Agriculture is the most important occupation of eighty percent of the people of our country. Before independence, the farmers of our country were not provided with facilities. The Britishers did not give much emphasis on agriculture in India. They simply imported our raw materials to England which led to the industrial development in England and the finished goods or products were sold in India.

Some other factors are also responsible for the slow development of agriculture. In India, it is not possible to take measures for extensive cultivation because every farmer has a small plot of land. On the other hand, the farmers being illiterate, are not inclined to adopt scientific methods of agriculture. The traditional method of tilling land, want of irrigation system, unregulated markets for selling agricultural produce, want of extensive cultivation, disguised unemployment, defective land revenue system, want of mobility of labour for caste system are mainly responsible for the slow growth of agriculture in our country.

In the First Five Year Plan, there was no planning for the agricultural development for the tribal people. The Fifth Five Year Plan gave much emphasis on agriculture, key and basic
industries producing for mass consumption, a national programme for minimum needs covering elementary education, drinking water, land for the landless rural roads, rural electrification and slum improvement and clearance.¹

The Sub-Division of Udalguri which is situated on the north-east corner of Darrang district covers 1690.1 kilometres. It is situated on the foothills of Bhutan and Arunachal ranges. Many small rivers and streams have emerged from these hills and have flown through this Sub-division. Another feature of this area is that there is no low-lying land in the Sub-division. According to the varying conditions of land, the whole area of the Sub-division may be divided into the following classes viz:

1. Cultivable land which is loamy below terrain.
2. Middle portion of rich alluvial soil.
3. Char-land near the bank of the Brahmaputra river.²

The imperceptibility of stoping tract adjoining the Bhutan and Arunachal foothills is inherently susceptible to soil erosion because of the peculiarities of soil and some biotic factors.

Till recently, this tract under forest and grass cover providing fire wood, inferior timbers and thatching grass to concentrated population few miles South. But the land has now been brought under cultivation without taking any anti-erosion measures. The creze is to grow winter paddy for which water is brought from the rivers through crudely aligned channels (Locally called Dongs) having no regulatory head works. Removal of protective cover, unsuitability of the soil for irrigation and the faulty irrigation channels have all combined to erode away and form gullies over alarmingly, increasing areas every year. Many of the ' Dongs ' have turned into rivers because of lack of proper regulatory head works. 3

The percentage of nitrogen in land is between 56% and 71% and its acidity contains from 4.7 to 7.1. The percentage of phosphorus in land per picture is between 10 and 20 kilograms and the percentage of patach is between 136 and 239 kilograms.

The average rainfall of this area during ten years is 1930 m.m. climate moderate. As the whole area is sandy, it becomes extremely hot in summer. Similarly, in winter severe cold is experienced. The maximum and minimum temperature of the area is 35° and 12 respectively.

Acidity is the general characteristic of the soil of the district and is more so in the older alluvial soil. There are few outlying patches of elevated ground of the texture of which resembles the older alluvial. These disconnected high grounds, patches of which are seen in the North of Mangaldai and Tezpur. New alluvial soils representing the lands of river banks are less acidic. These are often neutral and even alkaline. The phosphoric content is good in the river side of the Brahmaputra where tea is grown. 4

**Approach to Agricultural Planning:**

The approach of the Department of agriculture during the second Five-Year-Plan was to attain a balanced development of food and cash crops, priority was given to multiplication and distribution of fertilizers, creation of irrigation facilities etc. During the Third Five-Year-Plan attempts were made to put agriculture of the district on a better scientific plan.

The objectives of the Fourth Five-Year-Plan were to increase production of food grains at an average annual rate of 5 percent in the state to arrest the decline in production of jute by increasing the average yield rather the area and to increase the production of wheat, oil seeds, pulses, fruits and other plantation crops. 5


In the study area out of a total geographical area of 1,17,297 hectares, only 81,600 hectares of land are under cultivation. There are only 28,000 hectares of land necessary for double cropping. Different types of land for different cultivations are as follows:

1. Ahu Paddy 34,000 hectares
2. Sali Paddy 56,000 hectares
3. Wheat 35,000 hectares
4. Mustard oil seeds 13,000 hectares
5. Winter vegetables 9,000 hectares
6. Summer vegetables 5,926 hectares
7. Fruits 9,686 hectares

IRRIGATION FACILITIES:

The farmers of this region have to depend on rain water which is uncertain. In the high plains of the sub-division, rain water does not accommodate in the fields as most of it flows rapidly in small streams or in shallow rivulutes. The peasants raise 'Bunds' or embankments, but for want of network of drainage system, the accumulation of water spills over and is wasted when it crosses the height of the 'Bund' or embankment.

