CHAPTER II

STATE OF AGRICULTURAL CROP PATTERN, PRODUCTION AND PRICE STRUCTURE OF PRODUCTS

Based on the fertility, availability of water and rains, wet and dry lands of the people in the Medieval Tamil Country, the cultivators changed the crop pattern and it influenced the production of food and other items of mass consumption and trade, if there was any surplus. In fact, the production, which was sometimes surplus and many a time scarce, determined the price level of goods and commodities.

Classification of Lands

Contemporary inscriptions usually classify that lands into wet (nanjey), dry (Punjey) and garden (tottam) land. It was not unusual, however, for wet crops being raised on dry lands and vice versa. In the wet land cultivation, there were generally two harvests, the kar and pasanam. The season for the sowing of kar began in June and harvest took place around December. In the case of pasanam, sowing started in January and the harvest took place in May. The cultivated land is called nanjey and dry land punjey.

The number of crops raised each year on paddy land was two, sometimes three.\textsuperscript{211} Occasionally in the inscriptions there was a mention of fields which bore three crops.\textsuperscript{212} The term \textit{orupu} (single crop) \textit{Irupu} and \textit{kadaipu} (literally, the last) being applied to the several harvests.\textsuperscript{213}

The major \textit{kar} crops were rice, \textit{karnel} and the paddy cultivated during the time \textit{pasan} was called \textit{passan} crop. Apart from paddy, varagu, pulses, gingelli, castor (\textit{amanakku}) were cultivated in the dry (\textit{punjey}) lands.

The crops cultivated with the expectation of rainfall was called “\textit{Vanpayir}”.\textsuperscript{214} The dry crops were called \textit{pun-payir}.\textsuperscript{215} The dry lands were called \textit{kalani punjai} and \textit{kattupunjai}.\textsuperscript{216}

\textbf{Garden Lands (Tottam)}

The fruit trees were grown in the garden lands (\textit{tottanilam}) such as \textit{ma} (mango), \textit{pala}, (Jack fruit) and \textit{valai} (plantain). Apart from these trees the \textit{kamugu}, \textit{thennai} (coconut) and \textit{Iluppai} were planted or grown in these lands.\textsuperscript{217}

\begin{itemize}
\item \textsuperscript{211} K.A.Nilakanta Sastr, \textit{Op.cit.}, p.585.
\item \textsuperscript{215} \textit{S.I.I.}, Vol.II, No.61, p.247.
\item \textsuperscript{216} \textit{A.R.E.}, No.66 of 1919.
\item \textsuperscript{217} \textit{Cholapperuvendar Kalam, op.cit.}, pp.193-194.
\end{itemize}
Kollai Lands

These lands behind the houses were called *kollai* lands. The people grew flowers and produced vegetables in the lands for their own consumption. Two crops were raised in all the *nanjey* lands (*Irupu*) and one crop was raised (*oru-pu*) in other lands.  

Different types of Lands

Reclamation

There were different types of lands such as *kalar, uvar*, pastoral lands, *karambai, kallichey, kadu, tarisu, pattapal* and others. These lands were reclaimed in the due course by the kings, *Sabella, Ur*, and individuals.  

There was a steady progress in the reclamation of forest and waste land that was brought to plough. Land was reclaimed for tillage and the founding of villages and the work was often undertaken by the king. Clearance of waste was an advantage to the king who received the tax and to those who allowed to occupy it, though with the consent of the resident villagers whose right to ownership of the waste lands were proportionately diminished.

---

There were two kinds of reclamation. Reclamation might be of land covered with jungle and to be brought under village for the first time or of land once under cultivation but later deserted. This later category is closely connected with the problem of internal migration. The difficulty of meeting the demand of land sometimes led farmers to abandon their lands and such lands liking was for years had to be reclaimed and rehabilitated.\(^\text{220}\) The coast lands, as a result of inundations of the sea lands got submerged and sailed up with sand and had to be reclaimed at much cost. In the years 1148 and 1203 A.D. such lands in the Shiyali taluk were reclaimed at the cost of 500 \textit{kasu} per \textit{ma}, while the cost of purchase per ma of the land had been less than 400 \textit{kasu}.\(^\text{221}\)

The waste lands in the villages were called by the name \textit{muditariru} and \textit{paramparipal} and such lands were reclaimed by the village assemblies.

