be assigned to the protection.

For protecting the lands they used thorny fences\textsuperscript{108}. Thorny heaps were utilised as a protective fence to avoid trespassing by horses of the army. Fences protected the ripened plantains\textsuperscript{109}. The thorny plant called nirmulli, the \textit{ṭalai} shrub, and the thorny plants of neidal\textsuperscript{110} region were all known as kāndal\textsuperscript{111} and they were utilised for protecting the cultivated fields\textsuperscript{112}. Thus the use of fence served as a significant factor of preservation and protection\textsuperscript{113}. Further such factors such as fencing help us to note that the Tamil farmers were fascinated to have good yield by all possible ways.

\begin{multicols}{1}
\begin{itemize}
\item \textsuperscript{108} Puranānūru: 301:3, 306:1, Kalittogai: Pālai: 11:1.
\item \textsuperscript{109} Sundara Dēvārāma: 12, Tirukkaṟṟuppariyalūr: 4:1-2.
\item \textsuperscript{110} Nālādiyār: 194:3, Tiṇaimālai Nūṟṟaimbadu: 61:3.
\item \textsuperscript{111} Ahanānūru: 260:3, Kuruṟntogai: 117:3, 340:4, Nāṟṟinai: 191:5.
\item \textsuperscript{112} Nāṟṟinai: 54:11, 74:10, 123:9.
\item \textsuperscript{113} Nāvukkarasar Dēvārāma: 6:226:8:3.
\end{itemize}
\end{multicols}
Likewise preservation of agricultural implements was also treated as an important aspect of agrarian life. The maintenance of the ploughs will attest the fact. As the agriculture was a leading and venerable profession, the Tamils preserved it in all possible ways with at most care. No stone was left unturned in promoting agrarian activities.

The preservation and protection of the ripened grains and harvested grains was yet another aspect of agricultural life. The ancient Tamils commonly used the slings as an offensive weapon to protect grains from birds. It was a customary practice among women to be by frightening away the engaged in protection of the fields. birds.

They adopted separate measure for preserving the harvested grains. Generally, the grains were preserved in huge urns made of baked clay. Sāl or kudir is the term used now for the urn used for preservation of grains. The farmers preserved the white variety of paddy usually for different purposes. They were preserved in the rooms

116. Even today in the villages the farmers are preserving their grains in huge wins called Sāl or Kudir.
specifically constructed for the purpose of preserving the grains\textsuperscript{117}. The farmers were used to preserve paddy in particular common places and their names and quantity preserved by them in their account were all recorded\textsuperscript{118}. Such facts stand to prove that steps were taken at all stages by the farmers for the proper upkeep and continuation of their profession in a genuine efforts and effective manner. The constant and continuous efforts exhibit the sincerity and earnestness of the agrarian mass in the Tamil country during the early period of its history. Eight types of grains viz., \textit{Nel} (paddy), \textit{Varahu} (common millet), \textit{el} (sesame), \textit{Payaru} (green gram), \textit{Ulundu} (black gram), \textit{mochchai} (double beans), \textit{sõlam} (maize) and \textit{kambu} (millet) were preserved in separate places. The harvested paddy was stored in bags and retained in granaries, which were encircled by fences\textsuperscript{119}. The reference about granaries attests the fact that storage facilities were commonly available then. \textit{Kudir} was another place set apart for preserving grains\textsuperscript{120}. Thus preservation of grains for future use also reiterates the mentality of saving of the people. Further the

\begin{quote}
\textsuperscript{117} Padiruppatu: VII: 5: 5-6.
\textsuperscript{118} S.I.I., Vol. XII, 72.
\textsuperscript{119} Porunarãr̃ruppadai: 245-46.
\textsuperscript{120} Maduraikkâńchi: 169 and Perumbânãr̃ruppadai: 186.
\end{quote}
preservation was also helpful for them to be utilised at times of natural calamities such as droughts and famines.

