PART—III
ECONOMIC ASPECTS.
CHAPTER I

Agriculture

1. Introduction

Assam is one of the exceedingly rich country with the gifts of nature. The fertility of the soil and the periodical rain called Monsoon help luxuriant growth of the vegetation in the extensive plains of the Brahmaputra valley. The people are mainly agriculturists. Both in the plains and in the hills rice is the staple food in Assam. All people, irrespective of castes and creeds, are engaged in agriculture, including Brāhmanas. Those who were engaged in other industries and crafts also cultivated paddy. The areas of all lands granted by the Kamarupa kings, are expressed in terms of the quantity of paddy they produced. ¹ According to Yuan Chwang "the land lies low but is rich and regularly cultivated"."² Cultivation was extensively made on the plains of the Brahmaputra valley, specially on both banks of the river Brahmaputra. The hill tribes have been carrying on a sort of cultivation called 'Jhum' from the very early times. During the Medieval period, under the Ahom and the Koch rules, cultivation was made vigorously in the country. But towards the last part of the Ahom rule, the condition of the Assamese cultivators became very miserable. ³ The Moamaria insurrections and the Burmese invasions were responsible to a great extent for the fall in the cultivation of paddy.

2. Irrigation system

For the cultivation of paddy the people were mainly dependant upon nature. They receive ample water during Monsoons. Therefore, artificial irrigation system was not much known in Assam as in other parts of India. Owing to the absence of regular irrigation system the country suffered now
and then either from drought or from flood; this very often resulted in famine in the country. On the other hand, the Assamese cultivators were not required to undergo hard labour in the cultivation work, because of the excessive fertility of the soil and the water received from the heavy rainfalls.  

Although there were no big projects of irrigation yet it cannot be said that the people were quite ignorant of irrigating their fields or draining out water from them. Ralph Fitch says that the people of Kochbehar could, by damming the streams, inundate the country when necessary, making it impossible for men and horses to traverse it. Robinson also admits the existence of irrigation to a small extent. It is known from various sources that the people were accustomed to the construction of embankments, called 'Mathauri', along the banks of the rivers to check the rushing water of the rivers in spate into the field. In the biographies of Sankardeva it is found that the people living by the side of the stream called Tembuani once constructed a dam across it for the protection of the paddy. The proverbial sayings of the Assamese people, known as 'eskar Bachan', reveals the existence of irrigation system in Assam. Maniram Dewan states that the Ahom kings occasionally constructed embankments for the protection of the crops from inundations. 

B.C. Allen, writing on the activities of the Ahom kings, says: "On the other hand, embankments, which were thrown up along the side of some of the rivers near the capital, protected land which become uncultivable since they have fallen into disrepair. Embankments of this nature were constructed along the left bank of the Brahmaputra, from Silghat to Kajalimukh, along the south bank of the Rupahi, and along the west bank of the Jamuna, and must have proved of the greatest value to the villagers."
According to Robinson, "the Kacharis along the northern frontier in Chatgari, and Chutia and about the Butan Dowars, exhibit an exception to the general neglect of irrigation. They are in the habit of extensively irrigating their rice fields from the small streams which intersect these districts." Further, according to Robinson, there was "no general system of embankments in lower Assam, though partial embankments to guard against the inundations of particular streams at particular places are not uncommon."

Inundations are very beneficial to cultivation work no doubt; it makes the land fertile by its alluvial deposits. But as there was no perfect drainage system in Assam, many a time it did immense harm to agriculture. Robinson is right when he remarks: "The agriculture of Assam seems to suffer most from the imperfection of drainage. Those waters which traverse the valley, and are the chief source of its fertility, often overspread the country in a manner extremely destructive."