A record of Maravarman Kulasekara I, issued in 1294, A.D. states that the village assembly of Tirunalakkunram (Pudukkottai District) sold its land called \textit{samaivayal} to one Kuttuvan Sokkanar and the members of his family for 25 \textit{varagan panam} (evidently a concessional price on condition that the purchaser should improve the land and pay \textit{kadamai} dues to the village).\(^\text{222}\)

Another record of Jatavarman Parakra Pandya issued in 1320 A.D. informs us that the village assembly of Namanur (Ramnad District)

\(^{220}\) \textit{A.R.E.}, 1928-29, No.28.
\(^{221}\) \textit{A.R.E.}, 1919, Para 7, 504, 505 of 1918.
\(^{222}\) \textit{P.S.I}, No.4.
exempted a piece of land from water tax in compensation for the labour involved in reclaiming it from its waste condition.\textsuperscript{223}

Private individuals also undertook reclamation. The motive behind such reclamation was either desire to do some charity or to make profits and such transactions.

An inscription from Tiruvenkadu, registers the temple land was leased to a resident of Nallavur. He reclaimed the temple land for cultivation every year at the rate of one \textit{kuruni} per day for offerings.\textsuperscript{224}

Another great service rendered by the temple was in the field of reclamation of waste lands by bringing them under cultivation. Private individuals could easily do this. An inscription from Sendalai records that an individual made a follow land belonged at the Niyaman cultivable and made it tax-free and restored it to same temple for the charitable purposes.\textsuperscript{225}

\textbf{Grade of Lands}

The classification of land into different grades - as many as twelve or more grades \textit{taram}.\textsuperscript{226} and unclassified lands (\textit{taramili}). The ancient practice of classifying land into \textit{nancey} (wet land) \textit{puncey} (dry land) on the

\textsuperscript{223} \textit{A.R.E.}, 1924, No.15 Para 28.
\textsuperscript{225} \textit{S.I.I.}, Vol.XIV, p.74.
\textsuperscript{226} \textit{A.R.E.}, 126 of 1896
basis of crop raised was adopted by Cholas.\textsuperscript{227} The wet land was mentioned \textit{nancey}\textsuperscript{228} \textit{nirnilam}\textsuperscript{229} \textit{nitarampan}.\textsuperscript{230} All paddy fields were classified as wet land,\textsuperscript{231} and dry land was also referred to as \textit{kollainilam}.\textsuperscript{232} Non-paddy fields were included in this type of land.

Another class of land was known as \textit{tottanilam}\textsuperscript{233} (garden land) in which fruit trees, betel and vegetables were cultivated.\textsuperscript{234} The fourth class of land was \textit{kalarnilam}\textsuperscript{235} (saline land) which may be considered as uncultivated waste land. The above classification was based on cultivation of crops. The land further sub-divided into several grades depending on the fertility of soil. The \textit{taram} was used to denote the class or grades of lands. In the pre-Chola epigraphs no mention is made of this term. It was first used in an epigraph of Parantaga I and was continued in all the successive reigns\textsuperscript{236} to indicate some sort of classification of soil on the basis of fertility. The meaning of \textit{taram} is clearly brought out in a later inscription from Srirangam in which a land of 14\textsuperscript{th} grade was for tax assessment. 

\textsuperscript{228} \textit{S.I.I.}, Vol.XIX, No.535.
\textsuperscript{231} \textit{Idem}.
\textsuperscript{233} P.Shanmugam, \textit{Op.cit.}, p.72
\textsuperscript{234} \textit{S.I.I.}, Vol.VIII, No.10.
\textsuperscript{235} \textit{S.I.I.}, Vol.XXII, No.368.
land so classified were called *taram perva* and classified lands were called *taramili*.\(^{237}\)

The Epigraphs mention as many as 20 *tarams* of which the grades 11, 12, 13, 15, 16, 17 and 19 are not mentioned. Land of first grade was called *talaitaram* (first grade) in Ramanathapuram and Chingleput districts and *mutal taram* (first grade) in North Arcot district. The lowest grade was *kadaitaram* in South Arcot, Ramanathapuram and Tiruchirappalli districts. The 20\(^{th}\) grade is mentioned in Tiruchirappalli. The fourth grade (*nalam-taram*) is the only grade mentioned four times.

**The Arable Land**

Next to the village habitat, the most important part of the land system of the village was cultivable lands. A number of inscriptions record grants of villages with cultivable fields or in some cases, bits of land only, forming the part of the village. Some even specify the class of land which was gifted away. In Tamil grants however, the land is usually distinguished under three heads, wet lands, dry lands and garden lands. It is true that in inscriptions recording grants of lands we find almost invariably the existence of both dry and wet lands in the same village. This did not hold good of garden lands.

**Punjai tottam, pallam and mettu tottaccal**

Cultivable lands were not always cultivated lands. The numerous grounds of uncultivated but cultivable lands often accompanied with special

concessions in taxation, to help the donee to bring them under cultivation. An inscription of 1176 A.D. from Edaiyarpakkam, Chingleput district records a fact that a piece of land was in a distant corner of the village so that no one came forward to cultivate.