Proper care was assigned to the preservation and maintenance of the irrigation facilities because they were aware of the fact that without the proper upkeep and maintenance of irrigation facilities, agricultural activities would never be a thriving or prosperous one. The following facts will attest the significance assigned to the concentration and devotion shown towards irrigation measures. A specific amount of gold was kept in reserve with specific individuals and the interest accrued was utilised for the keeping up of the irrigation tanks in good conditions\textsuperscript{121}. A special cess known as ēriāyam was collected from the ryots of the respective villages at the rate of one padakk\textsuperscript{u} of grain per mā of cultivable land for carrying out the repairs in the irrigation tanks annually\textsuperscript{122}. The donation offered by the philanthropists from the income of their lands was also beneficial for the preservation of the irrigation tanks at all times\textsuperscript{123}. Paddy was treated as the major and main source of income with which the dredging up of

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{121} 42 of 1898.
\item \textsuperscript{122} 178 of 1902.
\item \textsuperscript{123} S.I.I., Vol. VI, Nos. 294 and 325.
\end{itemize}
\end{footnotesize}
tanks was carried out annually and regularly\textsuperscript{124}. The ērivāriyam too had the right to spend a specified sum along with the support of the private individuals at the interest rate of 15\% per annum. The income obtained from the interest was utilised for the regular maintenance of tanks\textsuperscript{125}. The village assemblies or the Gīna sabas maintained a specified deposit amount of money collected by way of fines from the public\textsuperscript{126}. Endowments were also created for the clearance of the tanks during every month\textsuperscript{127}. From the income of the lands gifted to public activities, the sabas dug pits in the tanks and deepened them for enhancing the water-capacity. Thus the different deposits collected from various sources helped for raising the bunds. Even boats were employed to collect the silts in big tanks and the sand collection was utilised to raise the lands of the tanks\textsuperscript{128}. Thus the sabhā with the assistance of vāriya perumakkal and the village public showed an evincing interest in maintaining and preserving the irrigation tanks\textsuperscript{129}, which was the basic pre-requisite of

\textsuperscript{124} 90 of 1898.
\textsuperscript{125} 65 of 1898.
\textsuperscript{126} 85 of 1898.
\textsuperscript{127} 74 of 1898.
\textsuperscript{129} 65 of 1898.
agricultural activities. Thus to achieve a prosperous yield from the lands, much care was bestowed on the protection, preservation and maintenance of landed possessions.

Above all, the customary practice of the tenancy rights offered to private individuals at specific rates compelled them to concentrate on the maintenance and upkeep of lands. If the land was kept unused or fallow for a long term they will become barren and useless. To preserve the normal condition of the agricultural tenancy concession were assigned on lands. Thus the farmers of the Tamil country of the ancient period were so keen on maintenance and upkeep of their cultivable lands. It will also testify to the calibre of the agriculturists of the Tamil country.

**Measurement:**

It was a regular customary practice among almost all the Tamil kings to donate lands to temples, private individuals and other institutions. Further they were accustomed to register them with accurate details of boundaries and measurements. It was mainly to avoid problems in the ownership. Such facts expose the common practice of measurement of

130. 370 of 1924.
lands prevailed then. As the agricultural lands had no fencing at that time it was essential for them to demarcate the boundaries. For, that will set aside various issues. Again the measuring system could have been the backbone of the taxation policies of the ancient. By appropriate land-survey it would have been possible for the states to know the specific income through land-revenue. To avoid land-disputes and also to make land transactions and economic measures easily feasible, measurements of some uniform kind and standard measurements could have been practiced.

Since lands were of primary importance in the social and economic life of the Tamils, one should note the measures employed in measuring the lands. Tadi was a common scale used to measure the parru land i.e., the donated iraiyili or tax-free land by kings\textsuperscript{132}. Puḷiyantaḍi, or tamarind stick having gold coverings at two ends was generally used for measuring the revenue-fetching taxable lands\textsuperscript{133}. Perumakkal kaithadi\textsuperscript{134} was yet another scale utilised by the vāriyapperumakkaḷ of the village assemblies for the confirmation of the measurements already made.

\textsuperscript{132} 81 of 1897.
\textsuperscript{133} 19 of 1900.
\textsuperscript{134} 15 of 1895.
Padinarusānkōl, the rod of 16 span lengths, was another common scale\textsuperscript{135}. Panniradikkōl was another rod used to measure punsei lands\textsuperscript{136}. These measurements seem to be utilised commonly because one padinaradikkōl was readily available and treated as ūrkkōl\textsuperscript{137}. Viramāmukkanikkōl otherwise known as viramukkānikkōl was the one used to measure temple-lands\textsuperscript{138}. Such facts reveal the importance assigned to the measuring of the lands with all earnestness.