Most of the tribal people inhabiting this area irrigate the paddy fields by constructing channels or 'Dongs'.

Normally, the length of a 'Jan' or stream is less than a kilometre and is only about 0.61 - 0.91 metre and about 0.33-0.45 metre deep.

There are three principal agencies in the state engaged in the implementation of the irrigation projects viz:

1. Agriculture Department.
2. The Flood Control and Irrigation Department.
3. The Brahmaputra Flood Control Board.

The first is engaged in implementing minor irrigation works such as construction of embankments across the streams, rivulate and drainage channels. The Brahmaputra Flood Control is entrusted with the task of controlling the flood in the Brahmaputra river which forms the Southern boundary of Darrang district.

The Dhansiri Project is the only major Irrigation Project in the Sub-division.

The river Dhansiri is the biggest river of the subdivision. Its source of origin is the foothills of Arunachal Pradesh. The locality where it meets with the other river is known as Bhairabkunda.

The irrigation project has been designed with six big canals. There are (1) Main canal (2) Canal B.I.M. (3) Canal SI. BI.. (4) Canal BI.M. (5) Canal CI (6) Canal C2.

The first four main canals are 9.75 km., 7.94 km., 3.28 km., and 4.29 km. in length while their breath runs about to 33 metres (100 Approx.) Over and above these, there are several other network of small canals which have spread to many villages within a reading of about 20 km. 8

This is the first major irrigation project in Assam which was targeted to be completed in 1980-81 at an estimated cost of Rs. 15.83 crores but is still in the construction stage. Its present estimated cost has risen to Rs. 92.00 crores. While its target date of completion has been delayed by a decade and the cost has been increased to about six times that of the original estimate, it is interesting to know that the Engineering Department has published the Annual Administrative Report, 1988-89 in 1990 showing the physical progress of work at Dhanasiri as 'not available'. People conversant with irrigation culture believe that this project may not be completed in this century and the present estimated cost of Rs. 92.00 crores may further rise to Rs. 100 crores. 9


Besides, there are a few minor irrigation projects in the study area which are discussed below:

<table>
<thead>
<tr>
<th>Name of the scheme</th>
<th>Length in Kilometre</th>
<th>Area to be benefitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Irrigation of Kalaigaon Chopai and Rangamati Mouzas.</td>
<td>13.93</td>
<td>1 acre = 0.404681 hectares</td>
</tr>
<tr>
<td>2. Extension of Noanadi irrigation scheme</td>
<td>13.93</td>
<td>4,833</td>
</tr>
<tr>
<td>3. Improvement of Kulsi Irrigation Scheme</td>
<td>7.93</td>
<td>12,000</td>
</tr>
<tr>
<td>4. Extension of C.M. Latta's Irrigation Scheme</td>
<td>12.31</td>
<td>2,800</td>
</tr>
<tr>
<td>5. Barnadi Irrigation Scheme</td>
<td>25.60</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Apart from these minor irrigation schemes, Larrang Investigation Division (Irrigation) was started for Nanai medium irrigation and small irrigation schemes. The Larrang Investigation (Irrigation) has been renamed Jangle Investigation Division (Irrigation). This department has been entrusted with the task of investigating the medium of irrigation project of Nanai since March, 1987. The area of the Jangle Investigation
(Irrigation) Department consists of Udalguri Sub-division and some areas of Sipajhar Block Development area.

The progress of the Langla (Irrigation) department in respect of small irrigation schemes has been given below:

<table>
<thead>
<tr>
<th>Name of the Irrigation scheme</th>
<th>Estimated expenditure</th>
<th>target hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started from 1983-04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baliamari Integrated Scheme (completed) (Tribal Development area)</td>
<td>12.11</td>
<td>198/160</td>
</tr>
<tr>
<td>2. Gargele (Tribal Development area)</td>
<td>Partially completed</td>
<td>22.36</td>
</tr>
<tr>
<td>3. Dovla Disa (Tribal Development area)</td>
<td>Partially completed</td>
<td>22.98</td>
</tr>
<tr>
<td>4. Anguri (Tribal Development area)</td>
<td>Partially completed</td>
<td>22.98</td>
</tr>
<tr>
<td>5. Kakramari (Tribal Development area)</td>
<td>Restricted Inv. completed</td>
<td>38.30</td>
</tr>
</tbody>
</table>

