CHAPTER - III

ECONOMIC LIFE (VARATAS)

The rural economy of India for centuries has been centred on what may be called in general terms communities of peasant-proprietors or rural people inhabiting in a village, who paid revenue to government under various specified heads, but otherwise, as a rule, left free in the possession of their holdings. It is true that this system was overlaid from an early period by the royal grants and assignments of lands for various purposes. Such land grants and assignments must have led to the creation of larger and smaller estates comprising number of villages. The village communities maintained their corporate organisation during this period with full vigour. The contemporary inscriptions frequently record the gift or the sale of lands by these bodies and their appointments as trustees by pious and charitable donors. The village remained the backbone of the Indian economy. The agrarian economy along with industry and trade was sufficiently developed in India during that period. A high level of economic prosperity prevailed generally among people concerned with these vocations and this level varied not only in different parts of the country but also among the different strata of population.

While a kaleidoscopic series of States and rulers appeared on the political stage, and wars were being waged, a long and gradual process of feudalisation was at work in the socio-economic life of Indian society. It was proceeding at two levels. Firstly, more lands which brought rent were being distributed as grants and the feudal lords who received grants came
to enjoy more and more rights both in relation to the central
government, and also in relation to the inhabitants dependent on
there. And secondly, within the village community itself, the
village officials, particularly the headman\(^1\), frequently gained
greater powers among the villagers, their functions with regard to
the division of the land tax within their village acquired
increased importance. Resultantly, they assumed the role of rural
administrator of the State apparatus and gave up their earlier role
of protecting the interest of village community. Through their
control of important community affairs, with the use of
uncultivated land of the village; acquisition of the land for
themselves and by making use of the free services of the other
villagers, some of the headman gradually became petty feudal
landlords\(^2\). The status they had acquired in practical term was
later legalised through government decrees.

**FEUDAL SYSTEM**

The basic ingredients of a feudal system were present in
India during the period under review. The growth of the feudalism
in the post - Gupta period may be traced to the practice of
granting land to warriors, chiefs, officers and members of the
clan. The practice of making outright religious gifts of land to
Brāhmaṇas without any condition of service had been widely
prevalent from the early period of ancient Indian history. By such
grants the kings renounced their right to collect taxes by sending
their officials to the lands of the individuals in question. Some

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2. E. I., IV, No. 34.1.47.
of the grantees must have been benefited in varying degrees from the profitable acts of government and this must have contributed to the growth of the feudal complex. But the secular land grants given irrespective of the religious identity appear to have played more important role in the process of feudalisation.

The Arthasastra and Smritis contemplate the bestowal of assignment only on lower officials, especially those connected with local administration. But the testimony of Hiuen Tsang bears out that this system was later extended to higher officers as well. The Pilgrim states that the ministers of the State and common official, all have their portion of land, and are maintained by the cities assigned to them. It is noted from the Harshcarita that Prabhakar Vardhana divided his kingdom among his officers. In the Kumarapālcarita, it is stated that a minister of the king owned 700 villages. In the Kathāsaritsāgara, a royal priest is stated to have received a grant of 100 villages. The Vdayasundarikatha of Soddhala refers to some land as the hereditary dhruvavṛtti of a Kayastha officer. We find in the Rājataraṅgini that king Avantivarman divided his kingdom among his officers and also relatives. Instances of assignments in favour of the officers of State are also found in two Paramāra records which mention the villages held by a Mahasadhanika and Pratihara.

1. Watters, P. 177.
3. Kumarapadacarita, N.S.P., Int, P.X.
5. Udayasundarikatha, G.O.S.P. 152.
There are ample evidences of purely military grants. A certain Raja Buwed, one of the earliest ancestors of the Solanki Clan, is said to have distributed villages among his chiefs in 16 equal parts. He used to send eight of these chiefs Pattadharas to conquer in all the four directions. In the Kathakosa of Harisena, it is stated that a military grant of a number of villages enjoyed by a Saharsabhata warrior who was admitted by the king to the order of the Samantas.

In the closing years of the 11th century, the Sukrtasankirtana of Amarasimha refers to the grants of the village of Bhimapalli by king Kumarapala of Gujarat to a warrior in recognition of excellent military service. In Bengal, the system of assignment of land for military service called Kaivarta-vṛtta was common before the 12th century A.D.

The Kamauli plate refers to grant of a tract of land to a chief on rajapatti (royal filet or tiara) by one of the ancestors of Govindacandra Gāhaḍavāla. Vatsarāja, one of the descendants of this chief, has been mentioned as the feudatory of the emperor. The system of rajapatti was prevalent in later times also in some parts of northern India. There are many other instances of grants to Chiefs which were for military service.

5. E.I., IV, No. 12.
Villages were granted to refugee chiefs also. The Mānasollāsa of Somesvara states that making assignments of land in favour of refugee chiefs was one of the duties of the king. There is reference to a grant of twelve villages to a refugee Guhila chief in Gujarat in the 12th century A.D.

An inscription of the time of the Gurjara Pratihāras reveals that a chief called Mathanadeva of the same clan had received an allotment of land as his own share. This system was continued by the other clan monarchies which arose after the decline of the Gurjara Pratihāra empire as evident from an inscription of the Cāhamānas of Sambhar in Rajputana, dated 973–974 A.D.

Of the Cāhamāna house of Marwar of the 12th century, one document refers to a group of twelve villages which a junior prince had received from the reigning prince. The others refer to the queen's grasa and bhukti. Two other records mention a couple of junior princes as bhoktrs (processors) of two villages. Reference is made in another record to the Seja (allotment) of a Rajaputra called Ajayadeva. Another inscription refers to Rajakiya-bhoga or the king's estate also.

4. Ibid., 11, 8.
5. Ibid, IX, 9 8.
6. Ibid, IX, No. XVIII.
9. Ibid., XIII, No. 188.
10. Ibid, IX, 9B.
A group of 84 villages were allotted to a chief under a very peculiar practice of assignment which was prevalent in some region of north India and was called as "the system of eighty four". One of the earliest references to it is found in a Gurjara Pratihāra record in which it is mentioned that a chief had acquired 84 villages by the might of his own arms\(^1\). In a Parāmara record of the 11th century A.D. also, it is stated chief had acquired a group of 84 villages on royal charter\(^2\) probably from his over lord. It appears that some of these grants were by way of rewards, gifts or maintenance of certain individuals and were not specifically conditioned on any kind of future service. In such cases, though the giver had no legal claim on the recepients, yet there must have been the moral bond of gratitude and the condition of service must have been implied.

But we also find evidences of grants which were specifically conditioned by military service. A verse in the Brhaspatismṛiti\(^3\) which has been quoted by Laksmidhara in his Vyauaharakanda refers to a written deed or charter known as prasada-likhita by which the king bestowed landed and other property, when satisfied with the faithful services, valour etc., of a person. It reveals that such grants were for revenues. The Chief was also responsible for the safety of the village. the grants were conditioned by military service with a fixed number of soldiers and hourses. Subinfeudation was prohibited. the grantee was under certain obligation to the master. Such grants were, accordingly, similar to the fiefs of western Europe.

\(^{1}\)E.I., IX, IA.
\(^{2}\)Ibid, XIX, No. 10.
\(^{3}\)Brhaspatismṛiti, Geakwad Oriented Series, P. 63.
A Kalacuri inscription\(^1\) of the 12th century A.D. reveals that one Sri-Jata was appointed as head of a Viśāya apparently in reward for military service by Kalacuri Kama in the 11th century A.D. But by the 12th century his descendants became full-fledged feudatory rulers.

Here was an instance of hereditary officers creating chiefships obviously by self-aggrandisement by taking advantages of the weakness of the central government.

It is significant that, in the condition of feudal decentralisation, the territory directly administered by the kings and monarchs become considerably limited and they become more or less like their chiefs and feudatories, though holding larger territory than any one of them. Ghoshal notices this feature in the Cahamana monarchy when he says that "the assignments preponderated over the reserved tract\(^2\)" or the area directly administered by the king. But this state of affairs may be more or less true in case of almost all the monarchies of northern India in the 11th centuries where this system was in vogue, and the use of the term Sva-bhoga\(^3\) by a Candella king and Sva-bhujiyamana\(^4\) by a Calukya king perhaps throws light on the same.

Besides the role of the central agency, it is noticed that other forces also worked for the feudal decentralisation. Apart from the big feudatories small vassal chiefs also tried to

\[1.\] E.I.,IX, 9B.


\[3.\] The Chārkhari Plate of Devavarmadeva (v.s. 1108); E.I., Vol. XX, No. 14, P. 127.

\[4.\] Sunak Grant of Karnā I, E.I., Part VI, No. XXXVI.
gather around them a group of followers. There is some evidence of sub-infeudation also. A chief of 84 villages who was the vassal of a superior chief Rayapala is said to have granted land to his Mahamatya\(^1\). The Rajatarangini informs us that the weakness of the central government gave rise to a class of chiefs in Kashmir, known as the Damaras. It is stated that an adventurous Kutumbin procured some wealth, occupied the village and after retaining some gathering become a Damara\(^2\). They were like agricultural barons and were an eye sore to the king of Kashmir. They lived in magnificent Palaces\(^3\) and were engaged in constant warfare with the Kings of Kashmir. More or less similar features occurred in other parts of northern India also. The terms gamaroda and Kondio were current in the desabhas\(^4\) in the 12th century A.D. They refer to persons enjoying villages by a deceitful manipulation. This shows that sometimes clever persons managed to become village chiefs.

Thus either by a royal grant placing villages under a feudatory chief, or by forceful occupation or by submission of the individuals, village after village must have acquired a lord and this must have led to the decline of the free village communities\(^5\).

All these tendencies contributed to the growth of a ruling landed aristocracy and large estates. The evidence of texts like the Aparājitapṛcchā and Latakamelaka and the inscriptions reveal that this class included the numerous

2. Raj., VII PP. 495-95.
3. SAMAYAMATRKA of KSEMENDRA, P. 29.
4. DESINAMATNALE of HEMACANDRA, 11, 48, 90.
Rajaputras and Thakkuras who were petty chiefs holding a number of villages. They were at the bottom of the pyramidal structure which was formed with many grades of feudatory rulers with the king at the top.

THE KING AND FEUDAL LORDS

The word used for vassals and nobles in India was Sāmanta (being an all side). The Sāmanta was the feudal lord and his right to decide a boundary dispute arose out of his ownership of land. But this view has been challenged by Lallanji Gopal who says that the Sāmanta were not petty nobles but rulers of considerable importance in their own respective regions. A Sāmanta was a ruler distinct alike from a sovereign king and a governor.

There were both bigger and smaller Sāmantas, differentiated by the term Mahasāmanta and Sāmanta. In the inscriptions of the medieval period these big Sāmantas are called Māhasāmantadhīpati. The smaller Sāmanta was subordinate to a bigger one, who in his turn, accepted the suzerainty of the emperor.

The nature of the relationship between the subordinate and sovereign States depended upon the comparative strength and size of the two States. A Sāmanta paid his allegiance only as long as the king was powerful. The Sāmantas were always on the lookout to declare their independence and the King by using his paramount

1. L. Gopal, The Economic Life of Northern India, 700-1200, Delhi, 1989, P. 263.
2. Ibid, P. 269.
3. Ibid, P. 270.
4. E.I., XII, 31; The term is mentioned in the suprious inscription from Devagiri dated A.D.600, E.I., XI, 1.p.6
5. S.I., D.C. Sircar, P. 326ff; I.H.Q., XXVI, P. 75.
power had to bring them to submission from time to time. It was the fear only that kept Sāmantas loyal to the emperor.

The Sāmantas used to accompany the emperor in wars. They had to pay the sovereign lord certain dues\(^1\). But the reference do not reveal the nature of these taxes\(^2\). It cannot be established if the king went out to collect this sum from the Sāmantas or if the Sāmantas paid it at the time when they presented themselves at the court. One of the duties of the Sāmantas was to report at the court personally and to win the favour of the king by personal service. There were many forms of obeisance. Sometimes the Sāmantas simply joined his palms and some other times he would bow his head or might touch the feet of the King with his head, or he might put the dust of the King's feet upon his head. The passage also refers to the payment of taxes by defeated and subdued kings. The Sāmantas were also required to obey the orders of the king. As their husbands served the king, so the wives of the Sāmantas had to serve the queen.

Thus a Sāmantarāja, even if allowed to rule his own territory, had too often visit the court to attend to the king. Some sāmantas resided permanently at the court. Economically unproductive they formed an idle and worthless class.

