



## AGRO-BASED INDUSTRIES UNDER THE KAKATIYAS: AS GLEANED FROM CONTEMPORARY SOURCES

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### ABSTRACT

*In the history of South India, the Kakatiyas of Orugallu occupy an important place. They were the undisputed monarchs of entire Andhra desa between A.D. 1158 to 1323. The inscriptions and literature of the period contain very useful information which enable to reconstruct the economic conditions of the period. The Kakatiyas after establishing their control on entire Andhra desa paid much concentration on the agricultural and industrial potential.*

*A progressive increase in the development of towns and cities around the holy shrines, forts, the capitals of the kings and chiefs, increased the demand for luxury goods. Industrial arts and crafts developed at the urban and the rural levels to meet the demand. As a result of it the industries especially agro-based industries developed quantitatively.*

*The agro-based industries played a prominent role in the economic sphere. Among the industries of the period were textile, oil, salt, fisheries, drugs, perfumery etc. All these industries were simple in their structure and located at the residence of the people. Their residences were arranged community wise within the village or town, and the surplus was collected by the business indigenous magnets and was exported to far off lands by land or sea. As a result of industrial production in abundance, trade and commerce also developed. Almost all the people were involved in caste-based industries and trade formed themselves into guild.*

### INTRODUCTION

The Kakatiyas of Orugallu occupy a vital place in the history of South India. During this period, most of the people depended on agriculture which formed the main basis of economy and primary source of revenue. Therefore, the Kakatiya rulers showed keen interest in providing irrigational facilities and expanding the area of cultivable lands. Development of irrigation gave scope for remarkable growth in the agriculture industry etc. as a result of which the Andhra country witnessed growth in every sphere.

According to the contemporary sources, during the period, many of the industries were agro-based and simple in their nature, the raw materials were drawn from either agriculture, horticulture or forestry and all the members within the family used to work at their home for the production of the goods. A progressive increase in the development of towns and cities around the holy shrines, forts, the capitals of the kings and chiefs, also increased the demand for luxury goods and industrial arts and crafts development at the urban and the rural levels. The main reason for the demand of these agro-based products may be attributed to the traditional techniques which adapted themselves to the changing tastes and also the zeal for creative innovations in patterning and designing of the goods they produced in turn. The demand for their products also encouraged them to be innovative and creative at their work. As a result of it, the industries, especially agro-based industries developed quantitatively in textiles, sugar, jaggary, textile colors, oils, herbal drugs, cosmetics, perfumes, toys, coir, toddy, etc. The

literary evidence proves that even dry-vegetable chips and pickles formed part of the contemporary trade.

### Textile Industry

The textile industry was the oldest and most important industry which flourished greatly, particularly during the Kakatiya period. The weavers manufactured a great variety of designs and different qualities of textiles. Inscriptions and literature provide valuable information regarding the variety of textiles produced during this period. Manufacture can be divided into three categories during the period, i.e. Cotton, Pattu and Silk<sup>1</sup>. Cotton cloth of all varieties, produced on a large scale, was exported to East and West and other interior centers. The kings, queens, nobles and wealthy people loved to wear clothes of fine texture and beauty. As a result, the textile industry received great encouragement.

Many inscriptions refer to the provision made for the supply of clothes to the Brahmins, temple servants and students which were of ordinary quality.

We have valuable references in the literature regarding varieties of sarees produced during the period with which we are concerned. <sup>2</sup>Nannachoda, a poet of the 12<sup>th</sup> century, while describing the grandeur of Lord Siva's marriage with Parvati, states that the pillars of the Kalyanamandapa were covered with a fine cloth, this shows that there was a practice of covering pillars of the Kalyanamandapas with a probable beautiful cloth of a good variety. He further mentions the silk sarees, the ends of which were knit in golden thread. The ladies of the well to do families were wearing, particularly on occasions, the silk sarees of superior variety which had golden threads interwoven at the edges.

According to PalkurikiSomana's Basavapuramamu, <sup>3</sup>there were 57 different kinds of sarees worn by the women during this period. They were: Mani pattu, Gowriganayamu, Marakatapattu, Velipattu, Netrambupattu, Chini, Gajavalamu, Hamsapadi, Vinavali, Varanasipattu, Rajavallabhamu, Pancchanipattu, Bhavajatilakamu, Rayasekaramu, Vayumeghamu, Mandolaravi, Sandhyaragamu, Chandratapamu, Indranilamu, Sannadananchu, Megha-vanne, Saradhi, Mahendrabhushanamamu, Tavarajambu, Chikuvayi etc.