6. Kanapura Deep Tube Well Integrated Scheme (Completed) 9.70 80/-

7. Kanapur Deep Tube Well Integrated Scheme (Partially completed) 11.02 235/-

8. Kadabil Integrated Scheme (Partially completed) 10.02 230/-

9. Bar-Tangla Integrated Scheme (Completed) 9.51 20/-

10. Bar-Tangla (Extension) Integrated Scheme Left side (Partially completed) 10.44 231/80

11. Bar-Tangla (Extension Rightside) Integrated Scheme (Under construction) 9.96 228/10

Besides, during the year 1986-87, the work of the following small irrigation projects is under construction:

1. Barnadi Integrated Scheme (Improvement) 25.60 850/

2. Sonai (TSP) 38.89 377/

3. Kuwabil (TSP) 29.33 300/

4. Dowlalishe (TSP) 19.73 250/

5. Singrimari (TSP) 40.00 786/

6. Kodabil (Improvement) (TSP) 11.51 240/
Apart from these mentioned above, the Government has sanctioned shallow Tube Well Schemes for Jalal, Khoirabari, Mazikuchi, Sekhar and Other 116 Shallow Tube Wells have been sanctioned for the above-mentioned schemes. It is expected that these will cover at least 860 hectares of land. Moreover, Shallow Tube Wells have been sanctioned for Majbat, Udalguri and Khoirabari Block Development areas during 1983-04 and 1987-88. These Shallow Tube Wells are expected to irrigate at least 2313 hectares of land.11

As the revenue areas of Darrang district are almost annually exposed to high floods not only of mighty Brahmaputra but also of its tributaries, such as the Nanai, the Lhansiri and the Noanadi, the Government of Assam set up a committee in 1957 to review the embankment and drainage system of Assam. The committee recommended drawing up a comprehensive Master Plan for flood control in the state and making provisions for sufficient of controlled openings wherever embankments are constructed.

These embankments not only controlled flood but also affected the fertility of land. Therefore, these embankments were corrected by systematic construction of a large number of sluices or controlled openings. These embankments have benefited large areas not only by providing protection against flood but also making some areas fit for double cropping and reclamation.

11. Ibid -
Name of the Schemes (Enbankments) | Length in Kms | Area benefited in acres
--- | --- | ---
1. Construction of Dhansiri Enbankment along left from upper crossing to lower crossing. | 9.66 | 6,400
2. Construction of Dhansiri Enbankment along right bank to lower crossing. | 7.72 | 4,048
3. Improvement on Nanai Enbankments. | 5.95 | 590
4. Construction of Dyke along both banks of the river Nanai from North Trunk Road but against Brahmaputra Dyke to its out fall. | 9.66 | 5,100
5. Construction of Dyke along both banks of Nanai from Railway lines to Patharighat Public works Deptt. Road-Public Health-Ph. Ill. | 59.60 | 3,000

ADMINISTRATIVE DIVISIONS FOR AGRICULTURAL DEVELOPMENT:

The Assam Agricultural University is also assisting the agricultural departments in respect of technical know-how and improved methods of agriculture. Moreover, the Assam Agro-Industrial Development Corporation Ltd, the Assam Seeds Corporation, statefod have been supplying agricultural implements to the farmers through the recognised agencies or co-operatives of Gaon Panchayats. Besides, agricultural loan is given to the cultivators through co-operative societies.

STRUCTURE OF THE AGRICULTURAL DEPARTMENTS:

The Sub-Divisional Officer (Agri.) is the head of the sub-division. He is assisted by a number of agricultural specialists. The whole of the sub-division is divided into eleven (11) circles which are as follows:


Besides, there are eighty three centres of agricultural workers.

AGRICULTURAL TRAINING:

The aim of agricultural training is to extend agricultural knowledge from the laboratory to the agricultural fields.
There are three training centres in the study area to impart training once a fortnight viz:

(1) Udalguri.

(?) Lalpul.

(3) Majikuchi (Khoirabari).

This type of training imparted by the sub-divisional officers (Agri.) and specialists on agriculture. The agricultural workers after receiving training regarding agriculture teach at least twenty villagers out of two hundred.