Finally, in medieval times samantas no doubt denoted a chieftain or noble having the right to enjoy a certain fixed income\( ^{\text{3}}\). The Kathāsaritsāgara\(^3\) often refers to individuals being made sāmantas by kings who gave them villages, gold, umbrellas and

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1. H.C., P. 74, King Pusyabhuti is said to have made the Sāmantas defeated by.
3 K.S.S., XVII, 126, 130, XXX, 137-138; XLIX, 61-62, LIII, 72.
vehicles. Sometimes, if the King becomes displeased would dismiss them and would appoint others in their place. They, thus depended upon the good will of the king. The references in Bana and a passage of the Malatimadhava to the feet of the minister Bhurivasu as coloured by the pollen of the flowers in the crest-chaplets of many a samanta indicate that the tendency towards a further change in the meaning of the term had started in the 7th century. Sāmanta in the Malatimādhava would appear to represent the period when the term would mean a chieftain. The practice of some Sāmantas residing at the imperial court with permanent mansions at the capital suggests that the new development had already begun.

LAND RELATION

The majority of inscriptions from period 650-1206 A.D. record that land grants were made to Brāhmaṇas in order to enhance the religious merit of the rulers. These were grants "in perpetuity" and they were recorded on durable materials, usually copper plates. However, the few grants which were made to other citizens, were recorded on perishable palm leaves (the customary material for writing in southern India) and not on copper plates.

As a rule, and particularly in Bengal, these grants were made by the feudal rulers. However, in northern India, in the empire of the Gurjara Pratihāra such grants were often made by vassals whose possessions were situated in the borderlands, either with the agreement of the central organs of administration or even

2. Malatimadhava, VI, P. 77.
without their knowledge at all. These gifts became particularly frequent after the decline of large States in the tenth century.\footnote{P.V.Kane, \textit{History of Dharmaśāstra}, III, PP 954-56.}

The titles of various men of power listed in inscriptions - those of sovereign, regional and district governors, etc. - point to the existence of a developed feudal administration network, especially in Bengal\footnote{N.G.Majumdar, \textit{The History of Bengal}, I, Dacca, Pl.19-43 PP.558-60.}. However, in the north there were considerably fewer administrative posts and it would appear that the vassals enjoyed more independence there. Those who were granted land gradually acquired administrative and judicial immunity. They were entitled to judge the people inhabiting their lands in connection with the "ten offences"\footnote{I.A., XIV, PP.101 ff.1.12 and XVII PR 14ff 1.16.} recognised by the courts of the time. Often state officials were prohibited from entering the territory of such estates\footnote{E.I., IV, No. 34 line 30-52.}. This meant that the cultivators became more dependent on the grantees. The State usually reserved for itself the right to administer justice only in cases of major offences, warranting capital punishment.

In the inscriptions of the times there are also references to taxes from which grantees were exempted\footnote{C.I.I., III, NO. 60, II 12-13.}. Gradually the list of taxes grew particularly in the tenth century\footnote{N.G. Majumdar, (ed), \textit{I.B.}, III, Rajshahi, 1929, No.5.}. Among the taxes listed are those on marriages, childlessness, on the celebration of festivals or family occasions in the house of the landowner. Also mentioned are collections to be paid for the delivery of royal decrees, or the boarding and lodging of
official visiting the village, fines decreed by the courts, tariffs, etc. Numerous attempts were made to "put in order" this complicated state of affairs by combining requisitions in one basic tax. Subsequently new taxes were imposed and the situation repeated itself. This reflected the growing financial oppression to which the people were subjected to and the increasingly dependent position of the villagers. Oppressed by heavy land revenue demands, the village community members lost their personal freedom.

As the degree of taxation increased so did the varieties of forced labour, which constituted a type of cover. It was the duty of the peasants to see the maintenance and upkeep of bridges and roads, attend to the needs of officials who might visit their village and take part in various types of building works. It is however not known whether they were required to work on the field of the owner of the granted land. All that is mentioned in the inscriptions is that holder of such land is entitled to "cultivate the land or have it cultivated", but it is not clear whether this implied corvee or the introduction of share-cropping. There is however no doubt that the use of villagers forced labour was widespread in the villages. The richest of the feudal lords (with the exception of actual rulers) were of course the "Collective owners" of the Hindu temples and the monasteries. During that period there was a difference between the grants made to religious

3. H.C., Page 57.
institutions and those made to priests and monks. Lands, villages or parts of villages could be donated both to individual Brāhmaṇas or group of Brāhmaṇa, who would share the rents among themselves. All questions relating to the administration of such Brāhmaṇ villages were resolved by the council of Brahmanas or the Sabha. This council also decided questions connected with the allocation of rents, usually on a once-and-for-all basis. The Brāhmaṇ Sabha differed from the village community and was a council consisting of land owners only. It was observed that occasionally land grants to Brāhmaṇ were divided up so many times amongst descendants that the individual plots were no longer distinguishable in size from those of the villagers.

The temples did not divide up their possessions and on the contrary, they added to them, receiving all types of donations from pious rulers, feudal lords and village communities, as well as through land purchases and mortgages etc. Lands donated to temples were, as a rule, exempted from taxation and enjoyed various form of immunities.

Initially, to judge by existing inscriptions, only uncultivated lands were donated. In order to donate land to a temple a ruler or feudal lord was obliged first to buy it, as the temple land had to be free of revenue obligation. In medieval India, land which had not been cultivated was often bought and

1. K.S.S., 82. 3.
2. E.I., IV, No. 29.
5. P.C. Chakarvarti, History of Bengal, Page 647.
sold, although in each case it was necessary to obtain the sanction of the village community or any other group to which it belonged. After the thirteenth and fourteenth centuries restrictions pertaining to the purchase and sale of land were increased. It is possible that on the granted fallow land temples set up their own estates, using the labour of monks, and also that of slaves, share-croppers and hired labourers. From the sixth-eighth centuries onwards it became common practice for temples to receive donations of whole villages, whose inhabitants worked on the land for the priests or monks. It is a known fact that in the seventh and eighth centuries the temples collected rent in kind. Apart from food products the cultivators were obliged to supply the temples with all essentials for the observance of religious ceremonies such as oil, garlands of flowers, ceremonial garments, etc.

The temple estates were usually managed by a council consisting of Brahmanas and headman of other cultivators or merchant and artisan castes. There was a large body of staff at the temple including scribes, craftsman, singers, musicians, dancers, etc. The temple estates in southern India were particularly extensive and well organised.

Although lands were donated to temples "for as long as the sun and moon exist" and in the scriptions a curse was laid on those who might encroach upon that land. It is clear from historical records that on frequent occasions, particularly in

troubled times, as one dynasty would be ousted by another or when the local population might be subjected to invasion by foreign conquerors, not only the estates of feudal lords but also those belonging to Brāhmaṇ communities and temples were confiscated by the State. This explains the constant changes during that period between the proportion of land owned by the State and that owned by individual feudal lords.

However, despite all these odds the members of village communities in India maintained their rights not only the personal freedom but also certain other rights and privileges as most grants of land (this applied particularly to Bengal) were made in the presence of the whole of the local population, including even those from the most humble castes. In the texts of the relevant grants special mention was made of the mahattaras, i.e. the "respected members" of the community, who appear to have included the headmen and scribes.

During the period, the village community was a powerful organisation which had not only a social and economic role to play but also a political one, particularly in southern India. In the north the village communities appear to have been smaller in size and less influential, but there too the communities often incorporated a number of villages (grāmas) or smaller units (knoas, paṭṭakas, etc.). Each village community had a council consisting of "prominent member", was incharge of the land and resolved all

local disputes and lawsuits. The communities arranged their own administration and defence, mutual assistance amongst the peasants, building of irrigation facilities and participated in the hostilities between the local feudal lords\textsuperscript{1}. They inscribed their decrees on stone plates that were frequently enclosed within the walls of temples. Money for this activity was collected in the form of community dues, which sometimes were no less in amount than revenue taken. Gradually the process of feudalisation progressed, these large communities began to lose their autonomy and developed into ordinary administrative units, which came gradually under the control of officials appointed by the central authorities. The final disintegration of the large village communities into small units embracing no more than one or two villages would appear to have taken place in the 13th and 14th centuries.

AGRICULTURE

Agriculture had been playing a vital role in the Indian economy. The period under review is no exception to it. Agriculturists have been specifically referred to in various land grants of the period. A number of these grants never fails to mention the krśakāh or the kuṭumbinah, i.e. the members of the cultivating class. The cultivators were highly esteemed and their profession was an honourable one. They even enjoyed the privilege of offering food and drinking water to the most revered ones of the caste order. Laksmidhara, in the authority of several

\textsuperscript{1}S.C.,III, Pt. I, Page 58.
Dharamasastras, finds nothing derogatory in it. From very early times it had been regarded as an important branch of varta or ancient Indian economies, the others being trade and cattle rearing. The classification of soil according to climatic conditions and productivity was known since early ages.

A Chandella grant (Vikram Samrat 1190) shows that land holdings were measured, their boundaries were clearly defined, and their seed capacity was also estimated.

With the decline of trade and commerce and the lesser prevalence of coins, the economy tended to become increasingly agrarian during the early medieval period. In the ancient period, agriculture was viewed as a distinctive occupation of the vaishyas. But now it was sanctioned unreservedly for the Brahmanas also. It was done partly with a view to provide means of livelihood to the poor Brahmans, and mainly for the benefit of the land holding priestly aristocracy. Some went to the extent of regarding agriculture as the Samanyadharma of all the varhas. But one of the most significant developments of the period in this respect was that it began to be regarded by many authorities as the distinctive occupation of the sudras. The sudras appeared as share-croppers (ardhika or ardhasiri) in the ows of manu and yajñavalkya. The word kinasā means a sudra according to Asahaya and a cultivator.

1. K.K., Niyatakālanada, PP. 262-63.
2. See, for instance, Artha., 1, 4.
4. P. Niyogi, Contribution to the economic History of Northern India, Chapter III.
6. Manu, 4. 253; Yaj., 1, 166.
according to Ajaypāla and Lākṣmīdhāra. This may point to the existence of sudra cultivators in our period. In practice also it was the sudras who were largely engaged in actual agricultural operations. Though we find literary as well as epigraphic descriptions suggesting that sometimes the common Brāhmaṇs were also engaged in the work of village. Yet on the whole, the members of the superior class began to withdraw themselves from the actual work of agriculture and developed a strong bias against it. As regards those Vaiśyas who were ordinary peasants, they appeared to have declined in social and economic status and thus became not much different from the Śudras. Gradually, only trade and commerce began to be regarded as the distinctive occupation of respectable Vaiśyas. The peasants were the backbone of the society. It was on their surplus income that the kings, the sāmanta hierarchy and other landed intermediaries, the priestly elite, and a number of village servants, as washermen, barbers and sweepers, were living.

Owing to feudal conditions and the increased claims of the kings, the Sāmantas and the landed aristocracy over the land rights, the land rights of the common peasant were bound to be reduced. Then again, in many regions the peasants were further hit due to the oppression by rulers, their officers and by the famines which, under the conditions of local economy, caused untold suffering and also by the frequent march of armies which often destroyed or plundered the fields. At the same time the transformation of a large number of the Śudras (whose duty was to

2. K.K., XI. P.90.
3. Yaj., I, 128.
render service to the superior class) into peasants meant the emergence of a fairly large section of peasantry who were generally in a state of dependence and held precarious tenancy rights over the land.

There were many categories\(^1\) of śudra share-croppers. The law books reveal that sometimes land was leased to temporary tenants who, in turn, had the right to get it cultivated by others\(^2\). Besides, there were plough-drivers and other agricultural labourers.

The Akhvanakamani-kośa (12th century) reveals the emergence of a type of agricultural labourers in Rajasthan and Gujarat who worked the arahatta and were, thus known as arahattiya-hava\(^3\).

In some estates of kings, chiefs and landlords restrictions were imposed on the movement of peasants, artisans and other humble village-folk\(^4\). The practice of mortgaging land for loans, and the mode of paying interest in the form of labour service (Kavika), which appear to have acquired prevalence\(^5\) during the early medieval period, were also partly responsible for the poverty and subjection of the lower peasantry. However, in the 11th centuries the emergent economic forces had started working against this set up.