5. Division of Lands and Land Settlements:

In the early records we find division of lands, such as Vastu-bhumi, Ksetra, Khila, and Goprachāra-bhumi. We will show the existence of such divisions of land in the Medieval period also. About the land occupied by people in the Medieval period, Martin says: "Assam proper is higher and of a better soil than Kamrup and contains few or no hills, nor woods. It is reckoned that formerly ⅔ of the whole were in full cultivation and that even now not above \( \frac{5}{16} \) are waste or unoccupied. This, I presume, is only meant to apply to the islands and the parts that are on the south side of the Brahmaputra. It is said that of all the lands in Assam proper which are occupied, 2\( \frac{1}{2} \) annas to belong to the temples or men esteemed holly
(Devottara and Brahottara), 4½ annas are let out for a rent and 9 annas are distributed among paykes or reserved for the king and his officers. Under the Ahom Government all the lands were divided into divisions, such as ‘Rupit’ (fit for cultivation of ‘Sáli’ and ‘Láhi’ paddy), ‘Patit’ (fallow land), ‘Béotali’ (fit for the cultivation of ‘Báo’ paddy), ‘Basti’ (land fit for housing purpose), ‘Faringati’ or ‘Tángani’ (dry land), ‘Jaláh’ (low land filled with water) and ‘Píñi’ (marshy land).

As regards the system of distribution of lands under the Ahoms, we have discussed in detail in a previous chapter. Land settlement policy of the district of Kamarupa was different from that of Assam proper. The Ahoms kept in tact the system introduced by the Moguls there. The whole of lower Assam was divided into some divisions, called ‘Pargannah’. Each pargannah (Pargannah) is let for from one to five years to a Chaudhurá, who agrees to pay certain rent, one half in money and one half in goods... He lets all the lands which are not given to paiks for service, and which have not been granted for pious purposes.

As stated by Hunter, there were people who neither possessed land for cultivation nor implement for doing cultivation work. Such people were sometimes employed by those persons who had lands and implements to cultivate their lands for which the former were either given wages in coins or a share of the crop. In the latter case the system is called ‘Marakía’ and in such a case the labourers are generally reimbursed for their manual labour by a one-fourth share of the crop. The employer furnishes the seed and the necessary agricultural implements. Husbandmen sometimes sublet their farms to persons who do not hold any land of their own. Such a tenure is called ‘Adhi’.
Cultivation of paddy or rice plants were carried on in the 'Rupit-māti', i.e., low lands where water accumulates in the rainy season.

The cultivation of vegetables, pulse, sugar-cane, mustard seed and other fruits, stalks and yams were carried on in dry lands, called 'Faringati'.

The cultivation of paddy is carried on both in the rainy season and in the dry season; but the one cultivated in the rainy season is the main and it is generally termed as 'Sāli-Kheti' (Sāli paddy). The paddy which is cultivated in the rainy season is divided into two main divisions, viz., 'Sāli-dhān' (Sāli paddy) and 'Lāhi-dhān' (Lāhi paddy).

The 'Āhu' crop, which is cultivated in the dry season, included many varieties. There are innumerable varieties of both 'Sāli' and 'Lāhi' paddy. Besides these, the cultivation of another variety, called 'Bāo', is prevalent in Assam. This 'Bāo' is cultivated in a comparatively low land where the cultivation of the 'Sāli' and the 'Āhu' is not possible owing to the accumulation of deep water in the rainy season. From the 'Statistical Account of Assam' by Hunter, it is learnt that this 'Bāo' crop is cultivated more in the districts of Nowgong, Kamrup and Goalpara than in other districts. Exhaustive lists of different varieties of paddy are available in the 'Statistical Account of Assam' by Hunter, 'Asamar Loka Sanskriti' by Dr. B.K.Barua and in the 'Yogini Tantra' of the 16th century. 'Yogini Tantra' mentions what rice should be offered in the 'Sraddha' and what should not. But all the varieties mentioned in the 'Yogini Tantra' are not produced in Assam. In the Spring season, a variety of paddy called 'Baro-dhān', is also grown in some parts of the State,
specially in the districts of Kamrup and Goalpara. It is a bumper crop to tide over a hard time. 'Yogini Tantra' prohibits the offering of rice cultivated in the Spring season in the 'śrāddha' ceremony. There are many varieties of 'Āhu' paddy of which 'Bāga Pharamā' and 'Rāngā Pharamā' are transplanted in the district of Lakhimpur. According to Shihabuddin, wheat, barley and lentils are not grown in Assam. References to wheat, barley and maize are found in the records. Maize was cultivated in a small scale in the State. According Hamilton, wheat, barley and millet are very little used. Therefore, the cultivation of these crops are very small in the period. Maize is generally cultivated in small patches about the houses of the farmers, but no where it is raised as an extensive crop.