There is also a branch known as Agricultural Engineering in each sub-division. This branch helps in selling the agricultural implements and in improving the waste land into cultivable land.

There is a Kisan Vidyapith at Bengbari (near Udalguri) where agriculturists are imparted training regarding agriculture. The Extension officers and the specialists act as teachers. This Vidyapith was started under Tribal sub-plan scheme. Besides, there are other schemes viz; seeds Improvement scheme, Jute Improvement scheme etc. Apart from these schemes have been taken at Panory, Harisinga, Udalguri, Sonaiyaon circles for improving more and more mustard seeds and chayabin.13

According to the Company Act, 1956, the Assam Agro-Industries Development Corporation Ltd. was set up at Guwahati with the following aims.

1. To help the progressive cultivators in adopting improved methods of agriculture.

2. To distribute the agricultural implements, manure, seeds at a cheap rate.

3. To setup Agro-Industries and thereby help progressive farmers.

4. To make arrangement for repairing the implements of agriculture by starting engineering workshop.

In order to distribute the agricultural implements, the corporation has setup many sale centres at different places of Assam. In 1979 a sale centre of the agricultural implements was setup at Udalguri but in view of the increasing sale it was promoted to the status of branch sale centre in June, 1987.

The Corporation has also arranged for selling agricultural implements at a controlled rate for the general cultivators and for the tribal people at 50% rebate.

Under the scheme of high yielding paddies the corporation has arranged for distributing or selling power tillers, power pumps and hand sprayers for the cultivators of the Block Development area at a fair price.
Following is the description of the progress of sale of agricultural implements from 1983-84 to 1986-87.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983 - 84</td>
<td>9,20,000</td>
</tr>
<tr>
<td>1984 - 85</td>
<td>14,30,000</td>
</tr>
<tr>
<td>1985 - 86</td>
<td>16,86,000</td>
</tr>
<tr>
<td>1986 - 87</td>
<td>22,23,000</td>
</tr>
</tbody>
</table>

Table No. I - indicates that the increased sale of agricultural implements among the tribal people is a sign of the use of improved methods of agriculture. Besides, it shows that tribal people have given up their prejudices against the use of scientific methods of agriculture.  

**CULTIVATION OF PADDY AND DISTRIBUTION SYSTEM OF CONSUMERS' GOODS:**

In the study area, paddy, jute, sugar cane, tea, pulses and mustard seeds are the main crops. Tobacco, potato, vegetables and fruits like mangoes, oranges, coconuts, banana, pineapples etc. are sub-sidiary crops.

Rice is the staple food of the ninety five percent of the people of the study area. Therefore, the farmers mainly depend upon cultivation of wet paddy. During the rainy season the farmers start planting paddy both Sali and Ahu. For Sali crops the farmers depend upon rain water, besides, rain water, they supply water through different sources viz; local channels or 'Dongs', jans or streams and the small irrigation projects. At present, the cultivable land in the sub-division is 34,000 hectares for sali paddy (wet paddy) and 56,000 hectares for Ahu (dry) paddy.

Paddy falls under three main heads - Sali, Ahu and Bao. There are various types of sali paddy such as Monohar Sali, Hali Sali, Lali Sali, Lan Lumart, Prasad Bhog, Bao Bhog Joha (scented rice), Bora and Basmati.

The duration of the above mentioned varieties of paddy is from 120 to 170 days.15

BACDHAN OR BACPADHY:

It is grown in the low-lying areas of the district. The paddy field is prepared ploughing the land for four to five times and Bao paddy is shown broadcast in March and April. It ripens in the beginning of January and harvesting is done as Sali paddy.

Like Sali paddy, there are several varieties of Ahu paddy such as Lubarichinga, Rangadaria, Kosalatha etc. The duration of these varieties is from 100 to 120 days. The seeds of Ahu paddy are shown in the months of March and April.

High lan Ahu is grown in land which is too high for transplanting rice and is fairly common in the country near the foot of the Himalayas. In its natural state this land is covered with a shrub forest and as the same field is not cropped for more than three years in succession, the Ahu cultivation of Darrang district resembles in a way to the Jhum cultivation of the hill-tribes. It is significant that this high land Ahu is seldom combined with pulse and mustard, though there is no reason why one or other of these crops should not be taken from the other in cold weather.16

Larrang district is generally famous for paddy. There are, at present, 93 rice mills in the study area and these may be classified as follows:

1. The first category of rice mills are of professional type and (2) the second category of rice mills are used for milling the rice for public consumption. The government has fixed the quantity of rice for the procurement of rice for the professional mills.