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1. See article by BNS Yadava in *land system and feudalism in Ancient India* (ed) D.C.Sircar.
2. Ibid. Page 261.
3. Article by BNS Yadava in *land system and feudalism in Ancient India*, Page 261.
4. Ibid. Chapter NO. 3.
METHODS AND TECHNIQUES OF AGRICULTURAL PRODUCTION

(i) IRRIGATION

Water is the most important source for cultivation of crops. Scarcity of water and some other factors, i.e., floods, draught led to the development of the irrigation system in northern India from the very early times. The responsibilities of the king to provide irrigational facilities in his kingdom is traditional and very old in origin. The failure of monsoons was often ascribed to the sins and faults of rulers. This notion obliged them to undertake excavation of wells, tanks and canals. The most remarkable irrigational project implying ingenious engineering skill came from Kashmir and belonged to the reign of king Avantivarman. Under him the minister Suyya constructed the dam over the river Vitasta (Jhelm) to save Kashmir from devastating floods of the Mahapadma lake. Kalhana notices the prosperity resulting from the work and showers unstinted praises at the great engineer\(^1\). Another king of Kashmir, Lalitaditya Maktapida reclaimed many hitherto water-logged areas by making an arrangement at Chakradhra for conducting the water of the vitasta and by constructing a series of water-wheels, distributing it to various villages\(^2\); king Harsha excavated the big pampa lake, identified by stein with the modern Damba sar\(^3\).

We find description of king Kalhana of the Naddula branch of the Chāmānas and Ajayasimha, a son of his feudatory,

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1. Rai., V, 84-121.
2. Ibid, VII, 991.
constructing wells\textsuperscript{1}. A sister of Purnapāla, a paramāra ruler of Abu, also claims to have constructed tanks\textsuperscript{2}.

Raja Bhoja also appears to have been energetic in building reservoirs\textsuperscript{3}.

The Chālukyas of Gujarat have many important irrigational works to their credit. The extent records indicate that under the Kalachuris many feudatories and ministers excavated tanks and wells. Thus, Malayasimha, a feudatory, is reported to have dug a tank in A.D. 1192\textsuperscript{4}. Rauta vallialadevaka, another feudatory, excavated a water channel\textsuperscript{5}. A number of tanks existing even to this day bear eloquent testimony to the concern of the Chandella kings for irrigation facilities. Rahilya sagar, kirat sagar (land 1/2 miles in circumference), Madanavarman, Vijayapala and Kalyanadevi. A tank in Ajayapgadh is again have been excavated by Paramardi\textsuperscript{6}. In the Khajuraho inscription dated 1011 of the vikrama era we read of the construction of embankments to divert the course of a river\textsuperscript{7}.

Srihara refers to the charitable provisions for wells

\textsuperscript{1}H.C.Ray, Dynastic History of Northern India, Vol.II,P.1119.
\textsuperscript{2}E.I., IX, P. 15.
\textsuperscript{3}1. A.,XVII, PP. 350-52.
\textsuperscript{4}E.I., XIX, 298 ft.
\textsuperscript{5}I.A., XVIII, 213. (see F47, F48)
\textsuperscript{6}Ibid, XXXVII, 132; A.S.I., Reports by Sir.A.Conningham,11, P. 439 ft.
\textsuperscript{7}E.I., OP. Cit., I, 122, V. 26.
etc. made by the hero of the Naisadhiyacharita. Pandita Damodara, associated with the Gāhaḍavāla Court, refers to his Kāśyapprakarṇaha not only to the cleaning of wells and digging of tanks but also to a state official named Surapala supervising the digging of a tank, his head shaded by an umbrella. Gangadhara, a minister of king Rudramana, is said to have excavated a tank in the Gaya district of Bihar.

Besides these irrigation works which owed their construction to the state, there were several water channels and rivulets in the rural areas. These are mentioned in the land grants as Sarota, Sout, Jolla, Jola, Jaloka and Jāva. These distributaries originated from a spring, river or a hill. The water supplied for drinking, washing and irrigation was generally known as Puskarini, Palvala, Jalāśaya, Pokhira, Pokhiri, Sara, Todaka, Vāpi and Kunda. There must have been many other means of irrigation built privately by individuals. Digging of wells and tanks has been propagated in India as a

1. E.I., IV, 310.
3. Ibid, IV, P. 49, 1.22.
7. J.A.S.B., LXVIII, ft.1, PP.120ft.
10. Ibid, IV, NO. 34, 1.43.
17. I.B., Majumdar,III, NO. 15, 1.42.
20. I.B., III, No. 15, 1.42.
charitable work of merit. We have many records testifying to the actual hold of this precept on the Indian masses. The presence of tanks and wells in the villages follows also from the land-grants of the period which, in enumerating the boundaries of fields or villages granted, often mention canals, tanks, wells and embankments. Dictionaries of the period describing terms for the cover or facing a wall, a small post near the wall, the rope and bucket, water channel and a drain, provide us how the wells worked. Mehachandra in this Desinamala explains agatti, Ukka, Vkkamdi, Vkkamati, dhemka, nelicchi and Vaddita alike as kupataula or a contrivance for raising water from a well in which a horizontal beam, from one end of which a bucket hangs, see saws on a vertical post.

From Medhatithi we learn about the way in which cultivators used irrigation work. In this connection he explains the term Yantra to mean the building of embankments for regulating the flow of water. He also refer to water being drawn from the well or the tank and preserved in a cistern and similar small reservoirs. The Samaranganasutradhara describes four water machines (Variyanastra) to bring water down, to raise it first and then to raise it and to raise it (ucchraya).

(ii) DEPENDENCE OF AGRICULTURE ON RAIN

All this irrigational activity going on in the country could little affect the ultimate dependence of Indian agriculture

1. Mitra, early rulers of Khajuraho, P. 180; Barua, Cultural History of Assam, P. 70. (see P5 11), W
3. Ibid, XI, 162.
on the rains. Pandita Damodara expresses the helplessness of the common cultivator at many places in his *Uktivyaktiparakaraha*. He says that the clouds by their timely rains make the world new, as it were, that fields yield crops only when the nature is kind, and that if God produces rains then there will be grains. In support of all this we have the testimony of Abu Zaid who describes Indian rains or Fasara (sanskrit varsha) during the three months of summer as "the life of the Indians; were they to fail, they would be reproduced to the deepest want. For their fields sown with rice are watered only by rains, and are fecundated thereby. "These sources indicate that the coming of the rains was always a subject of anxiety lest they should be inadequate as regards time, place and quantity. No doubt there are references to rivers swelling from the rains. But the main fear was its paucity or absence when needed. In his helplessness the cultivator could but pray the heavens for rain.

(iii) RIGHTS IN VILLAGE RESOURCES

In the period 650-1206 A.D., with the growth in the claims and powers of the state there was a distinct attempt on the part of the ruling powers to establish their ownership over irrigational water. The list of rights and privileges, which the land-grants transfer to the check and which, therefore, existed earlier in the donor

2. Ibid, P. 35, 1.29.
3. Ibid, P. 9, 11. 15-16.
The authority quoted by Bhāṭṭasvāmin also distinctly observes that well versed in the Shastras view the king was the owner of the land and water. But in ancient India the state never thought of deriving any income from its ownership of irrigation works. It was regarded as a pious duty on the part of the king to provide such works of public utility. However, the many demands on the purse of the feudal state led it, in its desire to tap new source of income. We find that Gahadavalas imposed a jalakara in this regard. It is likely that pressed by the inroads of the Muslims, they resorted to all possible avenues for collecting money.

But this is not to suggest that all the wells, tanks and ponds etc. in the village were owned by the state. It is obvious that the man who had a well dug on his own land was its natural owner. Similarly, it does not refer that machine wells called araghttas were owned by private individuals. It thus appears that the claim of the state to the ownership really amounted to its rights over natural ponds, lakes or rivers or streams situated in or passing through the village. Medhātithī suggests that for all practical purposes the village as a whole enjoyed it on behalf of the king. Elsewhere referring to the compacts formed by the villagers he says that if the inhabitants of a village decide to oppose those of a neighbouring village diverting the water course and to be of one mind in case of a riot or legal suit, any one who

1. E.I., XIV, 186, 1.24; XV 295 ff; XXVIII, 327-28.
3. E.I., IV, NO. 11 (O); VIII, NO. 14 (D); X, NO. 23; XIII, NO. 20.
is a party to the decision would be punished on his backing out of it on some inducement offered by the headman of the other village.1

(iv) WEATHER FORECASTING

There was an attempt to study the natural phenomenon accompanying rains and to create a somewhat ordered knowledge out of it. Parasara in his Kṛṣiparāśara, referring to the importance of rain for cultivation, and of the latter for human existence, observes that one should first of all carefully acquire knowledge about rains.2 The technique of forecasting weather involved the study of astronomy and depended on the experience and observation of natural phenomenon accumulated over centuries. The Kṛṣiparāśara shows how the two approaches were utilized for predicting monthly, yearly and immediate rainfall. It should not be assumed that all this knowledge was only stored in books without being put to practical use. The very fact that books on the subject were composed in Sanskrit suggests their usefulness to the class which knew the language and at the same time was interested in the practical aspect of agriculture. The Kṛṣiparāśara merely collects the knowledge which cultivators at that time possessed.

(v) CLASSIFICATION OF SOIL AND USE OF MANURE

Evidently, soil is the most important ingredient of agricultural production. It was realised that the field near the rivers were more fertile which might have led people to attach importance to them. A knowledge of the qualities of the soil is

implied when medhātithi explains usara as that part of the land where, on account of the defects of the soil, seeds do not sprout. The advance in the technical knowledge about the properties of soil is best indicated by the use in the dictionaries of different terms for an ordinary field, a fertile field suitable for every crop, a field unfit for cultivation, follow land, an area with saline soil, desert, firm ground, clay, excellent soil, an area green with young grass and one abounding in reds. In the land grants we have references to different types of land such as sara and usara, ksetra, khila, and urvara, in which urvara was extremely fertile land. In early medieval day northern India had a large area of such fertile land. The terms coined to indicate the fertility and other features of the soil were not merely academic but were used in connection with cultivation.

Next to soil, comes manure. It seems that people were aware of the fact that howsoever rich in chemical contents land may be, in due course of time it becomes unproductive because every crop takes away from it certain elements. That the Indian cultivator was using manure gets the undoubted testimony of the

1. Methātithi, op. cit, II, 112.
5. A.R.B., 2.3. (urvarā sarvasaśya bhuḥ).
Uktivyaktiprakarana¹.

It is undoubted that cow-dung was used as a fuel². It was recognized that dried cow-dung increases fire³ and so dried dung cakes were often collected in large numbers⁴. But we are not to suppose that cow-dung was used as fuel to such an extent as to render it unavailable for use as manure. In those days, huge forests surrounded the villages and there was no shortage of fuel as it is there today. Thus the cultivator must have found it advisable and profitable to use cow-dung for manuring the fields. Some of the manures used in the period are referred to in the sayings of Khana⁵. "Those things (e.g., rotten cow-dung) which injure man cure the plants;" if some water, in which a fish has been washed is poured at the root of a gourd plant, then the plant will surely be benefitted from it"; "the land which contains rotten paddy as manure is fit for the rearing of chilis"; "betel-nut plants require cow-dung as manure for their growth"; "pieces of rotten straw or chip of wood should be used as manure at the roots of arums".

(vi) SELECTION OF SEEDS AND METHODS OF SOWING

The Kṛṣiparāsara says that if the seeds are unproductive the efforts for other factors in cultivation become futile; the seeds are at the root of the crops, hence one should pay attention to the seeds⁶. It has a detailed note on how to collect and

¹ Choudhury, History of Assam, P. 1.17.
² Vaijayanti, op.cit., P. 10, 1.40; P. 231, 1.35.
³ Ibid, P. 91, 1.193.
⁴ Ibid, P. 187, 1.25.
preserve seeds. It advises that all kinds of seeds should be collected in the month of Magha or Phalguna. They are then to be well dried in the sun and exposed to dew at night. The seeds are to be kept in small bundles. Mixed seeds result in bad crops and seeds of the same class yield a rich harvest. The kṛṣiparāśara suggests the seeds to be kept away from impure associations.