The names of these varieties indicate that these names were given to them according to the colour and the pattern of designs and borders printed on them.

In Kridabhiramamu of Manchana, <sup>4</sup>there is a reference to a farmer woman wearing a reddish-orange colour saree designed with horizontal stripes around the waist; another woman wore a saree having a kongu with printed flowers. During the function named Akkala Aradhana, the women wore white Silk saree (velipattu). Kama Manjari, who was a Concubine of Manchana, wore ponnupattu saree. <sup>5</sup>The Navanathcaritra refers to a Brahmin who wore Light pink coloured 'nirkavidhovathi', Men and woman of those days used to be silk cloths with gold-laced border Karakanch, Bommanch, MadugubommanchChoralanchu, Nagabandhamamulu etc.

Buckrams was the other varieties of cotton cloth manufactured in Kakatiya kingdom; it was the best and delicate fabrics. According to Greek accounts of 2<sup>nd</sup> and 3<sup>rd</sup> Century AD, the Greeks took pride in wearing the textiles produced in the eastern coast of peninsular India. The port towns of Masulla (Machilipatnam), Kantakasala (Gantasala) and Koduru were busy with exports of textile produced here. <sup>6</sup>Marco-polo, the Venetian traveler who visited Andhradesa in the middle of the 13<sup>th</sup> century, also recorded the unique feature of the textiles of this region.

Dyeing and tailoring were the subsidiary industries, much of the cloth produced in the country was dyed clothes and the colors used for dyeing were extracted from plants and herbs, that were cultivated for this purpose. <sup>7</sup>Dyeing and Printing were the most important of the cottage industries in the Andhra country during the period in question, as mentioned in the accounts of foreign traveler, Marco-Polo. Borders adorned with designs of peacock tails, royal swans, rows of parrots, deer, horses and many other types were in use and some of the varieties of cloth were called often by the places where they were produced. For instance, Suravarams and Kamvarams were names given to clothes manufactured in Suravaram and Kamavaram villages in the Coastal region. Siddheswaracarita, while

giving the statistics of the houses of the people of different communities living in the capital city, mentions that there were 15000 houses of dress-makers.

### **Sugar and Jaggery Industry**

Sugarcane which was produced in the kingdom gave scope for the development of sugar and jaggery industries. There can be found many references to Sugarcane fields in the literary works. <sup>8</sup>Basavapuramam makes mention of sugar production. In <sup>9</sup>Kridabhiramam, sugar can be found as one among the items of food that was served in the hotels maintained by women, here the word pancadara was used. PalkurikiSomanathudu, ChalukyaSomeshwara III and many poets of the period referred to the sugarcane fields and the sugar-producing centers located in the fields.

### **Oil-Pressing Industry**

Oil pressing Industry was an important and profitable one during the period under study, oil was used for burning lamps and cooking food and was an essential item in daily life. <sup>10</sup>Every village and town, big or small, had at least one oil pressing mill, called Ganuga which provided remunerative occupation to a large number of people throughout the country. Among the oils, the gingelly (*Sesamum indicum*) oil was in great demand during the period. This oil was used to light lamps and also as a cooking medium. The production of castor oil was widespread and it was used for medical purpose as well as for lighting lamps. It appears that the oil extracted from the seeds of Kanuga and Margosa were also used for medical purpose.

<sup>11</sup>Kridabhiramamu gives a list of oils that were prepared in the oil industries; they included both edible and mechanical oils like vellagisenune, kuru nune, verrinune, nulanune, ippanune, kurumanune, ganuganune, pogunune, etc. The people of Telika community or Telikavevuru were engaged in this industry, Telikis or telikivevuru is a synonym for the Gariga or gandla caste of oil pressers, derived from the oil- gingelly (*sesamum*) where the word ganiga and gandla refer to the oil mill. The telikulas are of Onteddu section, i.e. who used a single bullock for working the oil mill. In contrast, among the ganigas, there were both Onteddu and renddedlu sections, which employed an individual or a pair of bullocks, respectively. <sup>12</sup>Kridabhinamamu refers to the participation of women also in the renddedlu section of this caste. The oil was extracted by using an apparatus prepared by the oil-presser (gandla) in the middle of a shed which was run by the bullock by rotating around it. It is like the modern grinding machine but was run by the animals.