16. Ibid - P. 166.
7923.15, 1466, and 7843 quintals of rice were procured in 1984-85, 1985-86 and in 1986-87 respectively. Udalguri sub-division occupied the first position in procuring rice in Darrang district in 1986.

ACRUCULTURAL LOAN TO FARMERS THROUGH CO-OPERATIVE SOCIETIES:

In the middle part of the year 1973, the Government of Assam decided to include all the villages under the co-operative societies and accordingly as many as 664 co-operative societies were formed. The area of a co-operative society is a Gaon Panchayat. At present, the number of Gaon Panchayats has increased to 773.

In the study area, there are 19 co-operative societies of such type. Of these, 15 co-operative societies are in the Integrated Tribal Development Project.

These co-operative societies have been formed with the following ends in view:

1. To supply and distribute agricultural inputs.
2. To make arrangement for selling the produced goods of the cultivators.
3. To supply the required commodities to the farmers at a fair price.

In respect of agricultural loan it may be said that 18 co-operative societies are extending loan to the agriculturists. In 1985-86, an amount of Rs. 12,75,280.00 was distributed to 1429 farmers and in 1986-87, an amount of Rs. 7,11,985.00 was distributed to 455 farmers as loan. As there was an unprecedented drought in 1986 in the study area, many farmers failed to repay the loan in time.

Besides, the co-operative societies have been extending to the farmers Rs. 250/- each under tribal sub-plan for children's books, marriage ceremony and treatment.

Out of 19 co-operative societies, 4 co-operative societies have been setup as Agricultural Service Centres viz; (1) Rowta Co-operative Society Ltd., Suklai Co-operative Society Ltd. These societies provide with pumping machines and other instruments of agriculture on lease and sell them at a reasonable rate.

There are thirty consumers' sale centres. These centres have been supplying consumers' goods to the people of 645 villages through 546 agencies. These agencies have been distributing rice and wheat to the tribal people at a concessional rate. These societies sold consumers' goods of Rs. 1,82,93.00 and other commodities of Rs. 14,02,00, in 1985-86. At present, the members of these societies are 56,223.

These societies have provided opportunities not only to 18 co-operative secretaries appointed by the Government but also to 100 local youths to work in these societies.
There were 9 co-operative stores but out of 9 only one is functioning at Tangle and after great efforts another co-operative store has been reopened at Udalguri. Both of these stores have been supplying necessary commodities to the poor consumers of the tribal communities.18

An assessment of the present position of agriculture in the study area, its problems and potentialities indicate that the present pattern of agriculture needs to be changed for its improvement. In the study, paddy, sugarcane, mustard and til are abundantly grown but the Government has not yet had data on area and rate of inputs like seed, fertilizer and in pesticides for a long period for each village to know the trend.

On the other hand, the other side of the planning is very optimistic, as irrigation, potentiality, land reclamation, suspension of shifting cultivation, introduction of improved agricultural practices and horticulture all depend on the acceptance of these innovations by the local people, effective administrative management, human engineering and extension services. Thus environmentally sound technologies suitable to the tribal people shall have to be developed with the help of the scientific knowledge. Absence of adequate irrigation network, inefficient extension works, high price and untimely and inadequate availability of fertilizers, poor economic condition of farmers, non-

availability of credit, untimely and insufficient soil testing services are some of the major factors affecting fertilizer consumption in the study area.

ANIMAL HUSBANDRY:

THE REARING OF BIRDS AND ANIMALS:

The domestic animals of the study area are cattle, buffalo, goat, poultry and dogs. Very few people keep buffaloes here. Previously, the tribal people used to rear pigs, poultry etc., but now-a-days they have given up rearing these animals under the influence of Hinduism.

The cows are not reared for flesh by the tribal because most of them are Hindus. These animals are reared for milk, for drawing plough and for manure etc. Beef eating is strictly prohibited among the Hindu tribal people. Even there is a provision for punishment upon those people who injure cows. Very few people rear buffaloes because buffaloes are expensive.