Sowing had, thus, grown to be a technical procedure demanding attention. To bring home the importance of the process of sowing kṛṣiparāśara converts it into a veritable ritual. The cultivator, meditating upon Indra on an auspicious day, sowed three handful of seeds moistened or sprinkled with cold water. Then, with a pitcher in hand facing the east he prayed to the Earth for the sprouting up all the crops, for timely, rain and for the grant of wealth, paddy and prosperity. After the sowing of seeds in the field was over, farmers were offered a sumptuous feast of ghee and payasa. This was believed to make agricultural free from troubled. We are not sure whether this ceremony, was observed by all cultivators, but it does indicate the ritualising of agriculture in early medieval times. Sowing had to be done on scheduled dates. Medhatithī implies that untimely sowing affects the yield of the crop. A cultivator was expected to know the requirements of his field regarding seeds. In the Vaijayanti we find terms for naming the fields which required drona, adhaka, khari etc. measures of seeds to be sown in them. The cultivator was also required to

2. Ibid., VV, 177-81.
4. K.K., grihasthakanda, P. 256.
know how seeds of particular types were to be sown, thickly or sparsely. Generally, the seeds were scattered in the field by the hand. It was after the field had been ploughed that seeds were generally sown, but sometimes the reverse was done. Medhatithī, however, refers to seeds being sown with the help of the plough etc.

(vii) CROPPING PATTERN

The peasant followed the system of rotation of crops so as to leave the field follow after one crop. No doubt, from as early as the times of the Taittiriya Samhita we find references to two seasonal crops with the possibility of a third. But the yuktikalpataru says that land looses fertility from cultivation year after year. It can, therefore, be safely assumed that the system was not much in vogue and that lands were left follow to recover their fertility.

(viii) MECHANISATION OF AGRICULTURE

The Kṛṣiparasara, emphasizing the need for proper implements, says that they should be firm, otherwise the cultivator faces difficulty at each step. In proportion to the importance of the plough the kṛṣiparasara devotes considerable space to the different parts of the plough and their measurements. It also

2. Vasavadatta, Gray's translation, PP. 100, 120.(See Fig. I)
3. Vaijayantī, P. 124, 1,46. (See Fig. I)
4. Taittiriya Samhita, V., I, 7, 3; Artha., II, 24; Megasthenes, PP. 32, 55.
5. Taittiriya Samhita, VII, 2, 10, 2; Artha., IX, 1; Panini, VV, 3, 44-46.
mentions two other implements, which appear to have been used as harrows. Of these viddhaka is said to have 21 spikes (salyas) and madika (mai of Bengali usage) is described as measuring 9 hands (13 feet 6 inches in length). Ploughing began with the performance of a ceremony called halaprasarana before the commencement of ploughing. It was believed that he who starts cultivation without performing halapprasarana does it in vain. The ceremony consisted of invoking a number of deities and worshipping them with offering and also in whetting the ploughshares and besmearing them with honey and the faces of the oxen with butter. The Agnipurāṇa gives details for worshipping the sun and the gods of the natural elements. The Krisiparasara refers to the nature of soil and its suitability for ploughing at different periods of the year. It indicates the commencement of ritual ploughing on an auspicious occasion. It gives a long list of nakṣatras days tithis and rasis auspicious for the purpose. The utility of a good plough depends upon the oxen that draw it. The Kṛṣiparasara gives important place to the proper upkeep of cows and bulls. Brhat parasara repeatedly emphasises the role of oxen. It observes that the world lives on the crops produced by the oxen; they produce the grains, crush them and carry them. They are really objects of worship. The Kṛṣiparasara also requires cultivation to be carried without cruelty to the oxen.

1. A.G., CCLIX, 43-47.
5. Ibid.
The Kṛṣiparāśara and other texts of the period 650-1206 AD refer to different processes of agriculture. After sowing the seeds, the field was to be levelled with a harrow so as to ensure even growth of plants. A sown field must be hoed during rainy season, so that crops may yield a good harvest. Animals, birds and insects must be prevented from destroying the crops. Fences must be created to prevent animals from crossing the sown field. Brhat-Parasara advises that fences, which animals cannot cross, should be erected\(^1\). Sometimes a scarecrow of grass was set up for protecting the field\(^2\) and a watchman had often to live in the field. Indian cultivators, rightly renowned for their superstitious nature, are found resorting to many such practices for protecting their crops. The Kṛṣiparāśara\(^3\) has an interesting mantra which if written on the leaf of Ketale and fastened in the north-east corner of the field is said to protect the crop from diseases, insects and animals. The incantation requests Rāma to direct Hanumān to drive away from the field with his tail the insects, birds and animals, of which many are named, which destroy the crops.

And, finally, the expressions used in the Kṛṣiparāśara for threshing refers to the process of separating grain from straw by making oxen tread on the corn. In the dictionaries of the period we have, beside terms for a threshing floor, the word, methi

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1. Parasara, Chapter III (Jivananda, II, P. 100).

J.B.O.R.S., P.562. For a similar practice in vogue in Bihar with the difference that here the notice is addressed directly to the insects.
which stands for the post of the threshing floor round which cattle turn to thresh out the grains\textsuperscript{1}. The same text also mentioned that after all this has been done, the grains are to be measured and kept in the grainary\textsuperscript{2}.

(ix) CROPS

We have already referred to the principal of rotation of crops prevalent in this period. Rice was one of the principal crops of India from very early time. The Rāmacāntā informs us that several varieties of rice were cultivated in Bengal\textsuperscript{3}. The Rajataringini reveals that it was the main cereal in the valley of Kashmir\textsuperscript{4}. It is also mentioned in the inscription\textsuperscript{5} of Assam, Bengal, Malwa, Uttar Pradesh, Western India, etc. belonging to the period extending from the tenth to the thirteenth century. Magadha is mentioned as a country rich in the commentary of Aparāraka. References to wheat, barley, maize some oil seeds, pulses, fruits, flowers, etc. are also found in the inscriptions of the early medieval period. But the inscriptions data in this respect are not comprehensive. The principal agricultural products of India are found in earlier literature, as also in that of the 12th century.

So far as the products are concerned, they are countless in number and in varieties. We can divide them broadly under two major categories, viz. (i) Those serving as staple food articles

\textsuperscript{1}Vaijayantī, P. 125, 1.61 2.
\textsuperscript{2}Parasara, op.cit. V. 237.
\textsuperscript{3}Rāmacānta, II, 17, P 90.
\textsuperscript{4}Raj., Tarang,II, V. 18, Page. 52.
\textsuperscript{5}P.Niyogi, op.cit., PP. 26 ft.
and (ii) those serving mainly as commercial crops. These categories further resolve under several sub heads. Thus, the food products may be classified under several sub heads. The food product may be major classification is follows: (i) corns and cereals (ii) vegetables (iii) fruits and herbs, and (iv) oil seeds. Commercial products are also divided under several sub-heads such as (i) sugar cane plantation (ii) cotton plantation and other fibrous products; (iii) varieties of spices, dyes, medicinal herbs, flowers and plants and (iv) forest products and fodder.

These classifications, however, cannot be regarded as scientific and precise. Maity\(^1\) correctly says that crops put under one head can fall under other head. And really even the broader divisions between edible and commercial products are not correctly logical. All these products can be called both commercial and edible in accordance with their use. Thus some of the commercial products could also be used as edibles.

Rice - Among the food grains, rice of several varieties are mentioned. Sali was considered to be a fine variety of rice as indicated by Bhgartrhari\(^2\). As enumerated by the lexicons rice had several varieties, e.g., salih, rabtasalih, mahasalih and kalamah\(^3\). Salih rice has been mentioned in many literatures. For example, Damodara mentions Salikanada\(^4\) and the Rajtaringini mentions

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2. Nitisataka (Bhartrhari, sl. 75).
Salichurna. In the Harascharita, red rice is mentioned. The other fine variety of rice was kalama, perhaps a specie of sali as categorised by the lexicons. Damodara also has mentioned it. The fine and the coarse varieties were classified depending on the place of their growth. Thus somadeva says that rice of kalinga was the best dietary for the king. Aparanka on yajnavalkya speaks highly of the rice of Magadha. Eight varieties of rice are enumerated in the Mānasollāsa, five by medhātithi and four by the visnudharmottara. A general paddy of different varieties was grown in Bengal. Among the coarse rice, Uddala, Koradusaka, Kodrava are mentioned as synonyms in the lexicons.

That kodrava was an inferior variety is also expressed by Bhartrhari.

Inscription also sometimes provide references to rice grown in different parts of the country. Several Assam inscriptions mention its cultivation on large scale. The land were measured on the basis of the rice produced on them. Inscriptions of the sena dynasty mention fields growing excellent paddy, and Myriads of villages consisting of land growing paddy in excessive

11. Nitisataka, 51, 98.
quantity\textsuperscript{1}, indicate that rice was grown in Madhya Pradesh, Uttar Pradesh as evidenced by Mathusa Prasati of the reign of vihayapala of Kanauj (v.s. 1207)\textsuperscript{2}. The Punjab was another province where rice was grown\textsuperscript{3}. An inscription from Rajasthan also uses a term chosa or chokha in the sense of rice\textsuperscript{4}.

On the basis of these literary and inscriptional evidences, it can be safely concluded that from the vedic period down to the present days, paddy was the chief crop grown in the northern parts of the country throughout its length and breath and this period also did not divert from the track once laid and followed.

Wheat—The next important cereal was wheat. In this connection as well not only lexicon\textsuperscript{5} but also other literary works, indigenous\textsuperscript{6} and foreign\textsuperscript{7} and inscriptions\textsuperscript{8} also mention and support its cultivation. From the study of these sources, it appears that the Punjab, Uttar Pradesh, Rajasthan and Sindh during the period under review were great wheat producing areas. It is referred to as early as in the white yajurveda\textsuperscript{9}. It also figures

\begin{itemize}
  \item \textsuperscript{1}I.B., III, PP. 89-90.
  \item \textsuperscript{2}E.I., I. PP. 287 ft.
  \item \textsuperscript{3}I.A., XVII, PP. 7ft. Chamba Copper Plate of somavarmadeva and Asatadeva.
  \item \textsuperscript{4}E.I., XI. The Bhinmal stone inscription of Udayasinha of the Chanamara dynasty (v.s. 1302).
  \item \textsuperscript{5}Paryayaratnamalā of Madhavakra, df. p.u. Journal, Vol. II.
  \item \textsuperscript{6}Bushari in Nadvi, S.S. op.cit., P. 65.
  \item \textsuperscript{7}Niyatkalakanada of haksmidhara,396-97 krtyaratnakara,PP.257-78.
  \item \textsuperscript{8}E.I., II. P. 236 (Dbkund ins); XI, PP.55 ft. X, P.57 (Bhinamala ins).
  \item \textsuperscript{9}Vajasheyi Samhita 18. 12.
\end{itemize}
in the Brhad Asanyaka\(^1\).

Barley - Yava or barley was another grain closely connected with wheat. Black hairs of barley corn are described in the "sisira" season\(^2\) Kashmir observed the festival when barley was ripe\(^3\). Halayudha also supplies terms for barley (yava)\(^4\); there being no indication for wheat. MedhatithI speaks of yava\(^5\). A good preparation called yavager is mentioned\(^6\). In inscriptions also well this produce is mentioned\(^7\). There is reference to wheat (godhuma)\(^8\) too. There is some confusion regarding the term yugandhari which occurs in the inscription of chahmana kelhanadeva (v.s. 1221)\(^9\). Bhandarkar mentions it as juara\(^10\). The commentator of Pravachonasaroddhara of Nemichand seems to suggest it in the same sense\(^11\). Itsing says that barley was produced in the west and wheat in the north-west\(^12\). In the Hammira-raso para-bhora is equated with 'juaro'\(^13\). We also get reference that maize was also produced\(^14\).

Pulses - Amongst pulses, mudga (both yellow and black varieties), kulaya (pea, cha\(\text{\textphi}\)ka, or chick pea), kulatha (horse grain), mas\(\text{\textphi}\)ra, valla, \(\text{\textphi}\)\(\text{\textphi}\)ha\(\text{\textphi}\), masa and r\(\text{\textphi}\)jam\(\text{\textphi}\)ga have been

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2. Saduktikarn\(\text{\textphi}\)m\(\text{\textphi}\)rt\(\text{\textphi}\), II, 136.5.
5. Manu, VIII, 320.
10. Ibid.
12. Itsing, Records, PP. 43-44.
14. Ibid, LXVI, PP.113ff in Assam, "Kosthamakhiyana".
Some of these are found in liberabures. Somevsvara has mentioned seven varieties of bears. Several inscriptions also provide the names of a number of pulses.

Oil Seeds - Amongst oil seeds, mustard (of two varieties; sarsapa and rajasarsapa) tila, jortila and atasi are met with in the lexicon. The prabandhachintamani refers to the oil of kanguni seeds.