The next important crop is mustard seed. According to Hamilton, 15,000 maunds of mustard seeds were exported to Bengal from Assam during the period 1807-14. The seeds are sown in the month of October and is harvested in the month of February or March. There were two varieties of mustard seeds, viz., white and red. The cultivation of sesamum was inconsiderable. It is used in preparing confectionaries, in drugs and in religious functions. Different varieties of pulses such as 'Māti-māh' (Phaseolus max), 'Magu-māh' (Phaseolus minimus of rumph), 'Kāla-māh' (Lathyrus Sativus), 'Barkalā-māh' (pisum arvense), 'Machur-māh' (Ervum lens) are commonly cultivated. The most common pulse is the 'Phaseolus Max' called 'Māti-māh' in Assamese. Besides these, the cultivation of 'Arahar' and other varieties of pulses and beans, such as 'Lechera-māh', 'Beji-māh', 'Gāro-māh' and 'Urahi' are made in Assam. The pulses are sown in the months of September and October and harvested in the month of December. The 'Gāro-māh' (cytisus cajan) was mostly cultivated for
the rearing of Lac insects; but later on it came to be cultivated for its pulse also. 25

The existence of the cultivation of Sugar-cane since the early period is supported by Bana's 'Harsa-charita'. Among other presents, Bhaskarvarman sent 'Guda' (molasses) prepared from the juice of sugar-cane in the earthen pots. The existence of the cultivation of sugar-cane is also proved by the writings of foreign writers of the Medieval period. Md. Quazim remarks that the sugar-canaxes of Assam excel all others in their softness and sweetness, and they are of three colours, such as red, black and white. Assamese people eat sugar-cane fresh and they prepare guda by pressing out the juice and then boiling it. According to Shihabuddin, the sugar-canaxes of Assam are very hard.

Fibre plants were sufficiently cultivated. Among the fibre plants, the cultivation of jute is the most common. In modern times also it is found largely cultivated in the districts of Nowgong and Kamrup. Next to the jute comes the cultivation of Rhea plants for its fibres. According to Hunter, the cultivation of 'Phonpâh', 'Sonpâh', 'Bar-Sonbarial', 'Sarə-səonbarial' and 'Bhedeli latâ' were also carried on in some districts of Assam, specially in the district of Lakhimpur. It is said, the fibre plants called 'Phonpâh' were cut twice or thrice in the course of a year. The fishermen used to prepare from the bark of the hems a sort of threads which they used in manufacturing their nets. But the local people were not so much conscious of its barks; they used the leaves and flowers of this plant in preparing an intoxicating narcotic drug. The cotton plant was generally cultivated throughout Assam, but more especially by the adjacent hill tribes. 26
Plantation of different kinds of fruit-trees were made in all parts of the country. Fruits are offered to God in religious functions and it serves as best tiffin to the people. The names of different fruits and fruit trees are found in the literary records and in epigraphs. Md. Quaaim writes: "Assam produces mangoes, plantains, jacks, oranges, citrons, limes, pine apples, punialeh, a species of amlet which has such an excellence of flavour that every person who tastes it, prefers it to the plum. There are also coconut trees, pepper vines, areca trees and Sadija (mala bythrum)."

The early inscriptions mentions jack fruit, mango, 'Jambuka', 'Sriphala', 'Dumbari', 'Sakhotaka' (walnut), 'Badari' (jujube), 'Lakuca', 'Amalaka', 'Betasa', 'Fuga' (betel nut), 'Coraka' (a kind of wild palm tree), 'Budraksa' (bead tree) and many other sour fruits, such as 'Au', 'Teteli' and others. Shihabuddin writes: "Many kinds of odorous fruits and herbs of Bengal and Hindusthan grow in Assam. We saw here certain varieties of flowers and fruits, both wild and cultivated, which are not to be met with elsewhere in the whole of India. The coconut and 'Nim' trees are rare; but pepper, spikenard, many species of lemon are abundant. Mangoes are full of worms, but plentiful, sweet and free from fibre, though yielding scanty juice. Its pine apples are very large, delicious to the taste and rich in juice."

The acid fruits of the people are, 'Au-tenga', 'Amaru', 'Jalphi', 'Kamraga', the two kinds of 'Thekeras', viz., 'Bar-Thekeru' and 'Kuji Thekura', 'Karja', 'Teteli', 'Karddai', 'Jara', 'Jeneru', 'Leteku', 'Robab-tenga' etc.