Goats and poultry are very popular among the tribal people. It is easy to rear them because they need minimum care. 19

Goats and poultry are the sources of income for the poor families. They supply meat on festival and ritual occasions. Chickens are used mainly for sacrificial purposes and for entertaining guests and relatives. Generally the tribal people offer chickens when their relatives and local officers visit their houses. On the other hand, cockfight is a popular game which attract hundreds of spectators. Even during the days of the Ahom kings of Assam, competition in cock-fight was held publicly.

The tribal people do not take care of these animals. They let them loose for grazing in the field. Formerly, there were pasture-lands full of green grass for the animals. At that time, there was the fear for ferocious animals like tigers and elephants. But now pasture-land is diminishing fast as it is being encroached upon by the people for the purpose of cultivation resulting in acute shortage of grass and fodder.

Inspite of this, domestic animals are still reared by the Boro-Kacharis. Secondly, the genetic potential for milk production among the cattle and buffaloes is low in the study area. Improvement of inherent milk producing capacity must take place by upgrading the stock either by artificial insemination or by providing service of exotic bulls. But the facility of this method is very much inadequate and the introduction of improved bulls is not possible because their maintenance is too expensive.

The tribal people are not generally habituated to rearing cows and buffaloes for milk. It is the Nepalis in the study area who deal in milk. They generally inhabit on the foothills of Bhutan and Arunachal mountain ranges.

In short the problems which reflect animal husbandry are poor quality cattle, poor feed, prevalence of disease, inadequate facilities, peculiar cultural practices and economic backwardness of the people. Any animal husbandry programme for this area may be implemented in solving these basic problems. Given certain minimum facilities with proper extension work in this regard can improve the general well being and economic condition of the people.

MEASURES TO IMPROVE QUALITY OF BREED TO SECURE GREATER OUTPUT AND EXISTING FACILITIES:

The area of the Integrated Tribal Development Project in the study area is quite rich in domestic animals. The livestock population of the area as per Beuch mark survey of 1983 is as follows:

1. Bullocks - 65,341
2. Cows - 38,394
3. Buffaloes - 3,891
4. Goats - 24,513
5. Sheep - 919
6. Poultry - 1,33,957

A Kachari village is usually full of domestic animals of various kinds such as ducks, fowls, goats, pigs etc. The tribal people therefore erect fencing and dig ditch to prevent the cattle, pigs etc. from getting into the rice-fields.

For a large number of domestic animals grazing around the courtyard of Boro-Kacharis, they cannot keep clean their surroundings. The Boro-Kacharis and the poor Hindus do not differ much in the sense that the Hindus also do not arrange separate houses for keeping their animals.22

According to the Live-stock Census of 1966, there were 27,612 bulls which were used for breeding and for other works in the undivided district of Darrang. There were also 6,558 he-buffaloes of the same category. Only 5,657 bulls and 2,255 he-buffaloes were used for breeding only. In order to improve the breed of the indigenous varieties various measures have been taken by the Veterinary Department which has procured and distributed Marana bulls and RIR bulls in the Panchayat, on loan basis.

Other measures to improve the quality of breeds include opening key village centres, semen collection centres and bull depots.

22. Lindle, S. - The Kacharis - New Delhi,
In 1968, there were five key village centres in the district located at Mission chariali (Tezpur), Jamuguri, Dhekiajuli, Mangaldai and Bhergaon. The sub-centres were located at Dipota, Goraimari, Barjhar, Parbatia, Samdhara, Farhigaon etc. Every Development Block has an artificial insemination centre. There are three Go-Salas in the district one each at Helen, Udalguri and thrakhat.

In 1984, a sub-division (Veterinary) was opened at Udalguri. For this purpose, the existing Veterinary Hospital of Udalguri was extended and the office of the sub-division (Veterinary) was started here.

The Structure of the sub-division (Veterinary) of Udalguri sub-division is as follows:

1. Sub-Divisional Officer 1
2. Asstt. Veterinary doctors 6
3. Extension officer (Vety.) 2
4. Field Assistants 23
5. Inspector cum-field workers 6
6. Upper Division Assistant 1
7. Lower Divisional Assistant 2
8. Fourth Grade employees 23

Following is the position of Veterinary hospitals of the sub-division of Udalguri.