Vegetables - As regards the vegetables, patola or parval (trichosanthesdiocca), karvellaka or karela (momordica charantia), Sovanjana or Sajina (moringa piterygosperma), helamochecha or hinchasak (enhydra or hingscha), gandhali (podina foetida), tumbe (lagenaria vulgariser), karkatakasa or knakumara (cucumis utilissimus), kusmandaka (beniskasacerifere). Olha or ola (amorphophallus sampanustatus), simba or sim (bean) of black and white varieties are mentioned. In the Prayaschitasprakarana, mushrooms are mentioned as being used as vegetables. Being cheap it is still taken by poor persons of lower castes. Onion and garlic are also mentioned. Ibn-Haukal (9th century A.D.) speaks of the use of vegetable stuffs by the people. Karkandu (a species

2. Kuttanimata, 51, 229; Raj., VII-758.
6. Prabandhachintamani, II. 64.
7. Patna University Journal-II.
10. R.C.Majumdar, The struggle for empire, P. 402.
of berry) was prepared by mixing it with saka by the foresters. Various literatures not only mention different varieties of vegetables, but also mention the countries where there were grown and the people who used them. Rājatarāṅginī mentions "visa" (lotus root also called nadus) used as vegetable. Stein says that it is prepared with meat. The last article is mentioned by Rājaśekhara. Assam also produced gourds. Besides, it grew cucumber, labu and several others.

Fruits - Fruits were grown and cultivated in profusion. Beds of fruit creepers were prepared in the cultivated grounds and "barjas" were set for their support. Shadowy trees bearing fruit were plated on road-sides. Gardens and grooves were specially set for the purpose. All the various sources supply evidences to the different categories of fruits. There are references to grape vines grown in Kashmir. Kalhana at several places alludes to them. At one place, he says that grapes are one of the ordinary products of Kashmir. Other reference informs that grapes grew in profusion in Sindh, north west India, Western India and

2. Raj., VIII, 676.
3. Ibid, V. 676.
4. Kavya Mimasa, XVII, 94.
10. Ibid, 1.42.
12. Kāvyamiṃśa, XVII, 94.
13. History of India as total by its own Historians by Elliot and Powson - I, PP.15-16, 24, 33, 37-40, 278.
Bengal. There were two seasonal crops of grapes. Mango trees were planted on road sides, in grooves. It may be mentioned that mango and mahua trees are familiar enough in India to be seen still standing on the Grand Trunk Road, said to be constructed by emperor Ashoka at first and later by Shershah curiously enough, these two kinds of trees have been invariably mentioned in most of the epigraphic records. The records of Ramaganja plates of Isvaraghosa refer to the madhuka trees, which is also supported by the Rāmcharita. In Madhya Pradesh, there were mango trees and other trees planted before a temple by a pious queen in the village Kadambari. Hiuen Tsang states that many fruits were grown in north-eastern India, and he refers particularly to the mango grooves of the States of Mathurā, Matipur, Ayodhyā and Vaisāli, to the plantins of Vaisāli, to the jackfruits of Pundravardhana, and kāmarupa and to the coconuts of kamarupa. The Agnipurana tells us about orange, lemon, date, coconut, arecanut, pomergranati, jackfruit, vini, mahuā and palmyra which were grown in Bihar.

2. Rashiduddin, In Gujarat twice every year, P.122.
3. E.I., XXI, P. 92, 1.28; I.A.,1888, P.226, 1.12, P. 236, 1.31.
7. Watters -I,PP.322,340,355,373,II,PP.47,63,81,184,185,190 and 191
8. Ibid, I. P.301.
12. Ibid, II. 63.
15. Ibid, P.185.
16. Ag., 69. 11-12, 173.21.
Besides these literary records, some epigraphic records of the period also support the production of a good number of the above mentioned fruits. The Gahadavala land grants indicate that mango and mahua trees were largely grown in Uttar Pradesh. The Aphsad stone inscription of Adityasena (c.7th century AD) informs us about plantain and tal palm tree growing perhaps in south of Bihar. The Ashralpur plates of Devakhadga mentions arecanut cultivation in East Bengal. The Khalimpur plate of Dharampala refers to date, pomegranate, Jamun and bela trees of the Pundravardhana bhukti.

Of the fruits, mango was most extensively cultivated in north-eastern India, and it grew from the State of Mathura to the west of Assam in the east.

Sugarcane - Sugarcane was also an important crop of northern India. Bana speaks of sugarcane cultivation in some forest villages. While Kalhana refers to its cultivation in Kashmir. Inscriptions very eloquently support the statements of the literary accounts. Almost all the inscriptions of the Chandelas, whose rule extended in parts of Uttar Pradesh and Madhya Pradesh, speak of it as an important product of the region. We have many references to iksudanda (sugarcane stick), guda....
(molasses)\(^1\) and sita (sugar)\(^2\) in the kalika purana testify to the production of sugarcane in Assam. But we do not have any reference to sugarcane cultivation in Assam. It was an important commercial crop of the under studied period, i.e., 650-1205 A.D. Cultivation of sugarcane and the growth of Sugar Industry was notable feature of Indian economy.

Cotton - Some parts of northern India like Uttar Pradesh and Bihar were well known for cotton production. Hiuen - Tsang observes that Mathura "Produced........a fine striped cotton" which shows that cotton was cultivated in the Mathura areas\(^3\). While according to the writings of the foreign travellers the Gujarat and Bengal were two main cotton growing centres. Marcopolo attests to it by saying that in Gujarat cotton of great height and duration were grown\(^4\). The Deopara inscriptions of Vijayasena also alludes to the villagers noted for the knowledge of the cotton\(^5\). Harāscarit used the word "Picavya" for cotton plant\(^6\). Rajasekhara also refers to cotton quilts, which may imply the cultivation of cotton in Uttar Pradesh\(^7\). Krsiparasara may be taken as a proof of cotton cultivation in Bengal\(^8\).

The traveller Marcopolo states that the people of Bengal "grow cotton in which they drive a greate trade\(^9\)." We can say that the cotton was also used for export.

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2. Ibid, P. 58, 19, 46, 90, 27.
3. Watters, l, P. 301.
6. H.C. , Bana, P. 228.
7. Saduktikarnāmṛta, 2, 178, 5.
8. K.P. ,V. 90.
Hemp - The hemp (śaṇam) was also widely known in the northern people. Hārṣāscarītā mentions the term Pattasutraprāsēvakā for jute. Kālikāpurāṇa also refers to cloth made of jute (Pattavasa). The Aṛyasaptasatī describes the raws of hemp plants (śaṇaśren) with yellow flowers standing in a field or fields near a small village called (Pallī). All these references indicate that only Bengal and Assam grew jute. Jute is generally cultivated in Assam, Bengal and part of north Bihar in the modern days.

The terms, Uma kṣuma and Bhāngavēsā meant turmeric which was cultivated throughout the country. Its another synonym in the lexicon is "haridra." Jīraka (Cumīr seed) also called ajaji ardraka (ginger), Pipali (dry ginger) Camphor (Karpura) and Saflron (Kumkum), maricha (Black pepper), Sunthi (Dry ginger) are mentioned in the lexicon. An aggregate of long pepper, black pepper and dry ginger was called "trkate." Hingu is also referred to siraka plantations and mentioned by Ravisenachanja in Magadhā. In Dvarka region, cloves (lavanga) and cardamom (ilachi) were grown. Rajasekhara says that "bdellium", was grown in western India. Besides other products like cloves, cardamom and kalekola also are

1. H.C., P. 217.
2. Kālikāpurāṇa, 63, 15.
3. Aṛya., V. 476.
10. Sisupalavadhā, PP. 87-88, VV. 79-81.
11. Kavyāmimasa, XVII, 94.
spoken of by him to have been presented to Harsha by the same ruler. According to Marcopolo, Spikenard and several other spices were produced in Bengal. Ginger was grown in Kashmir. In the Naisadhiya - chairtano, the use of maricha is spoken of. Khana mentions the process of fertilizer being used in cultivating all above mentioned these species. Certain spices are referred to have been sold in the market.

CATTLE WEALTH

The basic livestock of the peasant was cattle, used for ploughing, transport and food. Villages employed a communal cowherd, who drove the cattle, branded with their owners' marks, to the grazing fields beyond the ploughed fields every morning and returned with them at dusk. Milk and curd were important items of diet, as was ghee. The inviolability of the cow was of slow growth. Besides, the cattle owned by cultivating peasants there were large herds belonging to professional herdsmen, who led a semi-nomadic life in the wilder parts of the country. Other domestic animals included the buffalo, second only to the ox as a beast of burden, and the favourite victim of the sacrifices made to the goddess Durga, whose cult was very popular in that period.

The fine goat's wool fabric coming from Kashmir was well known and used widely in northern India, and heavier sheep's and yaks' wool.

1. H.C.,
2. Marcopol II. 45.
3. Raj. VIII, 141.
4. Naisadh XVII, 118.
5. T.C.Dasgupta, op.cit., P. 237.
8. Yaj. ,2, Page 161 : Naroda, 6.11.
blankets were exported in small quantities from the hills to the northern plains, where the winter nights were usually cold enough to make their comfort pleasant.\textsuperscript{1} The domestic pig was also known though it did not play a very important role in the rural economy.\textsuperscript{2}

Horses were breed mainly in Sind and the North-West. It was always a luxury animal used chiefly by the warrior class. For the ordinary people, the main means of conveyance was the ox, of which certain varieties could draw carts at a considerable pace. The Kings of Vijayanagar delighted in watching races of light carts to which an ox and a horse were yoked\textsuperscript{3}.

The ownership of elephants was confined to kings and chiefs. Peasants living in the vicinity of elephant forests must have cursed the depredations caused by these beasts, who would frequently leave the jungle to raid the clearings. The camel is not often mentioned, but it was known and used as a beast of burden in the dryer parts of the country and was also found in the Deccan in that period. Some dynasties employed the camel in war time also, the mule and the ass were other common beasts of burden.

The half-wild pariah dog was as common as it is today and dogs were also used in hunting\textsuperscript{4}. In the hills a special bred of large dog, perhaps resembling the modern Tibetan mastiff, was famous beyond the boundries of India. Hawking and hunting with cheetahas were popular among the ruling classes in this period and this custom appears to have been learnt from the muslims.

\textsuperscript{1} Ag. ,256 10; KP, Page 48; Raj., Tranga VIII, Verse 840, P. 473
\textsuperscript{2} K.P. , Page 48.
\textsuperscript{3} Indian Feudalism, PP. 22-3, 99.
\textsuperscript{4} Raj. , Trang VI, Verse, 183, Page 245.
VILLAGE CRAFTS AND INDUSTRIES

The artisan castes of the sudras continued to exist in the rural areas of North India during the early medieval period (650-1206 A.D.). Village people were engaged in the professions of making different type of crafts. Our sources refer to some important village crafts, such as pot-making, woodwork, iron work, oil pressing, weaving, basket making, milk churning, salt making, paddy-pounding, etc. The earthen pots were commonly used as Yogesvara mentions earthen pots used in villages in a pair of his verses. Govardhanaarya describes the churning of milk and curd in earthen pots. Moreover, poor villagers may have used earthen vessels for boiling rice, milk, etc. and for storing molasses and grain. Thus a large number of earthen pots were in use in villages. Hiuen Tsang clearly states that utensils used in households were mostly earthen ware and a few of brass. All these pots for various purposes appear to be the work of village potters, whose chief instrument for moulding pots was a wheel. Cultivation being the pivot of rural or agrarian economy, almost all types of people had to move round it. This was the main incentive for co-operation and good will among the villagers. The mutual dependence of all classes and castes, as a result of the general principle of one work for one class also suggests that the profession of the villagers were of hereditary nature. A large

1. Subhāṣītaratrakośa, V. 1312.
2. Arya, ,VV. 104 and 344.
4. Yaj, ,3.146; Arya, ,V. 592.
number of agricultural crafts were made which included plough and harrow\(^1\), mortar and pestle\(^2\), bullock cart\(^3\) and oil-press\(^4\) — all were made of wood as now. All these must have been the work of the village carpenters, who may have also helped the villagers in all type of works related to wood.\(\text{(see Fig}\ I)\)

Village blacksmiths showed their shall skill in making agricultural implements of iron-spade, sickle, axe, hoe, plough-share etc.\(^5\). The black smiths used charcoal to melt iron. The Harṣacarita, referring to the blacksmiths of a forest village states that they burn piles of wood for getting charcoal\(^6\). A large number of Gāhavālala land grants refer to iron pits existing in the villages. This must have ensured constant supply of iron ores to the blacksmiths.