Another example of the same unwillingness of the people to cultivate lands lying far away ocean in an inscription from Tanjore district. It is probably sufficient to note here in general, the land surrounding and within easy approach of the village settlement was mostly cultivated wet land and uncultivated waste was to be found only in the outer extremity of the village boundary.

Another class of land which was under cultivation only for part of the year. During the rainy season a part of the lands would go under water which and at other times they would be made use of the expression *arudupadugai* and *eri-koppu*. They are referred to about indicate that in flood time such lands would be covered, while in the dry season they would be under cultivation. It is very near to lake. It is under water in the rainy season and has to be drained for cultivation.

An inscription from Tiruvenkadu registers the leasing out of a temple land to the resident of Nallavar who was to reclaim the temple land for cultivation and every year at the rate of kurni per day for offerings.\(^{238}\)

Another great service rendered by the temple in the fields of reclamation of waste land by bring them under cultivation. Private individuals covered easily do this. An inscription from Sendalai records that an individual made a follow land belonged to the temple at Niyaman, cultivable and made it tax free and restore it to the same temple for the charitable purposes.\(^{239}\)

**Value of Lands**

There is no means of exactly determining the price of land in those times, though we have rare instance of mention of sale of land e.g. one *veli* of land being sold for *kalanjus* of gold or one *ma* of land being valued of 2000 *kasus* in A.D. 1214. But these currencies and units of land were so variable that these figures cannot be postulated for any considerable period of time.\(^{240}\)

The land and its products were the most important source of wealth. The largest part of the population was engaged in cultivating the soil regularly. Figures bearing on the land value of land reveal equally disparate conditions. The prices stated differ so widely from place to place among different transactions that it is impossible to attempt a detailed explanation of such differences without an accurate knowledge of the quality of the land concerned or to institute comparisons with present conditions in respect of land values. At Trivaiyaru one *veli* of land was sold for 100 *kalanju* of


gold.\textsuperscript{241} At Kurtalam in Tinnevelly, 8 \textit{ma} of land including the tax dues on it were valued at 43 \textit{kasus} in the fourth year of the reign of Rajendra I.\textsuperscript{242} Another inscription mentioned that the land value of sale of dry was 1 1/20 + \(\frac{1}{2}\) \textit{veli} of land for 2121 \textit{kasu}.\textsuperscript{243} Two years later in Tanjore district 2 \textit{veli} and 8 \textit{mas} of wet land including a tank together with dry land of some extent were sold for the low amount of \textit{kasus}. Since agriculture was the main source of people's subsistence, the value of land, in due course of time, seemed to have shot up as and when population increased and consequently the demand for land also increased.

\textbf{Mode of Cultivation}

\textbf{Implements used for Cultivation}

We do not get any direct evidence regarding the implements used by the peasants in those days. The epigraph mentions that the wooden plough was mostly and certainly used for ploughing the land. The bulls were yoked to plough.\textsuperscript{244} The water lift (\textit{ettram}) was used for baling out water for the use of cattle from well.\textsuperscript{245} The usage of hand piccotas and baskets for lifting water from wells and tanks seem to have been widely prevalent in the Tamil country.\textsuperscript{246}

\textsuperscript{242} \textit{A.R.E.}, 104 of 1926.
\textsuperscript{243} \textit{A.R.E.}, 506 of 1905.
\textsuperscript{244} \textit{A.R.E.}, 1919, para 19, p.27.
\textsuperscript{245} \textit{A.R.E.}, 218 of 1926.
\textsuperscript{246} K.V.Raman, \textit{The Early History of the Madras Region}, University of Madras, 1959, p.155.
The sharpened wooden plough share was yoked for ploughing. There was use of tiny sickles for reaping and harvesting, the natural manures were used for long time.\textsuperscript{247} The frequent mention of the plough for purpose of cultivation naturally leads us to infer that the livestock was plentiful in the country. (\textbf{Vide Appendix: No.I}) Beside, the careful preservation of waste and pasture lands in every village shows that much care must have taken to provide food for the livestock. Regarding the supply of manure it is not possible to estimate its availability.