A. **BLOCKWISE VETERINARY HOSPITALS** :

   (i) Majbat
   (ii) Udalguri
   (iii) Khoirabari

B. **STATE VETERINARY HOSPITALS** :

   (I) Grang
   (II) Rowta
   (III) Tangla
   (IV) Pachimpatla
   (V) Vairaguri

C. **VILLAGE SANCHAR AND BREEDING CENTRE** :

   (1) Bhergaon
   (2) Udalguri
   (3) Kuhriarkuchi

D. **INTER STATE AND NATIONAL CATTLEFOX INSPECTION CENTRE** :

   (I) Harisinga

E. **BLOCK PIGGERY IMPROVEMENT FARM** :

   (I) Sonaiyaon
The Boro-Kacharis in the study area are not habituated to rearing cows for producing more milk. It is the Nepalis inhabiting the foothills of Bhutan and Arunachal mountain region who are engaged in rearing cows for milk.

Generally, the Boro-Kacharis do not drink milk. They have an aversion to milk. They say that they do not like to deprive the calves of cows. This prejudice is shared by the Garos and many other members of the Mongolian races.

This prejudice is however, disappearing fast in the tribal society and Boro-Kacharis, now-a-days, take milk.\textsuperscript{25}

\textsuperscript{24} Baruah, Swapnanil (ed)-'Udalguri' (a journal) 15th August, 1985, P.p. 116-117.

\textsuperscript{25} Lindle, Rev.S.- The Kacharis, New Delhi, 1975 (2nd edition) p.15.
In the study area, there is no Government sponsored Milk Supplying Co-operative Society. Yet, there is abundant supply of milk and the farmers sell them in the nearest towns viz.; Tangla, Harisinga, Udalguri and Rowta.

Besides, at Atterikhat, there is a Go-Sala covering nearly 190 bighas of land. The Government is examining the proposals of the department for transforming the same into a milk producing project.

In accordance with the schemes formulated by the Government of Assam under Tribal Sub-plan, the area with a population of nearly 1.50 lakhs of tribal people has been included in the Integrated Tribal Development Project.

The Project has been provided with huge amounts of money for the Development of cattle, pigs, poultry and others.

The Sub-Division was sanctioned Rs. 2,69,883.00, Rs. 12,71,000.00 and Rs. 5,60,617.00 in 1984, 1985 and 1986 respectively. 26

Table - II shows the loans extended to the tribal people under Tribal Sub-plan. It also shows the loans extended to the scheduled caste people.


<table>
<thead>
<tr>
<th></th>
<th>1984 - 85</th>
<th>1985 - 86</th>
<th>1986 - 87</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S/T</td>
<td>S/C</td>
<td>S/T</td>
</tr>
<tr>
<td>1. Floughing Bullocks</td>
<td>29</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>2. Local Milch cow</td>
<td>44</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>3. Crossed Milch cow</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4. Unit of pigs</td>
<td>20</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>5. He-Fig (crossed)</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>6. Unit of goat</td>
<td>-</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>7. Unit of Ducks</td>
<td>100</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>8. Luck for widow</td>
<td>-</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>9. Grass cultivation</td>
<td>-</td>
<td>-</td>
<td>31</td>
</tr>
<tr>
<td>10. Training for animals</td>
<td>147</td>
<td>17</td>
<td>185</td>
</tr>
<tr>
<td>11. Ducks (Special)</td>
<td>580</td>
<td>441</td>
<td>147</td>
</tr>
<tr>
<td>12. Ducks and fishery</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>13. Bulls (Crossed)²⁷</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
</tbody>
</table>

²⁷. Irít - P.P. 71-72.
GOAT KEEPING:

The Boro-Kacharis of the study area are fond of rearing goat for many advantages. They provide good return in cash when sold and meat on special and festive occasions. Many people take goat's milk as people say that it is good for health. Therefore, goat is considered poor man's cow. Goat keeping has become a profitable business. Formerly, every household had some goats but now-a-days, both tribal and non-tribal people rear goats for extra income. A fine he-goat is sold at Rs. 1500/- for meat. In short, widow, agricultural labourers and others maintain their families by rearing goats. 28

DEVELOPMENT OF PIGGERY:

Most of the Boro-Kacharis of the study area are fond of rearing pigs also. In every tribal family, there are a number of pigs. The Caste-Hindu people did not rear pigs and did not take pork also. Being influenced by the Hindus, the educated families, the Saranias i.e., those who have taken vows on religious grounds under Goswamis or Mahantas do not rear pigs.

But now-a-days, the Government is extending loan to the unemployed youths for pig farm. The Government has setup a piggery Development Centre at Sonaigaon, 14 kilometres away from Udalguri. Here good breed of pigs are kept for insemination. Pigs of good breed are crossed with local pigs. The annual income of this farm is satisfactory. 