Both archaeological and literary evidences point to a developed state of iron industry in India. Weapons of war such as swords, spear-heads etc. were also manufactured on a large scale. Iron was used in the manufacturing of other weapons such as bow, arrows\(^7\), etc. Rivets crucibles, water-vessels and various other articles were also made of iron\(^8\). Vagbhata has given an elaborate method of making five and durable crucibles\(^9\).

Churning of milk and curd by women of the herdsmen class was another craft. Hiuen Tsdang refers to ghee (clarified butter) as

4. Arya, V. 592; Subhāṣitaratnakośa, V. 1365.
5. H.C., PP 212, 227; K.P, VV. 109, 117, 118.\(\text{(see Fig}\ II)\)
6. H.C., P. 228.
8. Eliot and Dowson, OP Cit. II P.44.
an item of common food, which indicates that it was produced on a large scale. The Aryasaptasatī refers to a churning rod put inside the milk or curd pot. The kṛṣiparāśara includes ghee in the list of the food articles of the rituals. It further adds that seed should be protected from the touch of ghee, oil, sour milk, lamp and salt which shows that farmers used ghee. As the herdsmen mainly depended on cattle and cattle produce ghee may have been a source of their income.

The making of cowdung-cakes for fuel seems to be highly popular in villages. The Harsacarita refers to the heaps of cowdung-cakes in the households of the inhabitants of the village called Pritikuta.

Various types of baskets, which are highly useful in agricultural economy, were made in villages. The Harsacarita refers to villagers using Karanda and pitaka (baskets) containing curd, molasses, candid sugar and flowers. For basket making bamboo and cane were largely available in the country side. Mats were also made in villages. The Harsacarita refers to closely-woven mats used for constructing small huts at the drinking inns in a forest village. These mats were naturally more lasting than those used as seats and beds. Straw, grass, date and palm leaves, etc, were the usual materials for making mats.

1. Watters, l. P. 178.
2. Āryas. , VV. 104 and 344.
4. Ibid. V. 163.
5. The Bengal Peasant life, PP. 67-68
6. H.C., P. 44.
7. Ibid. P. 212.
8. H.C., P. 228.
Brooms or besoms for sweeping are usually made of grass, data-leaves and the slender midribs of the palm\(^1\) or coconut leaves. As these materials were found in abundance in the region, villagers made brooms as well.

Villagers were familiar with rope making as well. Several types of rope was used in agriculture\(^2\). The agricultural labourers used different types of cords for different works, for examination. A type of rope was used for fastening the bullocks to the trashing posts\(^3\), a special type of rope was used to draw water from the well\(^4\). The materials used for making ropes was muṇja, kuṣa, kāsā, coconut-fruit fibres, and hair of cows\(^5\).

Villagers made all varieties of sugar from molasses to candy\(^6\). Bāṇa states that guḍa (molasses and khāṅḍa candid sugar) were presented by the villagers to Harṣa\(^7\). Hiuen Tsang observes that granulated sugar and sugar candy were the articles of common food\(^8\). All the varieties of sugar were made from sugar cane juice.

Several types of drink were also prepared. The Agni Purana speaks of the drinks prepared from the juice of grapes, mahua, date, palmyra and sugarcane\(^9\). The kṛṣiparāśaṇa refers to beverages enjoyed by the agriculturists on selective occasions\(^10\).

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1. The Bengal Peasant Life, P. 66.
3. Arya., V. 423.
5. H.C., P. 212.
6. Ibid. P. 228.
7. Ibid., P. 230.
8. Watters, I. P. 178.
9. Panakam draksamadhukam Khāṛjuraṃ tālamaikṣavam, Ag., 173.21
Hiuen Tsang also testifies to the drinking of beverages by the people in general including even the brāhmaṇas and the Buddhist monks. All this indicates that brewers and distillers did exist during the period under study in the rural areas. Although with the other village crafts of north India, the villagers of the forest area knew now to extract honey from bee-hives. Bānā refers to the loads of honey and peacock's tails carried by the natives of a sylvan village. These two special products of the forest area may have been valuable articles of trade.

North India was full of rivers, streams, ditches and tanks, which abounded in fish. Numerous Gahadavala land grants show that villages contained fishing waters within their bounds. The Monghyr grant of Devapala records the grant of village Mesika in the krīmilla viśāya of the Srinagra bhukti with the fish within its confines. The krṣiparāśāra states that water used for washing fish should not thrown or kept at the place where cows reside. This prohibited the cultivators to take fish. Hiuen Tsang also tells us that fish was occasionally taken by the people.

Oil-pressing was also another popular village craft.

Reference to the taking of parched grain with mustard

1. Watters I., P. 178.
2. H.C., P. 229.
4. K.P., V. 90.
5. Watters, I., P. 178.
oil, as recorded by Hiuen Tsang, has also been witnessed\(^1\). The krsiparasara states that on the occasion of cow festival oil mixed with turmeric was rubbed on the bodies and horns of cows\(^2\). Moreover, oil may have been used for cooking vegetables, and burning lamps at night. All these evidences lead us to infer that oil pressing was a regular business in the villages. (See Fig. VI)

Weaving was another important village craft because the early medieval period was the period of civilization and the villagers put some sort of clothes. Hiuen Tsang states that men use a piece of cloth round their waists and women wear a loose grament covering the whole body from the shoulders downwards\(^3\). The Aryasasptasati speaks of a yellow piece of cloth worn by the daughter of a village chief. The Gaudāvaho alludes perhaps to dyed clothes worn by village women on festive days\(^4\). The krsiparsāra states that cowherds the chief bull with cloth on the day of the cow festival\(^5\), and the cultivators wore new clothes on the occasion of the pusyayatra ritual\(^6\). All these references to clothes suggests that weaving was carried on in villages. Cotton was produced on mass scale in the countryside supplied enough material to the village weavers. (See Fig. VII)

Weaving was not possible without spinning, which seems to have been largely practised in villages. Some references to the carding of cotton\(^7\) also proves to spinning pursued by the villagers.

1. Watters, No. I, P. 158.
4. Gaudavaho, V. 598.
6. Ibid., V. 226.
7. kāmarūpa sāsanavali, PP. 146ff., 11.49 and 54-55, 62.
We do not know much about leather industry. Hieun Tsang informs that people rarely use shoes, and they go barefooted. Even now the villagers in general do not use shoes very much. This clearly indicates that shoe making was not an important occupation of the leather workers.

CONDITION OF ARTISANS

Most of the artisans belonged to the fourth varna, but some, as the tanners were antyajas who were considered to be defiling. From the very earliest of times four types of artisans and craftsmen existed in the Indian economic system: those of single villages who received a fixed wage in kind; those settled in separate villages of their own; those settled by kings, chiefs and religious institutions in their seats of authority; and the independent artisans residing in definite areas of a city. A specimen document in Lakhapaddhati reveals that in small single villages the five artisans - the carpenter, the ironsmith, the potter, the barber, and the washerman were the normal feature.

The method of town planning recommended in the Mānasāra, the Mayamata and the Aparājitaprccchā, etc., indicates that artisans and craftsmen of various categories were settled in the seats of rulers and chiefs. There were the royal artisans who appear to have been distinguished from the rest. The artisans generally worked in cottage industries, but the production of some goods like the metallurgical ones which involved minute sub-division of labour must have required a number of them to work under a common management of the guild or the ruler. The Vyayahārakāṇḍa

3. Lakhapaddhati, P. 19.
of Lakṣmīddhara refers to artisans living in the midst of merchants which may suggest the existence of economical dependent artisans in cities.  

Various industrial guilds were organized into srenis which had fossilized into occupational castes. The term has been used to denote both the low castes of artisans and craftsmen and the purely occupational associations of these people and of merchants. Each guild had its own head and elders. The Trisastī-sālaka-purusha-charita of Hemchandra conceives of the srethins who were the chiefs or elders as the protectors or governors of the fortresses of the eighteen guilds and sub-guilds. Affluent mercantile and industrial guilds may have had armed guards of their own, but there is no positive evidence that the lower craft guilds possessed such guards.

The practice of apprenticeship in arts and crafts had been continuing from earlier times. The pure castes of the artisans lived in the village or town in different areas along with the higher castes, but those who were regarded as antyajas or Mlecchas had to live outside the central habitation area.

**TRADE AND COMMERCE**

Trade is the natural corollary of industry and it is the main channel of the distribution of industrial products.

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1. Vyavahārakānda of the K.K., p. 23.
3. Ibid. P. 42.
6. RC Majumdar, Corporate Life in Ancient India, PP 30-31.
Transport and communication have always played a very vital role in the development of trade and industry of a country. They can be best described as their blood running arteries. They are also just like the keys to the unlocking of the country's wealth. They are the main channel of the distribution of industrial products. From the Mauryan period, if not before, trade both internal and external was usually vigorous in most parts of India. Trade had a very good effect on the life and culture of Indian people as a whole, far from that time onwards, the northern part of India was more or less closely connected with southern India. Each of these regions had to depend to some extent on the mutual contribution of the products of the other.

Inter-State trade continued in the rural areas of northern India during the early medieval period. This is obvious from the fact that many important items of daily use like spices, luxury goods, metals, and salt which were used in all parts of India came from different regions. Medhātithī refers to the vaishyas carrying on inter-state trade. The Kurvalavamkathā refers to merchants of the different regions of north and sought meeting together. An agreement arrived at by horse dealers from different parts is recorded in the Pehoa (Karnal) inscription dated A.D. 882-883. The Agni Purāṇa permits the brāhmaṇas to take

2. E.I., I, 186.
to trade along with cultivation, cattle-rearing and money lending. Agriculture has ever been the principal occupation of Indian people. From very early times it had been regarded as an important branch of varta. Agriculturists contributed to a great extent by making sugar of all varieties i.e. from guda (molasses and khanda (candid sugar). According to Hiuen Tsang granulated sugar and sugar candy were the articles of common food indicates of its mass scale production in the villages.

Another item which was produced on a large scale was ghee (clarified butter). Again Hiuen Tsang refers to ghee as an item of common food. As the herdsman mainly depended on cattle and cattle produce, ghee may have been a source of their income.

Cotton trade was in full swing during the period under review as Marco polo states that the people of Bengal "grow cotton, in which they drive a great trade." Reference to cotton cloth in the kālikā Purāṇa and to weavers in a land grant of Assam may indicate that Assam also produced cotton on a large scale.

Villagers of the forest area were indulged in honey and peacock's tails trade. Bana refers to loads of honey and peacock's tails carried by the residents of a Sylvan village. Wood cutting was another important trade practised regularly by the forest people of north India. We get some references

relating to fish trade by the rural people\(^1\). The kṛṣiparāśāra refers to the eating of fish by the farmers on the occasion of ritualistic feasts\(^2\). Hiuen Tsang also tells us that fish was taken by the people\(^3\). Obviously fishing was an important occupation, for the rich and poor, the villagers and the townsmen, all were fond of taking fish\(^4\).

Salt was manufactured and exported to different areas as various references testifies to salt trade during our period. The Irdā plate of the Kamboja king Nayapaladeva states that the village of Brhatcattivanna within the Daṅda bhukti mandala was granted with its salt pit (lavanakara\(^5\)). The Rampal copper plate of Śricandra refers to the transfer of the land of the village of Nehakasthi in the Nanya mandala of the Pundravardhana bhukti with its salt (salavana)\(^6\).

Oil trade was also one of the main contributors in the rural economy. Oil pressing was an important craft of the village people. Reference to the taking of parched grain with mustard oil, as recorded by Hiuen Tsang, has also been noticed\(^7\). Oil may have been used for cooking vegetables, and burning lamps at night. All these lead to the inference that oil trade was a regular business in the villages.

We get references to the trade of horses in northern India.

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1. Arya., VV. 95, 96 332 and 406.
2. K.P., V. 222.
7. Watters, P. 198.
A place named Aratta which is located in the Punjab. The supply of horses for quite a long time. Banabhatta referred to horses from Aratta. The Sāraṅgadharapaddhati, however refers to horses of this region as of medium quality.

The villagers in general appear to be poor. They had to pay so many taxes and customary dues that little remained with them. A close study of the early medieval records indicates that villagers were generally poor and highly oppressed. Payment of loans was their additional burden. Creditors had a flourishing trade in early medieval times and they could charge even very high interest from their debtors.

The merchants who participated in the inter-state trade generally travelled in groups. The caravans were regarded as a safe protection against the robbers infesting the highways. From the Bhavisavattakahā we learn that the big merchants before proceeding on their caravan journey used to proclaim their intention to the other merchants in the city and invite them to join them by offering a number of facilities. During the summers the caravan stopped at near a pond and tree and rested. We read of the presence of matrons also in the caravan. In rains travellers advanced very slowly and were covered with mud up to the knees. To pass the season thatched huts were made. In course of time provisions of food were exhausted and everyone got very worried.