Padinettadikkōl was a rod utilised in the modern Pudukkottai state areas during the early periods\textsuperscript{139}. While the perungkōl\textsuperscript{140} was yet another common rod used to measure the temple lands there were other specific measuring rods also. The ūrar or the common public had the measuring rod known as māligaikōl\textsuperscript{141}. That was used for the measuring of wetlands. The garden lands were measured by perungkōl\textsuperscript{142}. It will attest the fact that separate yardsticks were employed for measuring different

\begin{flushleft}
\textsuperscript{136} S.I.I., Vol. VI, No.435.
\textsuperscript{137} \textit{Ibid.}, No.440.
\textsuperscript{138} \textit{Ibid.}, Vol. II, No.650 and No. 654.
\textsuperscript{139} P.S.I., 350.
\textsuperscript{140} 351 of 1903.
\textsuperscript{141} A.R.I.E., 1956-57, No.167, 99 of 1914, 102 of 1925 etc.
\textsuperscript{142} S.I.I., Vol. II, No.621.
\end{flushleft}
kinds of lands. Sripādakkōl seemed to be yet another rod by which temple lands were measured. To measure the lands assigned for the processing of the agricultural yields, a separate kōl called kadaigai kalattukōl was used. Generally the length of the kōl as attested by the temple of Tiruvalangadu confirms the standard size of the measuring rod employed then.

Lands were surveyed with accuracy by a particular type of measuring rod and the measurement details were recorded in the registers specifically prepared for that. For having an accurate estimate of the land-revenue received by the state, importance was assigned to lands in an uniform pattern. The survey arranged by Raja Raja (985-1014 A.D.) in 1001 A.D. with the assistance of Senapathy Kuravan Ulaga landa Raja Raja Marayan was impressed by the use of a specific stick called Ulaga landākōl. The lands demarcated with exact boundaries were marked by the particular stones known as pulla daikarkal. This

143. 87 of 1900.
144. 160 and 172 of 1921.
145. 93 and 97 of 1926.
146. 413 of 1902, 59 of 1913, 199 of 1917.
indicates the sincerity and earnestness activities of the state. They also reveal that the rulers endeavoured to promote agrarian life in a methodical way without any flaw in a uniform way.

Various terms are used to indicate the various measured area of lands. They suggest the prevalence of uniform system of land measurements throughout the areas of specific rulers. Vēli was the common term\textsuperscript{149}, which indicates a particular area of land. Mā was another measuring unit of land\textsuperscript{150}. The \textit{sabayōmudhānaputtakam} suggests that the units kāni and mā were the measured lands\textsuperscript{151}. Kull another unit was a higher unit comprising of mā\textsuperscript{152} and sēru\textsuperscript{153}. Such facts indicate that the Tamils of the ancient period were keen on measuring the land without any deviation. They devoted much attention to exact and correct measurements.

They were particular about the exact quantity of seed to be sown in a particular area. For example a \textit{kuruṇi} and five nālīs of seeds were

\begin{itemize}
\item\textsuperscript{150} \textit{Puranānūru}: 184:2, S.I.I., Vol. II, Nos. 617, 624, 655, 658 and 659.
\item\textsuperscript{151} 32, 100 of 1900, E.I., Vol. XII, pp.213-216.
\item\textsuperscript{152} S.I.I., Vol.II, No.623.
\item\textsuperscript{153} 250 of 1902.
\end{itemize}
required to be sown in a unit of land called kuli. Likewise they were able to estimate the anticipated income from a particular amount of seed sown in a specific area. For instance they expected that by sowing two kalam of paddy seed they will get a yield of 24 kalam of paddy.

Thus the calculated efforts of the agriculturists of the ancient period expose their thorough knowledge with probable estimates. They also reveal the quantitative analysis of land and their yields by the Tamils.

As seen above, different and exact measurements were adopted by them for having an appropriate estimate of the yield. The measurement of the land was commonly practiced with appropriate measures even during the Saṅgam Age. The red variety of paddy was also measured by such measurements. The term muhavaipattu sung during the time when paddy was doled out as charity will also attest this fact. Thus much attention was paid to the measuring of the grains.

154. 263 of 1912.
156. Ahanānūru: 126:11.
To measure the grains, the Tamils followed different uniform units. **Nāli** was a common measure in this regard. **Padakku** and **kurunī** were other units utilised for measuring the different grains. **Kalam** was another common measure employed for the same purpose. **Sabhānāli** (a standard measurement recognised and approved by village assembly) and **kurunināli** (common as **kurunī**), were few other measurements, which were in vogue then. **Nārāyananāli** was a separate unit utilised for measuring rice. The term **Adigai Nayakkan Marakkāl** indicates that the measures could have been approved and certified as recognised units by the particular officer of an area. Thus the importance assigned to varieties of measurements indicates the arithmetical knowledge of the Tamils in measuring and utilising the agricultural produces with estimated limits for various activities such as collection of taxes, sale to others and donations to temples.