Many inscriptions refer to the guild of oil mongers. A record from Vellpuru Village in the Guntur district, <sup>13</sup>mentions a tax called ganuvula-mudra-sunkamu- from this, these oil crushing machines also were stamped by the government. And these industries also participated in munificent activities and granted the oil to the temples for AkhandaDipa. One of the inscriptions from Khazipet village mention a Nakaramu (merchant guild) of the city of Hanumakonda, made a gift of one mana of oil every day for maintaining a perpetual lamp in the temple of the god Veerabadreswara. Some inscriptions register exemption from the payment of the tax on ganugas (oil mill).

### **Palmyrah Products**

The Coconut tree is generally referred to as Kamadhenu or cow of plenty; from this tree, coir and toddy were manufactured and no part of it was left unused by the people. The coir industry ranked first in importance; its utility was increased by the fact that in shipping, much iron was not used.<sup>14</sup>Marco-Polo observed about the extensive use of coir by stating that "they have no iron to make nails and for this reason, they have only wooden nails in their shipbuilding, and then stitch the planks with twine".

The coir was extracted from the husks of the coconut. The husks were rotted by burying them in pits on the margin of rivers, streams or backwater in which they were left to soak for six months, a year or even longer; when the husks were removed from the pits, the fibre was beaten out by women with sticks, dried in the sun and twisted into yarn. It was largely used for attaching the planks of the ships. But Marco-Polo doubted whether it could stand well in the storm.<sup>15</sup> This coir was also used in carpet

making, rope making and bag-making, and was extensively used by the farmers in preparing agricultural and irrigational devices.

The Palmyrah tree was equally important like Coconut<sup>16</sup>, its leaves were used as writing material, for weaving mats, making ropes and umbrella, as roofing over houses and even as fuel, and the trunk was used in building houses. An inscription from Draksharamam<sup>17</sup> dated A.D. 1263 mentions a Palmyrah grove (tadi-tota), jaggery was prepared out of its sap which was used as a medicine in human as well as animal ailments.

The fermented Palmyrah sap (toddy) was consumed by the laborers after their day's labour as an intoxicant and as a medicinal recipe without fermentation. Thus, we can find scope for many cottage industries, bearing on Palmyrah. But we do not find direct information regarding the class of people who were engaged in each by-product much as writing material (palm leaf), jaggery, fermented sap known as tatikallu, construction material, irrigation devices which need some carpentry work on the dry trunks etc., From the pulp of the ripened fruit, dried cakes known as tandha was produced and sold in the market. Realising its importance, the kings and chiefs encouraged the planting of Tatitopulu (Palmyrah genders) for strengthening the bunds of the tanks. Also, Palmyrah not only safeguarded the soil from erosion but also helped in the promotion of the above-mentioned agro-products.

### Fisheries

Fish were, as they still are, an important article of food consumed by a large section of the community. Therefore, the industry of fisheries was in a flourishing condition and added much to the economic resources of the Kakatiya state. A comprehensive account of the growth of fisheries cannot be given here because only a few scattered references occur in the sources of this period. The state did not bestow its patronage on the fishing industry. Caste-wise, the foundation of agraharas, the austere life of the Brahmins and the strict injunctions of the dharmasastras regarding diet and drinks would have discouraged it. Basavapuramamu refers to fish as an item of diet.<sup>18</sup>

During the early stage of this period, kings and princes took to fishing as a pastime. The Telugu poet, KoraviGoparaju gives a beautiful description of a prince, who caught many kinds of fish with a long net (baruvala) in a lake (madugu)<sup>19</sup>. The various kinds of fish are: Korramila, Valugalu, Bapraminalu, Maravula, Bedasabula, Gendal, Vemottla, Godisel, Paperala, Bakkemottaroyya, Pariga, Emgilikam, Jella, Nurajela and Kuntamukku.