Among the fruit trees, the plantain and betelnut together with betel leaf are universally cultivated. We have already mentioned in connection with "Food and Drink" that the plantain trees are unavoidable in the life of the Assamese people. The plantain fruits are very commonly taken by the people, its leaves and other parts are also used for consumption. Though,
according to Shihabuddin, coconuts are rare, yet in the early records and inscriptions, there are references of the existence of coconut trees in Assam. Yuan Chawang states that in Kamarupa "the jack fruit and coconut were in great esteem, though plentiful." So also the cultivation of betel nut trees along with the betel vine creeper (usually called 'Pan-gachh') is found both in the records of the early period as well as of the Medieval period. Betel nut and betel leaf are raised almost in every garden. The cultivation of betel leaf requires more labour and care than other plants and creepers. The betel leaf creeper is generally raised on betelnut trees and very rarely on other trees.

Robinson says that "the fruit betelnut palm (Areca catechu linn) is universally employed together with the leaf of the piper betel linn (Assamese'pan') which latter is grown in almost every garden. The plant is raised from slips and cuttings, which are carefully planted in a moist rich soil, and at first are well enclosed and shaded, so that they are in a great measure protected from both sun and wind; when the plant grows up it is trained to the betel nut palm, though occasionally poles are employed for the purpose". According to Hamilton, there were plenty of tobacco. In the opinion of Robinson, tobacco was pretty generally cultivated but to no great extent and it was not adequate for the consumption of the country. It is generally cultivated in a rich spot of land, contiguous to the farmer's house. It is occasionally cultivated in high lands fit for the cultivation of sugar-cane and on the banks of the rivers also. The first mentioned place yields sufficient produce and the last mentioned one yields the much less. For the cultivation of tobacco, first in the month of August, the seeds are sown in the enclosed place
and the plot of ground for the plantation is well dug up or ploughed.
Then the plants that have been sown in a in are removed to the plot
where they are planted out at a distance of a cubit from each other. The
plants become fit for cutting in the month of March or April.

As said above, the consumption and cultivation of opium entered
into Assam towards the last part of the Ahom rule. About its cultivation,
Robinson writes: "The large single white flowered variety (of papaver
somniferum, linn or poppy) is grown to a very considerable extent. The
raising of opium is a business of much delicacy, the poppy being a very
tender plant, and liable to injury from various causes. The produce seldom
agrees with what might be stated as the average amount, but generally
runs in extremes: while one cultivator is disappointed, another is an
immense gainer; and while one season will not pay the expenses of culture,
another enriches all the cultivators. This circumstance renders the
pursuit in the highest degree alluring from the excitement, uncertainty
and hope connected with it. Probably the uncertainties of this cultivation
depend in a great measure on the natural falls of rain and the qualities
and elevation of the soil...."

The cultivation of poppy was carried on extensively in the district of Nowgong. The British administrators later on prohibited its cultivation as a result of which a skirmish, popularly known as 'Phularthuri Dhewa', between the farmers and the Govt. people took place in a place called Phularthuri in the Nowgong district.

We have discussed above in connection with 'Food and Drink' that
it has been the practice of the people to raise a little kitchen garden
contiguous to their houses where they cultivate different kinds of green
vegetables, stalks, Yams etc. The cultivation of green vegetables and
other esculents in the early period is supported both by inscription and literature. Yogini Tantra mentions many vegetables and other esculents which cultivated by the people in their kitchen gardens even to-day. The green vegetables and other esculents mentioned in this work are Mulaka, Rajaka, Bastuka, Palanga, Kusmanda etc. Cultivation of pumkins and gourds in the early period are supported both by epigraphy and literature. Bana mentions among the presents of Bhaskara, pumkin and gourds containing painting materials. Bargaon grant refers to arable land with clusters (hills) of gourds (Labukutiksetra). The tribes living in the hilly regions especially cultivate 'Ađā' (ginger), 'Hālādhi' (turmeric) and 'Kachu' (the Arum plant). The arums are numerous and they are cultivated sufficiently. The cultivation of sweet potato is a speciality of Assam. Robinson says that the root of this plant, that is 'Rangā Ālu' or sweet potato was the original potato known in Europe, and communicated its name to the more valuable plant from America, which latter is not yet generally cultivated by the natives of Assam. The sweet potato is much cultivated where the soil is free, and is deservedly esteemed by the people as one of their most palatable and nutritious roots. The cultivation of potato proper came to be introduced in Assam after the advent of the Britishers. The other green vegetables and esculents are Lāi, Laphā, Chuκā, Maricħā, Dhaniā, Purai, Lecherā-ṃāh, Fāleng, Bābari, Katarī- 