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159. 21 of 1903.
161. 393 of 1903.
162. 122 of 1928-29.
163. 488 of 1921.
It is worth to note that they were so particular in mathematical calculations, subdivisions and subtraction. Such measures followed in the units of measurements will reveal the quality of the Tamils. It was estimated that one mā of land consisted of hundred kulīs and that was measured by a yardstick called māligai kōl. Sometimes 250 kulīs was equal to one mā of land. While the land was measured by the Pathināru sān kōl (16 span rod), it was equal to 512 kulīs. One-quarter sēi of land was equal to the quantum of land of five mās. In few places 128 kulīs were treated as an equivalent of one mā. Likewise modern scholars have fixed certain values to the measures. For instance, it is calculated that 20 mās of land was equal to that of one vēll and 100 kulīs of land was also treated as one mā. Such facts indicate that though there were variations from time to time and place-to-place, it is revealed that mā was the most accepted unit of all the areas during the period between the Saṅgam age and Chola period.

164. 102 of 1925.
165. 261 of 1902.
167. Ibid., Vol. XIX, No.69.
168. 508 of 1899.
170. V. Mahadevan, Kalvettukkalil Tēn Tuligal (1979), p.44.
In measuring the grains also they were particular in adopting calculations. Kāḍi was a unit to measure paddy, and in 1015 A.D. 40 kāḍi quantity was treated as equivalent to 13 kalam, which was a highest unit\textsuperscript{171}. Sulakkal was yet another unit used to the measuring of paddy\textsuperscript{172}. From the inscription also it is revealed that in 992 A.D. such measures were in vogue\textsuperscript{173}. Attaiyittan mathu\textsuperscript{174} was a measurement used to measure paddy, which seemed to be lower than kalam. Likewise attaiyittan and marakkāl were units of lower value. S. Krishnaswamy Aiyyangar has calculated that grain weighed one kalam will be three maunds of modern value and a vēli or 30 kulīs will be equal to six acres of modern days\textsuperscript{175}. In the same way in 1012 A.D. in the then existed barter economy one pon or kalanju gold value was equal to seven kalams of paddy\textsuperscript{176}. But in 1018 A.D. twelve kalams of paddy was equal to one kalanju pon\textsuperscript{177}. Such facts indicate that measurements utilised in

\begin{enumerate}
\item[171.] 196 of 1915.
\item[172.] S.I.I., Vol. V. No.233.
\item[173.] 218 of 1921.
\item[174.] S.I.I., Vol. V. No. 771.
\item[175.] S.Krishnaswamy Aiyyanagar, \textit{op.cit.}, p.183r
\item[176.] 299 of 1904.
\item[177.] 263 of 1912.
\end{enumerate}
agricultural activities were beneficial for adhering to a proper barter economy.

Such facts throw light on the fact that mathematical calculations were adopted by the agriculturists of the Tamil country of the ancient period. It is worth to note that the various measurements employed were more accurate and they were estimated even upto the values of 1/12, 1/312 etc. But the calculations undertaken then seem to be more accurate and were difficult to be understood by the modern people.

Endowments:

For the continuous and regular operations of agricultural activities and for maintenance and upkeep of irrigation facilities, it was a customary practice to create endowments of lands. The income gained by the way of interest on the debts was utilised for carrying out activities such as creating endowments. The various endowments created were mainly because of the importance assigned to agriculture not only for its prosperity but also for the prosperous nature of the people.
The sabhās or the different assemblies were enjoying the rights to make endowments\textsuperscript{178}. Private individuals have also created endowments of lands after purchasing pieces of dry land. Such lands were converted into wetlands by irrigation facilities for the maintenance of a flower garden\textsuperscript{179}. Private individuals even had the privilege of purchasing land from the sabhā and converted them into endowments for carrying out public activities\textsuperscript{180}. Lands were also assigned as endowments for making funds for feeding Brahmins\textsuperscript{181}. The local assemblies maintained the land endowments assigned for daily offerings to specific temples by private individuals\textsuperscript{182}. Different varieties of Lands gifted by private individuals were also treated as endowments\textsuperscript{183}. Lands offered as endowments after reclamation were kept under the supervisory control of public servants exclusively appointed for that purpose\textsuperscript{184}. The village council had the right to offer a plot of land in exchange for the land located beside a tank to the private individuals. Such exchanges were arranged only when that land