There were two methods of cultivation that might have been in practice such as method of transplantation and direct sowing, that means, \textit{puluti}. An epigraph refers that there was the gift of separate plot of land for raising seedlings for transplantation.\textsuperscript{248} The two methods of preparation of the field for sowing, was indicated. The peasants, in some cases tiled the land and made it dusty and sowed the seeds in the dry dust. The seeds burst out into young plants and then water from channels or by lift is supplied. Transplantation means uprooting seedling from the nursery and replanting. Kambar's Erelupadu describes the two methods of preparation of the field for sowing such as \textit{puludi} and \textit{seru}. In the latter case, the land is prepared by ploughing after being flooded with water from a tank. The former \textit{puludi} form is adopted when water was scarce. \textit{Puluti} and \textit{seru}. In the later case, the land is prepared for ploughing after being flooded with water from a

\textsuperscript{248} A.R.E., 132 of 1935-36.
tank. The former *puluti* form is adopted when water was scarce. On dry land they sowed by hand. (Vide Appendix: No.II) Agriculture was practiced on primitive line but there was sufficient experts in the field for the Tamil peasant. Property was evaluated by the gentry in terms heads of cattle, rural in the number of ploughs and a pressure of wealth. To top it all, agriculture was praised as the noble occupation by the Tamils.

**Cultivation of the Land under Lease**

Leasing out the land was specially common among the owners who belonged to the non-agricultural classes or institutions which had necessarily to depend on tenants.

Under conditions of lease we may discuss the term of leases, the stipulation regarding the cultivation of crops and proper care of land, the share to be paid by the tenant to the landlord and the rights of alienation of land. Regarding term if a family took a lease, there was no reason to eject them from the lease, until they were found unsatisfactory. So the family might continue to be the tenants of that land from generation to generation and be systematically paying to the landlord his dues.

Regarding the payment of share of produce to landlord, there were two main systems, i) a share in kind (ii) a fixed rent. The former was

---

termed the *varam* system.\textsuperscript{252} The latter was *kattukuttagai*.\textsuperscript{253} It also appears from the inscriptions that the former was generally prevalent in wet lands, the latter in dry land. There were also exemptions.\textsuperscript{254}

Usually the tenants could raise whatever crops they liked, but apparently conversion of wet land into dry or garden land required the permission of the landlord. It was the interest of the land lord to see that the land was kept under proper cultivation.

A record of Jatavarman Sundarapandya, from Tirukkolakkudi, states that the certain temple lands were granted to one Sundara Pandya Narasingadeva under the terms of the Kanippidipadu lease.\textsuperscript{255} It stipulated that the tenants could enjoy them only after repairing the disuse tanks, remove the jungle, and bring them under cultivation. The share of landlord varied according to the kind of land (Wet or dry) For dry lands, the share was less, in the range of variation in the 13 and 14\textsuperscript{th} centuries. A detailed example of such a differentiation according to crop comes from Ramanathapuram district about 13\textsuperscript{th} century. For the *pasan a melvaram* of 1/3 to the cultivation of *tinai, varagu*, gingelly, *payaru, kuruvai*, sugarcane, *kolunthu, karunai*, turmeric, *inji, sengalumir, valai* (plantain), *valutalai, pusani*, as well as the trees, *ma, pala, narettai*, lime *kulaviruli, Ilupai* was collected. One in five shall be given, for coconut areca-palms and one in seven and dry crops according the yield one in seven. After clearing jungle

\textsuperscript{252} \textit{A.R.E.}, 197 of 1910.
\textsuperscript{253} \textit{A.R.E.}, 409 of 1913.
\textsuperscript{254} \textit{A.R.E.}, 64 of 1916.
the tenant shall have to pay 1/10 in the first year, ¼ in the second year, 1/8 in the third year, 1/7 in the fourth year and all the subsequent years a permanent *melvaram* of 1/3 shall be given. The following again are the rate of *melvaram* fixed in the inscriptions. For *pasan* the *melvaram* was 1/3, for tinai, varagu, and gingelly ¼ and for, sugarcane and such other crops 1/8. From the following instance it was strictly stated that the donee (tenant) should not keep the lands without cultivating them and that mounds and low grounds should be levelled and jungle removed. The temple share *melvaram* was fixed at one fourth.\(^{256}\) There is variation in the rate of *melvaram*. Perhaps the landlords share in the transaction was fixed, according to the quality of land and amount of lease money.\(^{257}\)

**The Condition of Tenancy - Cultivation**

It is an most interesting record of Maravarman Kulasekara, from Alangudi, dated in the 4th regnal year of his reign, in A.D.1817. It gives us a glimpse about the method of tenancy-cultivation prevalent in medieval times. Generally custom and local conditions determine the rights and duties of the land lord and the cultivator. The *varam* (upper share of the landlord) and *kudimai* right (culivator share) were generally approximate to some standard. But, they were different in different places. This inscription also stated that in the case of *kar* single crop and second crop, 1/20 for landlord as his right share. The dues like *palli*, *padikaval*, *perum-padikaval*, *sudu* (sheaves of corn) were given to servants. The coolies like *avaivadai* and

\(^{257}\) *A.R.E*., 1916, Para 28.
alkuli, should be charged on the village in common. The remaining should
be distributed in ratio of ¼ (1:4) between the landlord and tenant. Generally,
the straw and green gram (payaru) sown just before or after harvest have to
do be equally divided between the landlord and tenant. The kudimai is next
stated and here in the case of kar and for the single crop, ½ and ¼ panam
for the second crop for ever plot of land should be given. The threshing
expenses for the single crop, 1 tuni and 1 padakku for a plot; and for the
second crop, ½ of the above to be borne in common.