Spices were also used by the people. Yogini Tantra and other literary works mention many varieties of spices. Robinson mentions the cultivation of ginger, turmeric, chilli, onion, garlic, corinder (dhania), Mithi, Pipali (long pepper), Āluk (black pepper), Jāni, and Tezpat. He says that though
Not cultivated, cardamum plant is indigenous to the country. Among the spices, 'Yogini Tantra' mentions ginger, cumin, long pepper, chilli, camphor, mustard seed etc. Among the different spices mentioned here, the cultivation of long pepper, black pepper and tezpat is the speciality of Assam. Black pepper was extensively cultivated. During the Ahom rule, black pepper formed one of the principal presents sent to the kings and important personalities of different countries. According to 'Katha-Guru-Charit', it was more extensively cultivated in upper Assam. As stated by Robinson, the pepper vine grows luxuriantly and abundantly in the gardens of the natives, more particularly in upper Assam. The pepper is used for culinary purposes and in medicine. Long pepper is also indigenous to Assam. It is found in great abundance on the hills and is used in medicine. Last but not the least is the tezpat, i.e., 'Malabathrum' of the classical writers. Tezpat was also extensively cultivated especially by the hill tribes of Assam and Burma had been associated with the production of 'Malabathrum' from the remote 1st century A.D. The tezpat was extensively produced in the Garo Hills and in Sylhet from the earliest times.

For the purpose of dying a few plants were cultivated of which mention can be made of 'Manjit' or Indian madder, or Majathi as it is called in Assamese), indigo, acchu plant, and jaradhar plant and kendu plant. About Manjit we are discussing elsewhere in the book. Lac was extensively cultivated for the purpose of dying. From the earliest times, Assam is known for lac. According to Dr. Choudhury, the earliest reference to the lac insects is perhaps made by the classical writers. Ctesia and Aelian mention the fruit of a tree called 'Siptachora' from which amber is exuded and upon
which there was found a small insect yielding a purple dye. The tree is said to have been found in abundance in the country of Seres; the insect alluded to must be the lac insect. The region referred to is lower Assam. During the Medieval period, under the management of the Ahom Government, there were appointed paiks for the rearing of lac insects. But it was especially cultivated by the hill tribes, such as Mikir, Garo, Naga, Dafla, Mishimi etc. The lac is prepared from the purple juice of a kind of small insects generally called 'La-paru' in Assamese. The insects are reared on creeper like pulse-plant called 'Garo-mah' and on 'Jari-gachh'. Describing the process of rearing lac-insects, Robinson writes that lac is prepared in large quantities; the insect is propagated by tying small baskets, filled with gum, upon trees convenient for its nourishments. During a period of three or four months the tree is nearly covered with the family. The insects are generally fed on the trees called 'Jari-gachh' or Ficus Joori. Small quantity of indigo is also cultivated by the people in the vicinity of their villages; but the Mikir people cultivated it pretty extensively. Besides these, the Assamese people cultivated 'Achu-gachh', 'Harsinger', 'Jaradhar', 'Kendu' etc. for the purpose of dying.

About the cultivation of flowers, it is gathered that "The Assamese people scarcely be said to possess any flower gardens, though their gardens frequently contain a variety of pretty flowers and most of their villages are surrounded by a large number of beautiful trees and shrubs." In his account, Shihabuddin remarks about the residence of the Barphukan at the capital: "The Barphukan who was the Raja's son-in-law, had laid out an extremely elegant and fresh garden round a very pure and sweet tank within the grounds of his mansion. Truly it was a pleasant spot and a heart ravishing
and pure abode." In the 'Yogini Tantra' and in other literary works composed during the Medieval period, there are descriptions of numerous flowers, but most of these descriptions are on conventional line. Robinson in his 'Descriptive Account of Assam' gives the names of some of the indigenous flowers.

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