\begin{itemize}
\item \textsuperscript{178} S.I.I., Vol. XIX of 48.
\item \textsuperscript{179} 110 of 1929.
\item \textsuperscript{180} 123 of 1919, 560 of 1920, 494 of 1922, S.I.I., Vol. XIX, No.60.
\item \textsuperscript{181} 614 of 1920 etc.
\item \textsuperscript{182} S.I.I., Vol. XIII, No.49, 117 and 226 of 1926, A.R.S.I.E., No.169 of 1937-38 etc.
\item \textsuperscript{183} 325 of 1907.
\item \textsuperscript{184} 682 of 1909, 347 of 1918.
\end{itemize}
was already an endowment land\textsuperscript{185}. Temple authorities also purchased lands from the local assemblies (Sabās) and agreed to pay the taxes from the interest obtained out of it. The gifted lands were given irrigation facilities from the local tank\textsuperscript{186}. Lands including tank-beds and house-sites were purchased and converted into endowments\textsuperscript{187}. It is unique to note that even women had the privilege to make endowments\textsuperscript{188}.

Lands granted to temples as donations were exempted from taxes. Such kinds of income and others from those lands were utilised to pay the remuneration of the temple-servants, for getting manures for the lands etc\textsuperscript{189}. Without any disparity, people of all kinds donated land endowments\textsuperscript{190}. The tax-free lands served as endowments and they assisted to meet the different expenses of the temple. The sale of the produces from those lands was also used for meeting out the expenses of the temple\textsuperscript{191}. Various kinds of paddy such as sabi, Sennel, Vennel etc.,

\begin{footnotesize}
\begin{enumerate}
\item 580 of 1920.
\item S.I.I., Vol. XIX, No.352.
\item 690 of 1909.
\item 320 of 1906, 123 of 1931.
\item 126 of 1911, 112 of 1914.
\item 44 of 1910, 346 of 1918, 585 of 1930.
\item 175 of 1919.
\end{enumerate}
\end{footnotesize}
were donated. The endowed lands were not used totally at times\textsuperscript{192}. Some of them were left fallow without serving the purpose for which it was donated\textsuperscript{193}. The merchants were also interested in making the endowments\textsuperscript{194}. The income from the lands was mainly used to carry out the common improvements and to offer conveniences needed in public places\textsuperscript{195}. The donated plots of tax-free lands, or the purchased or exchanged were kept under the supervision of \textit{ganavāriyapperumakka\textsuperscript{i}}, i.e., the temple authorities\textsuperscript{196}. The \textit{mahāsabhās} paid the taxes on the basis of the directives issued by the kings on lands contributed to the endowments\textsuperscript{197}. For the maintenance of irrigation-tanks alone, a separate endowment was created\textsuperscript{198}. Thus the lands, which were donated to the endowments for different purposes, disclose the fact that lands served as measures for carrying out welfare activities of different kinds including agriculture.

\textsuperscript{192} \textbf{A.R.S.I.E.}, 249 of 1932-33.
\textsuperscript{194} \textbf{S.I.I.}, Vol. XIV, No.96.
\textsuperscript{195} 358 of 1918.
\textsuperscript{196} 206 of 1915.
\textsuperscript{197} 107 of 1907.
\textsuperscript{198} \textbf{A.R.I.E.}, 1935, No.62.
The above facts indicate the distinctive qualities of treatments assigned to lands by the cultivators and others during the ancient period in the Tamil Country. It is absorbing and unique to note that the Tamils, due to their attachment and knowledge in agriculture, were capable of distinguishing the different varieties of lands and grains. Such knowledge assisted them to assign different names to identify the varieties of lands. Due to their earnestness and needs of agricultural produce, the Tamils concentrated on the reclamation of uncultivated fallow and barren lands into cultivable lands. The sincere administrative measures of land, undertaken then, reveal the significance assigned to the maintenance of agriculture. For achieving the proper yields from the lands, they were keen on preservation-techniques and protecting the landed properties as well as agricultural implements and yields. They undertook many efforts achieving their ends. The measurements, which the Tamils followed at different stages of agricultural activities, reveal that they were keen on in maintaining accuracy in the various aspects of agriculture. It exposes the practical and pragmatic knowledge of the Tamils in achieving a bumper harvest by the appropriate estimate of things. The calculated mathematical and arithmetic approach assisted them to avoid the
wastage of land and time. Such aspects were possible due to the widened scope of joint endeavour. Endowments were also made for the successful conduct of agricultural activities without hurdles and difficulties. Thus the agricultural pursuits of the Tamils attained a significant place in the economic activities of the Tamils.