According to Siddheswaracaritra, there were 16000 houses of fishermen only in the capital city. The fishermen lived in great number during this period may be inferred from an epigraph from Srikurmam in Srikakulam district dated A.D. 1246, which records a cash gift made by the Antyajas to the temple<sup>20</sup>. According to the inscription, Antyajas or Antyajatis include the community of fishermen (pallekkarlu). They used several types of nets to catch the fish in a pond, stream, lake, rivulet, river and sea. The strings of nets were prepared with strong fibre got from Muruna (bow-string hemp) etc. Their technique of fishing is well brought out by the eminent Telugu poet, Tikkana. He says by adopting the principle of Nidutratabonimmu, (the equivalent idiom for this phrase in English is to give one a long rope) a fisherman caught Kapila (a kind of creature) in a lake. The vetakadu (angler) used a bamboo rod having a long thread (nidutrada) tied at the top. This thread was attached to fishing-hook (galamu) made of iron in curved shape, which carried a bait (era). Then the bait was immersed in water. The watery creature after devouring it got stuck up to the hook. It tries to wriggle out of it and failed. Eventually, it was pulled out and taken by him. The literary works reflect the life and art of these fishermen. Further, the fish in tank and ponds etc. were fed carefully by them. Rice bran, dung, and waste material were used for feeding fish<sup>21</sup>.

The fish served as an item of food for some people<sup>22</sup>. The raw fish was salted, roasted in sunlight, preserved and then used as foodstuff<sup>23</sup>. Some fishermen took to it as an occupation to earn their livelihood. They sold raw and dry fish in santas or markets and oil was extracted from them. It was used as a manure to plants and medicine to cure some diseases<sup>24</sup>.

### Salt Industry

Salt was another important industry of this period. In the coastal Andhra, manufacturing of salt from the seawater was a very important industry even during the early and medieval periods, as at present contemporary epigraphs mention many important centres of this industry, like Devarampalli, Comparela, Kodakuduru, Kuruvada, Payundorru or Padorru, Pedaganzam, Perali, Pinagazam, Kanuparti, Pondorta, SonghaUppugudure, Uppartala and Tuggalagiri were among the important villages in the coastal Andhra and earth salt was manufactured from saline soils of Tripurantakam in Kurnool district, where salt was produced. From the inscriptions, it is clear that salt was transported from the producing centres to other places by means of mules and bullock carts. A damaged inscription from Draksharama<sup>25</sup> dated 1129 A.D. appears to record the gift of one putti of salt manufactured in the salt pan of the Tuggalangiri in Prolunadu to the god Bhimeaswara Mahadeva and one inscription from Pedaganjam, records the gift taxes levied on the salt manufactured in villages, Pedaganjam, Kadakuduru, Kanuparti, Devarampalli and Chomprela to the god Pinnesaradeva of Padaganjam.

The epigraph of Kakatiya Prataparudradeva (1316 A.D.) stated that the Ashtadasaprajas i.e. the eighteen village communities and Karanas of Kamdukurugrama, with the consent of the king made the gift of taxes, income at the rate of one Chinna per each Penamu of uppu to the god Ramanathadeva of Kamdukuru for the arngarangabhogas. One of the inscriptions from the Warangal Fort of Kakatiya Ganapatideva (1228 A.D.) records among other gifts the grant of one mana of salt per cart. Another inscription from Tripurantakam dated 1250 A.D. records the gift of sales tax sold in Tripurantakam to the god Mahadeva<sup>26</sup>.

### Drug Industry

Drugs of different kinds were used in the treatment of disease both for men and animals. Two varieties of drugs known as tabasheer and aloes were prepared. <sup>27</sup>The tabasheer was made from the inner ring of the bamboo. The aloes called the saimuri aloes was made a bitter purgative drug. These two medicines were used by the physicians in the treatment of people with ointments.

ChalukyaSomeswara III in his Manasollasa mentioned the arrangements made for the treatment of animals such as elephants and horses and also emphasized the need for appointing physicians and free distribution of medicines, while referring to elephants he says that medicines should be prescribed in the form of bals or powders. The medicines were manufactured and used by physicians in the country. Thana, Chaulsandan and Broach were the centres of drug industries. The drugs were prepared at the above places on a large scale and exported to all the parts of the East and West.

A Jain physician named Aggalayya founded chemico-herbal drug centres at various places in telangana region about A.D. 1035. A perusal of the kakatiya inscription reveal that the rulers followed liberal policy towards the trade-in drug substance<sup>28</sup>.