5. Bhavisayattakahā, PP. 16ff.
The means of transport included the carts drawn by bullocks, mules, buffaloes and other animals and these same animals when ridden upon may be taken as denoting, conveyances. The rules for hiring a conveyance or a labourer to transport merchandise which appear in earlier legal texts would seem to have held ground in that period also. In the dictionaries of the period we have many terms for a carriage street, a small street, a high street and a high road. The important roads seem to have been well demarcated with milestones. But their condition would appear to have been far from satisfactory. In the Sandesarasaka it is said that in the rainy season the travellers with shoes in hand waded through the waters, waves roared in rivers rendered uncrossable and travellers had to halt midway, using boats if business still forced them to travel. The Kuttanimata gives a very dismal picture of the difficulties which a traveller might face. The text discourages travelling and extols the joy of remaining in one's own house and adds that a traveller's food tempers upon the caprice of others; the earth is his bed, the temple his home and a broken brick his pillow.

We have references to public supplies of water on the roadside. The Tillakmanjari describes a water reservoir for the use of travellers on the outskirts of a city. In the Samayamatrka we read of a woman who kept an inn. There were small shops supplying the travellers with provisions for their

1. Narada, VI. 7-9, Yaj., II, 197.
2. Jayasankara Joshi, op. cit., V. 289; Vaijayantī, P. 160. II. 31-33.
3. Sandasarasaka, VV. 141-42.
5. Tilakmanjari, P. 117.
journeys. From the Prabandhachintamani\(^1\) we know that kings maintained charitable houses where travellers were given good, hot water and oil to refresh themselves. Similar references are also found in Tilakamaniari.\(^2\)

In the plains of northern India rivers were often a better and safer means of travelling and of transporting merchandise than roads. Zuktivyaktiprakarana\(^3\) shows that river traffic was very common in eastern UP and boatmen had gained an intimate knowledge of the course of the rivers and their depth at different places. In the Rajataringini also many references to river journeys are found\(^4\). Though bridges seem to have been constructed in the hilly areas of Assam and Kashmir they were not much in use in the plains.

The volume of trade in that period seems to have gone down as a result of the insecurity of the highways. The absence of a strong central power led to the growth of feudal anarchy and the increase in the power of anti-social elements. This was the result of the political disintegration after the disappearance of the Guptas from the scene. It is significant that Fa-hein was never troubled by robbers while Hiuen Tsang was twice molested while travelling\(^6\). The merchants feared not only gangs of robbers but also petty feudal chiefs. Thus, the political vicissitudes of The time and the frequent feudal raids and wars must have also hampered trade by adding to the insecurity and disturbances

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1. Prabandhachintamani, P. 106, ll. 4-7.
2. Tilakmanjari, P. 66.
3. Uktivyaktiprakarana, P. 46, 1.11; P. 39, 1.7.
4. Raj., V. 84; VII. 347, 714, 1628.
created by other factors. Medhātithī speaks of the merchants forced to give up journey on account of political upheavals.¹

In the 7th-10th centuries, there had been a decline of trade and commerce. Even in the first half of the 11th the invasion of Sultan Mohmud who plundered temples and cities must have created an adverse effect on the commerce and general prosperity of the affected regions. But trade and commerce revived in the later half of the 11th and in the 12th century. This was because the later Turkish invasions were not characterized by such plunder and devastation. When the Punjab became a regular province of the Ghaznavid empire it began to be deeply affected by the activities of the Muslim traders and also to radiate influences which in the long run contributed to the expansion of commercial activities in northern India. Some new cities emerged as centres of trade² and the older ones grew in prosperity³. A number of inscriptions reveal the existence of town or village markets⁴ as busy centers of local or neighbourhood and inter-regional trade.

**LAND REVENUE AND OTHER TAXES**

The fiscal and revenue policy of a Government has always played a vital role in the life of the people. It is on this policy that depends the prosperity and advancement of a country. That "revenue" is of primary importance for the State can be well realised from the fact that "revenue" and "State" both have been equated with each other by ancient authors. "All undertakings

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1. Medhātithī, On Manu, VIII, 156.
2. R S Sharma, Indian Feudalism, P. 71.
3. Ibid., Chapter 5. Also see Lewis Mumford, The City in History, P. 255.
depend upon finance. Hence foremost attention should be paid to the treasury”, says Kautilya\(^1\).

As protection of the State from internal and external troubles was the highest duty of a king and which depended on a well financed treasury. He has been permitted by the law writers to attain all possible resources of revenue in times of emergency, such as war and famine and also to levy heavy taxes not permissible in ordinary times. Medhatithi informs that a king instead of taking 1/6th of the land produce as tax, could take 1/4th when the treasury is depleted for ensuring protection to the people\(^2\). Kautilya has also allowed a king in great financial distress to collect revenue by demanding 1/4th or even 1/3 of the grains, according to the capacity of the agriculturists\(^3\).

The taxes were, however, to be levied in such a way as not be oppressive and heavy in normal days. Kautilya says that a king should exact taxes from his people as a gardener does with regard to his garden\(^4\). This ideal has always been followed by the later writers. Of course, there was no fixed rate of levying the taxes, the guiding principle being greater the profit, the heavier the taxes. Sometimes even more than the profit itself\(^5\).

Brāhmaṇas were exempted from all types of taxes\(^6\). Although the artists and sudras were spared from paying any tax. Yet they

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1. Artha. of Kautilya. II. 8.
2. Manu, X. 118.
3. Artha. of Kautilya, V. 2.
5. Manju, VII. 128.
were required to supply manual labour. Lakmidhāra, quoting from Matsyapurāṇa, has disapproved of heavy taxation. While Chandesvara also states that a king is not bound to levy as much as required for his government and at the same time not proving oppressive to the people. Taxes from the cultivators were to be realised, with due margin for their profits. Thus taxation was the compulsory levy of the State. The king afforded security to his subjects and in turn taxed them to establish a stable Government. Everyone was taxed irrespective of social status and profession. At the same time, the theory of taxation was based on the principles of social benefit. It provided certain classes of persons like the vedic scholars, mendicante and poor. For the summing up the reason and principles of the system of ancient India taxation, it would, however, be profitable to scan Adam Smith's principles, according to which, the subject of every state ought to contribute towards the support to the government, as nearly as possible, in proportion to their respective abilities, i.e., in proportion to the revenue which they respectively enjoy under the protection of the State and that every tax out to be paid in time, or in the manner, in which it is most convenient for

the contributor to pay it\(^1\). It should be obvious that these all modern principles of taxation were more or less served a guiding lines in ancient times. The inscriptions of northern India mention a number of revenue terms. The common among various type of taxes are bhāgabhoga kārā hirāṇya and daśāparādha.

Bhāgabhogakara :- The compound bhāgabhogakara constantly occurred in the inscriptions of the early medieval period\(^2\) has been interpreted variously by the scholars to denote a single tax or as bhogakara and bhogakara\(^3\). Or as three different taxes - bhāgabhoga and kara\(^4\) it is not possible to impose a common meaning to this compound word. Of the two terms bhaga may be taken as the king's share of the crops and bhoga as the objects of enjoyment such as the periodical supplies of fruits, firewood, flowers, etc. by the rural people to the king.

Hirāṇya :- The word hirāṇya is generally used along with bhāgabhogakara or rājabhoga\(^5\) in the land grants of our period. According to S.K. Mitra, the term literally means gold but in its technical sense it means kings share of certain crops paid in cash as distinguished from tax in kind (bhoga) levied on ordinary crops\(^6\). It has also been interpreted variously by scholars as

2. E.I., P. 75. This term is also found in the Pala, Sena and Gahadavala inscriptions.
5. E.I., XIV, PP. 293ff.
tax in money\(^1\). Payment in money\(^2\), tax in cash\(^3\) lumps in cash as distinguished from the kings grainshare assessed upon individual cultivators. On the basis of the fact that Alberuni also refers to a sort of property taxed imposed on the people. The Mānasollāsa also refers to king's share of 1/50th part of the hoard of gold capital and cattle\(^5\) wealth. The Agnipurāṇa also stated that the king should take a 5th or 6th part of cattle and hiranya\(^6\).

**Daśaparādha** - The term dasaparadha or dasopocara is also very common in the grants of the early medieval period which simply means ten offences\(^7\). Jolly explained the ten crimes after Narada's who give them as disobedience to the king's order, murder of a woman, intermixture of castes, adultery, theft, pregnancy from other man not the husband, abuse and defamation, obscenity and assault and abortion. The same list is also mentioned by the author of the Sukrañṭi\(^8\) in the form given by Nāradā.

The terms like udraṅga and uparikara occurred together in the grants of the Gupta and post Gupta period\(^9\) have been noticed separately in the land grants of our period\(^10\). D.C. Sircar describes the term udraṅga to mean a tax on permanent tenants, a

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2. Sircar, op. cit, P. 372, f.n. 7.
fixed tax paid in grains in some areas of the north India. On the authority of Rājatarāṅgiṇī, P.Niyogi resembles Udraṅga with dranga (Watch station or military outpost) and suggests that the term may mean an agricultural tax on lands.

Some land grants (Pala and Paramara of early medieval period) uparikara as an item of revenue. Since upari in Sanskrit means above, it may be taken as an extra or additional tax. The oppressive nature of this tax is testified by the Nowgong Plate of Balavaran III of Pragjyotisa in which an officer called auparika is shown as one of the oppressors of the rural people. The meaning of Pindaka mentioned only in Khalimpur Plate of Dharpal is not clear. Its resemblance with Pindakara of the Arthasastra which Bhaṭṭāśhamin explains as a tax levied upon the whole village may indicate that it was a collective tax.

The Pratihāra land grants states a tax called Khalabhiksha which has been taken to mean as a tax at the threshing floor. According to Pushpa Niyogi, it may have been an unspecified extra demand to meet an emergency. According to Lallanji Gopal, most

1. E.I., III, No. 36; E.I., IX, PP. 1-5; E.I., IV, No. 29; E.I., I, P. 75.
2. Epigraphical Glossary, P. 349.
4. E.I., XVII, NO. 17.35; I.A., XV, PP. 304ff, 42; I.A., XXI, P.; E.I., XXXII, No. 33.43.
probably the threshing floor was a state monopoly and a portion might have been taken out of the corn brought over there.1

Besides these taxes the inscriptions of early medieval period mention a long list of taxes on land and allied source. The Gāhāḍavāla land grants present a long list of regular and irregular levies, known as gokara, jalakara, kūtara, pravanikara, turuskadandan, kumaragadianak, valadi, lavanakara, parnakāra, daśabandha, viśatiāṭhūprastha, varavajha, visayadāna, yamalikāmbali, dagapasadīdīrghagovica, ākara, nidhinekṣpa etc. 2

The land grants of the Pālas and other contemporary dynasties, besides the usual land revenue, refer to tax called cayuroddarana which has been aptly explained by U.N. Ghoshal as a tax imposed upon villagers for protection against thieves.3

The detailed specimens of Candella land grants mention alongwith the usual bhāgabhogakara and hiranya, paśu, śulka and other demands. 4

The land grants of the Kalacuris contain terms such as Kāmata, carī, viseṇimādaya, pravanī, pathakilādaya, duṣṭasādhyādaya, visayikādaya, ghattādaya and mārganaka. 5

A thirteenth century paramara grant from Mandhata, besides mentioning the usual dues refer to certain taxes which were probably paid in kind. These are śākamūṣī (handful of vegetables), tailpalikā (small measures of oil) and kumbhapūraka 6

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1 L.Gopai, Economic Life of Northern India, P. 66.
5 E.I., XXII, 181-82; XX-130-31; XVI, 12.13.
6 C.I.I, IV. 324-31, 645-52; E.I., XXI, No. 15.
7 E.I., XXXII, 146-56.
(vesselful of most probably of grain). The terms ākāśoptpati, Pātala and kalyāṇadhana are found in a few land grants of the feudatories of the Cedi and Candella kings. The terms Kalyāṇadhana may be taken for the dues collected on auspicious occasions.

We can classify some of the taxes on the following heads:

Tax on Plough: The earliest reference to plough tax (halikākara) is found in the grant of the maharajas of Uccakalpa (5th, 6th centuries A.D.). The Gānadavāla inscriptions mention the fiscal term Kūṭaka. The term kutaka means a plough or a ploughshare. The Patna Museum inscription of Jayasena of about the 11th-12th century A.D. states that the village of Kotthala, in Saptaghatta, was offered as a gift to the vajrasāna for the residence of the Ceylonese monk Mangalasvami with its land, water and plough-tax (halakara) by king Jayasena, the lord of Pithi. In the time of king Jayasena this plough-tax seems to be a levy on each plough that the cultivators kept or it may have been a tax in kind or cash, most probably in kind, on each hala measure of land.