In the case of dry crops such as turmeric, castor seeds, cotton and
gingelly, seed-grain to be supplied by the landlord and the yield to be
divided equally (sevvaram). The supplying of coolies for storing of grain in
the landlords granary and work of repairing ridges on the fields seemed to
have been done exclusively by the landlord.258 Another inscription found at
Puvanur, in Mannarkudi taluk speaks of the fixation of rates of taxes on the
cultivators.259 Another record found at Tirukkurugavur issued during the
14th year of Rajadhiraja deva registers an order of the assembly of
Tirunelveli alias Elirvilisola-chaturvedimangalam reducing the rent both in
kind and money to pay by persons holding temple land.260

Another inscription found at Achchapuram, issued during 14th regnal
year of Rajathiraja records an order of Panchavanmahadevi alias
Kulottungachola chaturvedimangalam reducing rate of varam and kadamai

259 A.R.E., 71 of 1946-47.
260 A.R.E., No.429 of 1918.
to pay on the lands by the cultivators and fixing duties and privileges to be enjoyed by certain classes of persons.\textsuperscript{261}

Both of these two inscriptions dated in the 14\textsuperscript{th} year of Rajakesarivarman Rajathiraja II, are quite similar in respect of their contents and are worthy of notice here. They register a reduction in the rate of rents of pay on \textit{varisaiparru} and \textit{varapparru} lands held under lease from the temple, though the great men forming the assembly of \textit{panchavanmadevi} (Achchapuram) by the cultivators residing in the hamlets of Pirattanallur, Alanganallur etc.\textsuperscript{262}

\textbf{Tenants of the Temple Lands}

The rates of \textit{kadamai} and \textit{antharayam} fixed in kind at \(\frac{3}{4}\) of the above on the Arpasi-kuruvai and Adikkuruvai and land growing varagu, and \(\frac{1}{4}\) on lands yielding sesamum and tinai. The \(\frac{1}{2}\) \textit{panam} on every \textit{ma} of land growing plantain, ginger, turmeric or betel was also fixed.\textsuperscript{263}

An inscription found at Ayyampettai registers an agreement between assemblies of Rajendra sola-chaturvedimangalam and Vellala tenants of villages. The tenants had to pay the portion of produce upon on the lands held by them and certain privileges conferred upon them in return.\textsuperscript{264}

Tenancy cultivation was quite common both on private estates and on quasi-public land such as that of a temple after paying the landlord a fixed

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{261} \textit{A.R.E.}, 538 of 1918.
\item \textsuperscript{262} \textit{A.R.E.}, 429 and 528 of 1918.
\item \textsuperscript{263} \textit{A.R.E.}, 1924, Para 38, p.110.
\item \textsuperscript{264} \textit{A.R.E.}, 115 of 1927-28.
\end{itemize}
\end{footnotesize}
melvaram determined in advance, the tenant usually retained as his share what remained after payment of the direct expenses of cultivation and any minor dues assessed on the land held by him. The extensive class of service tenure may be taken to have invested their holders with a temporary partnership in the soil as remuneration for the particular services rendered by them to the community or the institutions concerned.265

**Principal or Main Crops and Crop Pattern**

Crops, to some extent determine agricultural practice, an understanding of the principal crops that were grown in the medieval Tamil country and their local distribution is necessary step in the study of agricultural practices in the period.

But, we do not have a comprehensive account from which we could compile the evidence scattered through a number of inscriptions which records rates of landlords share in various crops,266 the revenue assessment of land267 and tolls on goods which enter into internal trade.268 Travellers accounts also supply of some interesting information on the subject.269

The study of a number of such inscriptions and foreign accounts leave us with impression that the medieval Tamil country produced almost all the

---

269 K.A.Nilakanta Sastri, *Foreign Notices of South India*, University of Madras, Madras, 1972, p.168.
crops that are cultivated at present. Reference to the cultivation of dry crops like varagu, ragi, kambu, black gram, samai, millet, horse gram, dhall, pulse etc. These crops are frequently mentioned in the inscriptions. The ingenious inference of Nelson that dry crops were practically unknown in the period should hence be rejected as untenable. The crops cultivated in the Tamil country seem to have comprised the following categories. A near-exhaustive list of crops cultivated in all nanjai, punjai, thottam and kollai lands in the Tamil country has been furnished below:

Paddy: Kuruvai, ayppasy, kuruvaï and adikkuruvaï, sittiraikar paddy, sennel, karnel, panchavara.