### Toy Industry

Toy-making, basketry, mat-weaving, carpet weaving, lace-work etc. also form part of agro-based industries. Though they seem to be minor handicrafts, quite a good number of people lived on these occupations. Especially toy-making enjoyed great demand in internal and external market even from the very ancient days. <sup>29</sup>In Andhradesa, the famous toy-making centres were located at Kondapally (Krishna district), Nirmal (Adilabad district) and Tiruchanur (Chittor district). The wood used and the form of toys manufactured in these centres still are different from one another. But all of them reflect the Indian style in them.

The Kondapally artist has reached a high point of perfection in conveying splendid artistic expression and could create a world of imaginative realism. <sup>30</sup>In the carving of the toys, a special kind of wood (known as tella-ponuku available in the surroundings) is used. Small land implements are used to chisel the carvings. As the wood is soft, the making of the toy is not so strenuous. For colouring the toys, they use herbal colours prepared by themselves. Almost all the substances used in the preparation of colours are the same as used in dyeing and painting. Here, loc is extensively used to bring a shiny effect



to the toys. The toys produced are wide-ranging and they depict the life of the people. Deities, legends, various occupations and village life are depicted in these toys.

The toy industry at Nirmal is carried on from generations and the wood used is burugu and puniki. The articles produced here are boxes, trays, birds, vegetables, fruits etc. Artware is another industry pursued here and its origin can be traced back to the Kakatiya period. Here also herbal juices are used with professional skill to make articles attractive.

The Tiruchanur toys were also famous for their elegance. The designs consist of gods and goddesses, human beings and animals. They are made of red sanders and were in great demand not only in the internal market but also in the foreign market.

### **Cosmetics and Perfumery Industries**

Perfumery and cosmetics were flourishing industries during the period of Kakatiyas<sup>31</sup>, many of the contemporary sources mention about many varieties of cosmetics and perfumes like Rasavada and Gandhavadha developed to a large extent by the Siddhas and the medical scientists. In the works on *Materiamedica*, we find a record of many aromatic substances used in the manufacture of perfumes and cosmetics, mainly the perfumeries and cosmetics were used to create powders, pastes and Dhupas, some perfumes were used for sprinkling on the floor.

Andhra Bhoja, the author of *Charucharya* dealt with the aromatic substances explaining their properties, their efficacy, etc. some of the scholars on *Gandhavadha* described the methods of preparation and proper use of perfumes and cosmetics. P.K.Gode identified two works exclusively dealing with the art of making cosmetics and perfumes namely *Gandhasastra* and *Gandhavadha* (anonymous) with a Marathi commentary, *Gandhadhara*, classified the aromatic ingredients into eight divisions i.e. 1) Leaves 2) Flowers 3) Fruits 4) Barks 5) Woods 6) Roots 7) Exudation of plants and 8) Organic products.

The author of *Manasollasa*, ChalukyaSomeswara III, <sup>32</sup>described the perfumeries like camphor, musk, javadi, sandal paste and bdellium incense, and he explained the preparation of perfumeries.

Anyway, we find that in kakatiya period, the Cosmetic and perfumery industry was flourishing, almost all the literary works of the period reveal the fact that the people of all classes were very much fond of sweet-scented oils, pastes, ointments. This industry provided employment to thousands of people during the Kakatiya period.

### **Conclusion**

Thus, the Kakatiya Kingdom enjoyed great material prosperity under the rule of Kakatiya kings, the villages were the backbone of the state. They were bodies of peace and contentment; agriculture and industries were in a flourishing condition and there was abundant food supply. The government did much to improve the irrigation facilities and to extend the area under cultivation. Many kinds of industries thrived in the country and employed a considerable part of the population. Especially, textile and salt industries reigned the international market. The cosmetic and perfumery industry, toy industry, sugar and jaggery industries etc. also employed a good number of families. Horticulture also enjoyed great demand. Another important aspect of the Kakatiya period was that industrial organizations were stable and steady. Trade both internal and external prospered under the care of Kakatiya monarchs. There was plenty of money and taxes were light and definite. The economic life of the country was regulated mainly by the corporate organization of traders and artisans and happiness, wealth and contentment reigned everywhere.

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