The candella land grants mention the fiscal term paśu which has been taken to mean a tax on cattle. The Rohan grant of the

2. E.I., XIX, No. 31.
6. Ibid, P. 44.
Gahadavāla king Govindacandra dated 1108 A.D. refers to a tax valadi which has also been taken by B.N.S. Yadava to mean a tax on plough bullocks\(^2\). In the Ramganj Plate of Isvaraghosa gokula appears as a source of revenue\(^3\). This tax was most probable to be levied on the breeding of animals.

Pasture tax:—Pasture land continued to be a source of revenue in early medieval India. The Jubbulpore Kotwali Plates of the Kalacuri king Jayasimhadeva dated kalacuri year 918 (1167 A.D.) mentions a revenue term cari which has been explained by the editor of the inscription as tax for allowing cattle to graze in pasture land\(^4\). The Lekhapaddhati informs us that in Gujarat, villagers had to pay an annual tax on grazing lands (gocara)\(^5\). According to Lekhapaddhati, the rate of tax for grazing fields for cows and buffalos was 2 drammas, for oxen 1 dramma and for rams, sheep, etc. 1/2 dramma respectively. But for grazing bullocks engaged in ploughing fields no tax was charged\(^6\). Jalakra was the another tax mentioned in the inscriptions of the Gahadavalas to R.Niyogi\(^8\) states on the authority of samatsyakara in Gagha inscription that Jalakra was a tax on the produce of water i.e. fish etc. does not seem satisfactory. The commentary of Bhattasvamin states that the king is the owner of both land and water which indirectly points to the king's right of taxation on

1. I.A., XVIII. 17.
2. B.N.S. Yadava, Society and Culture in Northern India in the Twelfth Century, P. 290.
3. I.B., III, P. 154, 1.23.
7. E.I., XII, P. 219; VII, P. 158; IV, P. 120 and X, P.99.
these two items. The Arthuna inscription of Paramara Camundaraja\textsuperscript{1} and the sevadi inscription of the cahamana king Asvaraja\textsuperscript{2} refer to a tax one hāraka (large basket) of barley on a well with a water wheel.

The Dharmaśastrakaras like Manu and Viśṇu recommended that the state had the right to levy taxes on trees, perfumes, medicinal herbs, flowers, roots, fruits, leaves, vegetables and grass which has been quoted with approval by Lakṣmidhara. The Mānasollāsa\textsuperscript{3} also informs to kings' right of taxation on the above mentioned items. The Caulukya inscriptions mention right of the donee to levy taxes on the raw of trees\textsuperscript{4}. A grant of the Sena dynasty\textsuperscript{5} refers to the income derived from betal leaf plantation (barajas).

PEASANTARY - General Condition:

While India was generally prosperous in our period, prosperity was not shared by all the sectors in society. According to Rajataringini whereas the courtiers ate fried meat and drank wine cooled and perfumed with flowers\textsuperscript{6}, the common people had been content\textsuperscript{7} with rice and utpalasaka (a wild vegetable of bitter taste). Similarly, whereas the rich enjoyed luxurious theatre halls\textsuperscript{8}, filled with leather cushioned coaches, the common man witnessed theatrical performances under an open sky.

\textsuperscript{1}E.I., XIV, No. 21.
\textsuperscript{2}Ibid, XI, PP. 28-29.
\textsuperscript{3}Rajdharmakanda, PP. 88-90.
\textsuperscript{4}Mānasollāsa, Vol. I, P. 44.
\textsuperscript{5}A.K.Majumdar, Caulukya of Gujarat, PP. 247-48.
\textsuperscript{6}I.B., III, NO. XV.
\textsuperscript{7}Raj., VIII, 186ff.
\textsuperscript{8}Ibid, V. 49.
and in case of a downpour had to disperse. From the Davabhaga it appears that sometimes housewives found the earnings of their husbands insufficient and had to take to spinning, waving or some other mechanical art.

The study of this poor (peasantry) community in the broad sense is of major interest to historians, sociologist, anthropologists, economists and other scholars today. The word peasant has been described in the Chambers Twentieth Century Dictionary as 'a countryman: a rustic; one whose occupation is rural labour; and peasantry' as the body of peasants or tillers of the soil; rustics; labourers.

"Peasants are small holders who live by cultivating land which they control themselves" to Daniel Thorner in the narrow sense. But in the broad sense, which is commonly adopted, peasants are all those who live by working on the land including sharecroppers and agricultural workers.

Peasants existed as an important section of society throughout the ancient period of Indian history. The word "kinasa" occurs even in the Rigveda (IV. 57.8) which, according to the authors of vedic index, means the ploughman or cultivator of the soil. The reference to vis (predominantly peasantry) as a subdivision of the Jana in the Rigveda (II. 26.3) as pointed out by the writers of the Vedic index. As the Rigvedic society in the

1. Davabhaga, P. 85.
early phase was mainly tribal in which land and cattle were held in common\(^1\), the position of the peasantry class was not considered low in the society. But the position of the vaisya or the class of peasantry became lower in the society than that of a Brāhmaṇa or kṣatriya in the later Vedic period.

In the post Vedic period the introduction of money and greater production brought in the beginning of a capitalistic economy\(^2\) in which the gap widened to great extent between the wealthy traders and land holders on the one hand and small artisans and poor wage earners on the other\(^3\). This may have led to a decline in the social status of the peasantry class. Further more, the close contact of the peasants (i.e. the vaisyas who were engaged in agriculture) with the sudras to carry out their occupations of agriculture, cattle breeding etc. also led to the diminution of the social status of the peasantry. According to Dr. R. S. Sharma\(^4\) the sudras and vaisyas were treated equally in the matters of food purity and marriage by the Sutrakaras. But the attitude of the sudras does not seem particularly hostile to the vaisya class. A vaisya engaged in sacrifice is treated sometimes on equal terms with kṣatriya or even the Brāhmaṇa\(^5\). In the penal code of the sutrakaras the vaisyas were given better treatment than the śūdra\(^6\). The rule of Apastamba\(^7\) that if the

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5. Haradatta on Gautama Dharmasutra, XXII, 14, 15, 16.
servant in the village gives up his work he should be beaten with a stick shows that in the sutras the poorer class of the vaisyas engaged in tilling and labour were treated badly by the landowners and were reduced to the status of the südras, but the richer section still enjoyed prestige and better treatment than sudras. The evidence of the Arthaśāstra points to the fact that the peasantry not only consisted the Vaiśya varna but it also included considerable number of the sudras in the Mauryan period\(^1\). The Milindapanho\(^2\) also refers to cultivation, trade and the care of cattles as the duties of the ordinary folk such as vaiśyas and sudras. Such active participation of the sudras in agriculture must have led to the depression in the social status of the peasantry which in the earlier days consisted only members of the vaisya class. Though the Arthaśāstra prescribes, like the Dharmasastras, for the sudras the duty of serving, the twice born, yet side by side it also includes agriculture, cattle breeding, trade and the profession of artisans as duties of the sudras\(^3\). The Arthasastra reveals some improvements in the general condition and property rights of the sudras and slaves which may have been due to the centralized administration and the consequent economic and social developments of the period\(^4\). Probably the sudras were employed on a far larger scale as slave and labourers in agricultural production by the State which might have led to some improvement in their economic status\(^5\).

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1. Artha. of Kautilya, II, I.
3. Artha. ,1.3.
5. Artha. ,Part III, P. 143.
We find different terms for the common peasantry in ancient Indian texts. As mentioned earlier the term *kinasa* occurs in Rigveda for a ploughman or a cultivator. The *Aṣṭādhyāyī* of *Pāṇini* uses a new term *krisvala* for the common peasantry. In the *Arthaśāstra* we find the term *karsaka* for the toiling peasantry. The *Dharmasāstra* texts use the words *ardhasīrī*, *ardhika*, *kuṭumbī*, *bhūmikārṣaṇa*, *sīrvāhaka* and *kṣetrika* for the sharecroppers. The terms *halika* or *halavahaka* have been used for the ploughdrivers who represented a class of field labourers. The inscriptions of the early medieval period mention terms of the like *kṣetraṅkara*, *kuṭumbin* for the class of peasantry.

Usually the wages of agricultural labourers were fixed at the outset but in case their wages could not be fixed, the peasants were eligible to share (generally 1/10th) in the profits or produce etc. According to the wage rules of Brhaspati (XVI 1-2) an agricultural labourer, if provided with food and clothing was to receive one-fourth of the produce and if not provided with food and clothing, he was entitled to one-third of the produce.

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7. *Ibid*.
Legal and economic oppression of peasants in the feudal system greatly hampered their economic development and elluded them from a wider participation in the national culture. Since land became the main source of income, the peasants were loaded with many oppressive taxes. Candella inscriptions mention ucita and anucita demands. Such expressions indicate that the grantees could make largest possible claim to revenue which obviously meant considerable burden to the taxpaying peasantry. A second factor that undermined the position of the common peasantry was their horrifying poverty which led to their sheer degradation. The Avadanakalpalata presents a peasant as the picture of poverty and misery. He is working hard in his field with his plough and spade, hungry and thirsty. His whole body is covered with dust and his hands and feet are cracked. The Subhāṣitaratnakośa has numerous verses regarding the poverty of the villages. In the Prabhandhacintamani a householder who owns four bulls and two cows and has a sweet tongued wife is said to be really fortunate.

The life of the cultivator or villager was miserable. The family of a peasant has many members, but a single ox, the only possession of the family, is too exhausted to get up, making the future all the more gloomy. An entire family has just one room and the housewife has to spend her labour time in that very room.

Another poor peasant has to bear the sight of his children looking like corpses with bodies emaciated with hunger. The shy children of the poor are said often to cast greedy glances at richer people eating their meals. A poor mother wishes the night might never pass and thus stop the worries about food which she will face tomorrow, indicates that the living standard in the villages was very low.

We will now conclude our study by recapitulating the main points discussed in the previous pages.

The charters of the period reveal that feudatories enjoyed varying rights over land. The actual rights enjoyed by the samantas and the landed aristocracy depended upon the power and prestige enjoyed by them. Sometimes, under the rule of the weak kings the increased power of the samantas led to their greater claim over land. The religious endowments, generally given by rulers to entrance the spiritual merit of their family, in its turn created a sizeable class of landed aristocracy.

The religious donees gained complete control over the land, water mineral, timber and all sorts of things in the donated areas which, in its turn reduced the land rights of the ruler.

Agriculture was the principal occupation of the people of northern India in the early medieval period. The sources of this period throw light on the method and process of cultivation in northern India. Plough was the chief implement of cultivation. The forest dwellers and the aboriginals however, used the spade for breaking the soil. Besides plough, the sources of this period

1. Subhāṣitaratnakosa, op.cit., V. 1320.
refer to many other agricultural implements like axe, cleaver, sickle, stick, etc. Contemporary sources reveal a fair knowledge of the use of manure by the cultivators of this period. As in the modern times, the cultivators of this period followed the system of rotation of crops. Though the cultivators in the early medieval period generally depended on rain, artificial systems of irrigation seem to have been in fairly extensive use. The usual means of irrigation were lakes, rivers, tanks and wells.

Much attention was given to the preparation of fields and the sowing of seeds. Sowing had grown to be a technical and specialised procedure demanding careful attention.

Cattle wealth boosted the economy of the cultivators to a great extent.

The artisan castes of the sudras continued to form the nucleus in the village crafts which consisted of :- Pot making, salt making, basket making, etc. Some sort of internal trade was carried out in the rural areas.

The condition of the cultivators in the areas under the state control was not very much different from the former ones. The peasants were harassed by the officers like catas and bhatas and also by other petty royal officers.

The villagers had to pay a large number of taxes. Bhāgabhogakara, hiraṇya and daśāparādha seem to be the taxes of regular nature. A long list of agricultural taxes was also existed namely : (I) tax on plough (II) tax on cattle (III) tax on water (IV) tax on pasture. Due to the influence of the sāmanta system, the rate of revenue showed a great variation. The village
headman primarily collected the land revenues and passed it to the head of the viṣṇya. The latter gave it to the sarvādhakṣa who delivered it to the king. The system of collection of land revenue was marked by regional variation.