Dry crops: turmeric, castor seeds, cotton, gingelly, seed grains, millet, varagu, ragi, kambu, samai, black gram, dhall, tinai, pulse, horse gram, payaru green, pulse, sesamum, betel, karunai, pusani, valuthalai, sugarcane.

---

270 A.R.E., 66 of 1916 Para 28, p.27.
277 A.R.E., 152 of 1940-41.
Spices: Pepper, cloves, ginger, nutmeg, cinaman, cardamom, cumin, coriander, mustard,\textsuperscript{284} kodikkal,\textsuperscript{285} sugarcane and plantain.\textsuperscript{286}

Garden Crops: Melon, gourd, turnip, battle gourd and tamarind.\textsuperscript{287}

Trees: \textit{ma}, \textit{pala}, \textit{narattai}, \textit{elummichai}, \textit{kulavirali}, \textit{nelli}, \textit{Iluppai},\textsuperscript{288} coconut,\textsuperscript{289} pulse, horse gram,\textsuperscript{290} payaru, green pulse, sesamum,\textsuperscript{291} tinai,\textsuperscript{292} karunai,\textsuperscript{293} betel,\textsuperscript{294} sugarcane,\textsuperscript{295}

\textbf{Spices:}

Pepper – cloves

 ginger – nutmeg

 cinnaman – cardamom

 cumin – coriandar

\textsuperscript{281} \textit{A.R.E.}, 1916, Para 28.
\textsuperscript{282} \textit{Idem}.
\textsuperscript{283} \textit{Ibid}.
\textsuperscript{284} \textit{S.I.I.}, Vol.VIII, No.442.
\textsuperscript{286} \textit{Idem}.
\textsuperscript{287} \textit{A.R.E.}, 1916, No.66.
\textsuperscript{289} \textit{A.R.E.}, 1916, Para 29.
\textsuperscript{291} \textit{A.R.E.}, 1919, Para 19, p.97.
\textsuperscript{292} \textit{A.R.E.}, 1924, Para 38, p.110.
\textsuperscript{294} \textit{A.R.E.}, 1911, Para 19, p.65.
mustard\textsuperscript{296}
pumpkin\textsuperscript{297} - *pusani*

**Flowers:**

- Thumbai,\textsuperscript{298} Kuvalai (Lotus),\textsuperscript{299}
- Jasmine,\textsuperscript{300} Siru Chembaka\textsuperscript{301}

**Flower Trees:**

- Ittakki, Shembak, sathapathi, karumurungai,\textsuperscript{302}

**Fruits**

- Mango, Pala, Elumichchai (lime), Nelli,\textsuperscript{303} Trees

The cultivation and raising of crops as a common practice was of two harvests - the *kar* and *pasanam*.\textsuperscript{304} The *kar* means the rainy season.\textsuperscript{305} The cultivation of the *kar* season had to be by the end of May every year the water left in the tank out of previous year’s supply being used for the

\begin{itemize}
\item \textsuperscript{297} A.R.E., 1916 Para 28.
\item \textsuperscript{298} S.I.I., Vol.XXIII, No.14; Vol.XIX, No.384.
\item \textsuperscript{299} S.I.I., Vol.XIX, No.24.
\item \textsuperscript{300} *Ibid.,* No.271.
\item \textsuperscript{301} A.R.E., No.260.
\item \textsuperscript{302} S.I.I., Vol.XXIV, No.33.
\item \textsuperscript{303} A.R.E., 66 of 1916; A.R.E., 1916 Para.
\item \textsuperscript{305} S.I.I., Vol.II, No.22.
\end{itemize}
purpose. The crop was sown in June or July and it being a six-month crop was harvested in December. The *pasanam* was a kind of coarse paddy which ripened during the period from September to March.\(^{306}\)

Paddy seems to have been principal crop raised by the farmers throughout the country. Thus paddy was cultivated every where whenever condition of soil, temperature and water supply were found. When paddy was raised in *nanjey* (wet lands) in *punjey* (dry lands) cereals, millets, pulses Sleuth peas and grams, oil seeds like gingelly and cotton, Itigo, spices like pepper and ginger were cultivated. In the garden and *kollai* lands fruits vegetables and flowers were cultivated. In the *nanjey* lands some times *punjey* crops were also raised. Inscriptional references also testify to the cultivation of dry crops like *varagu, ragi, kambu, samai*, black gram and horse gram.

**Distribution of Crops**

Though the distribution of crops cultivated is not known with any degree of clearness, but account left by travelers give us some information about it. Both garden crops like ginger, plantain and wet land crop paddy were cultivated widely through out the country. In contrast to this some crops like pepper cinnamon and nutmeg were cultivated in the west coast region of in the Tamil country.

**Protection of Crops**

Protection to the peasant crops was a matter vital to the interest of the society. As Kambar put it poetically about watching of the crop by individuals particularly at night, so as protect it from thieves and wild animals. There was also the possible damage and wanton destruction caused by stray cattle.\textsuperscript{307}

One injunction against those who set fire to a field is also noteworthy as it shows that trend of contemporary thought on the subject, those, who set fire to a field in which the fruits and crops have ripened, or a threshing floor should themselves be surrounded by the virana grass and burnt alive. This clearly shows the desire of the people themselves to give protection to the cultivator and his crops is noteworthy.\textsuperscript{308}

**Yield of Crops (or) Quantity of Produce**

An inscription of the six years of Rajendra I from Nattam in Chingleput district states that the landlord’s share per kuli of cultivated land was a kuruni and five nalis.\textsuperscript{309} In Virudhachalam, in 1124 A.D. ninety veli of land was given as devadana and met pure iraiyili, on the basis of an irai. The tax was payable to government of forty kalam of paddy per veli by rajakesari measure (marakkal).\textsuperscript{310} An inscription found at Erumur in South Arcot district, dated 1152 A.D. it is seen that some devadana land apparently of very good quality was assessed at 26 $\frac{1}{4}$ kalam per ma, equal to 525

\begin{thebibliography}{9}
\bibitem{308} \textit{Ibid.}, p.345.
\bibitem{309} \textit{A.R.E.}, 263 of 1912.
\bibitem{310} \textit{A.R.E.}, 63 of 1918.
\end{thebibliography}
kalams per veli or nilam which included the taxes patinkaval, silvai and any other taxes and two cesses therefrom.³¹¹ A record from Periya –korukkai (Trichinopoly district), during the reign of Rajaraja III shows some devadana lands paid on all inclusive tax of kalams of paddy on wet land (nanjey)³¹² and 10 kalams on dry land (punjey). Another record found at Jambukesavaram dated 1117 A.D. gives the rate of five kalams on punjey land.³¹³ Another inscription of Rajendra Chola II, found at Chidambaram states that the one veli of land produce 102 kalam of paddy.³¹⁴

There is a no clear and copious evidence about land values. There is no direct statement on the gross yield of land. The estimate of the yield involves an approximate estimate of the cost of cultivation and yield per acre. The variation is according to the quality of land and the nature of crop cultivated. An inscription from Tanjore mentions that the produce of one veli of land was 100 kalam of paddy. It was measured by the marakkal called adavallam, which is equal to a rajakesari.³¹⁵ An inscription of Rajakesari Rajendra, found at Chidambaram which refers 44 veli of land yielded in all 4500 kalams of paddy,³¹⁶ and the melvaram on this was fifty per cent of the yield. An epigraph of Kulottunga I found at Tiruvotriyur mentions that 12 veli of land yielded 576 kalams of paddy which means 48

³¹¹ A.R.E., 397 of 1913.
³¹² A.R.E., 266 of 1926.
³¹³ A.R.E., 31 of 1891.
³¹⁴ S.I.I., Vol.IV, No.22.
**kalams** were produced from one **veli** of land.\(^{317}\) Another epigraph of the same king and from the same place the yield was only 35 **kalams** per **veli** – a rather poor return because of the land was less fertile.\(^{318}\) The low fertility of soil at Tiruvorriyur comes out with a sharp contrast to that obtained in South Arcot for example, where a **veli** of land produced about 102 **kalam** of paddy.\(^{319}\)

### Price of Products

Some variations are recorded with the price of paddy and rate seems generally different with fertility of the area concerned.

The Tanjore inscription records the price of the paddy. The land assessment (**kanikadan**) was roughly one hundred **kalam** of paddy for each **veli** of land. It would be interesting to compare this with the present rate of assessment. Paddy was sold at the rate of two **kalam** for each **kasu** and three ewes could be purchased for one **kasu**. The rate of interest was apparently 12 ½ per cent. It was actually \(1/8\) **kasu** per year for each **kasu** or 3 **kuruni** of paddy for each **kasu** per year.\(^{320}\)  

\(^{318}\) Idem.  
\(^{319}\) A.R.E., 118 of 1888.  
An inscription of Kulottunga I from Tiruvorriyur refers to cost price of 576 *kalams* of paddy as 144 *kasus*, that is, 4 *kalams* of paddy was sold for one *kasu*.\(^{321}\)

**Table 2.1**

**Articles of Daily Consumption and their Exchange**

**Value at the Beginning of the 11\(^{th}\) Century A.D.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Items</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cardamom seeds</td>
<td>1 <em>kuruni</em> and 4 <em>nali</em></td>
<td>1 <em>kasu</em></td>
</tr>
<tr>
<td>2</td>
<td>Champaka buds</td>
<td>1 <em>padakku</em></td>
<td>1 <em>kasu</em></td>
</tr>
<tr>
<td>3</td>
<td>Khaskhas roots</td>
<td>605 <em>palam</em></td>
<td>1 <em>kasu</em></td>
</tr>
<tr>
<td>4</td>
<td>Dhal</td>
<td>1 <em>nari</em>, 3 <em>urakku</em> and 1 <em>arakku</em></td>
<td>5 <em>nari</em>, 1 <em>uri</em> and 1 <em>arakku</em> of paddy</td>
</tr>
<tr>
<td>5</td>
<td>Pepper</td>
<td>1 <em>arakku</em> and 1 ¼ <em>sevidu</em></td>
<td>5 <em>nari</em>, 1 <em>ulakku</em> of paddy</td>
</tr>
<tr>
<td>6</td>
<td>Mustard</td>
<td>1 <em>arakku</em> and <em>sevidu</em></td>
<td>2 <em>nari</em> and 1 <em>ulakku</em> of paddy</td>
</tr>
<tr>
<td>7</td>
<td>Cumin</td>
<td>3/4, 3/20, 3/80 <em>sevidu</em></td>
<td>1 <em>nari</em></td>
</tr>
<tr>
<td>8</td>
<td>Sugar</td>
<td>3 <em>palam</em></td>
<td>1 ½ <em>kasu</em></td>
</tr>
<tr>
<td>9</td>
<td>Ghee</td>
<td>1 <em>urakku</em>, 1 <em>arakku</em>, 3 ¼ <em>sevidu</em></td>
<td>1 ½ <em>kasu</em></td>
</tr>
<tr>
<td>10</td>
<td>Tamarind</td>
<td>8 <em>palam</em></td>
<td>1 <em>nali</em> paddy</td>
</tr>
<tr>
<td>11</td>
<td>Curds</td>
<td>3 <em>nali</em></td>
<td>1 <em>kurumi</em> 1 <em>nali</em> of paddy</td>
</tr>
<tr>
<td>12</td>
<td>Gram</td>
<td>3 <em>Sevidu</em></td>
<td>1 <em>ulakku</em> of paddy</td>
</tr>
<tr>
<td>13</td>
<td>Plantains</td>
<td>18</td>
<td>5 <em>nari</em> of paddy</td>
</tr>
<tr>
<td>14</td>
<td>Salt</td>
<td>1 <em>ulakku</em>, 1 <em>alakku</em></td>
<td>1 <em>ulakku</em> and 1 <em>alakku</em> of paddy</td>
</tr>
<tr>
<td>15</td>
<td>Tender (Plantain) leaves</td>
<td>12</td>
<td>2 <em>nali</em> of paddy</td>
</tr>
<tr>
<td>16</td>
<td>Arecanuts and betel leaves</td>
<td>(30, 60)</td>
<td>4 <em>nari</em> and 1 <em>ulakku</em> of paddy</td>
</tr>
<tr>
<td>17</td>
<td>Bark</td>
<td>1 <em>kasu</em></td>
<td>1 <em>nari</em> of paddy</td>
</tr>
<tr>
<td>18</td>
<td>Camphor</td>
<td>3 <em>kalanju</em></td>
<td>1 <em>kasu</em></td>
</tr>
<tr>
<td>19</td>
<td>Pulse</td>
<td>1 <em>nari</em></td>
<td>3 <em>nari</em> of paddy</td>
</tr>
</tbody>
</table>

Source: South Indian Inscriptions, Vol.II.

Like any other agrarian society during medieval times, agriculture under the Cholas was monsoon-based. Irrigational facilities were scarce and not in proportion to the need for water. Improved techniques for boosting the agricultural production were not attempted by the landocracy. Therefore the scarce production seemed to have been just sufficient for mass consumption. Increase in population increased the pressure on land as more and more number of people had to depend upon agriculture. A few commercial crops raised could bring in some profits for the cultivators, because some of those crops were exported to foreign countries. By and large, the cultivators, who were the actual tillers of the soils as small peasants, tenants and landless agricultural labourers had to suffer because they could not get remunerative prices for their products.