BUFFALO FARMING:

There is no proposal for buffalo farming in the study area. On the other hand, the Government is not giving importance to buffalo farming in the study area. It is good in Assam because Assam is a flood prone state and buffalo is a semiaquatic animal.

Besides, buffalo milk contains average 7.5 percent of fat and 9.5 SNF where as cow milk contains 4.5 percent of fat and 8.5 percent SNF. The doubt about the benefit of feeding of buffalo milk to children has also been removed by the National Dairy Development Board by preparing excellent baby food from buffalo milk in their Amul factory at Annand.

Only 13.38 percent of total milk produced in Assam comes from buffalo, which is very low by world standards. There is a need for better organization of buffalo breeding, the milk sector, and the dairy industry to give proper importance to Buffalo breeding programmes in Assam.

**FODDER CROPS**:

Formerly, there were grazing fields for cattle. Nowadays, people have encroached upon the Government Grazing fields and have turned into cultivable lands. Therefore, the need for fodder development scheme has been felt.

The Tezpur (Mission Chariali) key village centre has been opened under the Fodder Development Scheme. 63 bighas of land have been successfully brought under perennial fodder cultivation. Roots and seeds of improved grasses are distributed free in the Centre. Every Veterinary dispensary in the study area has one demonstration fodder attached.

The Livestock Section of the Animal Husbandry Department has been encouraging the cultivation of grass among the farmers. The implementation of such schemes is necessitated by the fact that the cattle, buffaloes, sheep, goats of

the district rarely get anything but grass gruel and green leaves of some trees. Livestock are grazed on the rice-fields after crops have been carried off and in swamps and marshes.

In the flood-affected areas the villages experience some difficulty in obtaining fodder for their cattle during the rainy season. Stall-feeding usually does not find favour with the villagers. However, the hards are carefully watched and grazed on fallow lands when the cultivable fields are covered with paddy. Stray cattle which cause damage to standing crops are lodged in the public cattle pounds by the aggrieved party and the owners of those cattle are obliged to pay certain amount to secure the release of the cattle. 31

The leaves of some of the trees planted are suitable as cattle feed. The entire plantation strips have goat in these strips and the local tribal people can use the leaves fodder and grasses for their cattle free of cost.

Fodder can be obtained from crop residue of cultivated cereals like paddy and maize or can be obtained from pasture land.

Besides, the people in the study area grow oil seeds like mustard and niger as major cash crops. Oil seeds are pressed locally and oil cakes are used as an essential concentrate.  

**ANIMAL DISEASES:**

The cattle diseases common in the study area are anthrae, haemorrhagic septi caecmia, black quarter, B.C.P.P. foot and mouth diseases, rinderpest, and parasitic diseases.

During 1957-58, rinderpest epidemic broke out in the study area. A team of doctors and vaccinators was engaged for eradication of the disease. About 5,28,527 heads of cattle were vaccinated against rinderpest and about 2,587 poultry were vaccinated against Ranikhet disease during the same year.

During last four years i.e., between 1983-84 and 1986-87 as many as 5,16,479 domestic animals were treated, 60,119 domestic animals were vasectamised, 8,38,58 domestic animals and birds were vaccinirated and 9,828 were in seminated in the sub-division of Udalguri.  

Progress Of The Veterinary Department In Assam In brief And the reasons Of Slow Progress:

The Department of Animal Husbandry and Veterinary Services extended loan to 2034 poor tribal people in 1986-87 under the anti-poverty Scheme and Spent Rs. 300.00 lakhs. The Department (Vety) distributed 500 hundred bullocks, 533 units of pigs, 133 milch buffaloes and a large number of ducks and other birds and animals to the poor tribal people of Assam.

In the same year the Department proposed to setup six Veterinary hospitals, ten primary Health Centres. Cre of the remarkable of the tribal sub-plan is this that the Government of Assam proposed to establish a college for rearing cattle and other animals. The college will not only help the unemployed youths but also encourage to study the subject of rearing animals also.

Similarly, for the development of milk under the anti-poverty scheme extended loan to 150 tribal families and extended financial assistance to a hundred poor tribal families. The Government of Assam spent Rs. 35 lakhs for the scheme. The Department of Veterinary earmarked Rs. 53.00 lakhs for the tribal sub-plan and proposed to raise atleast 210 families from the poverty line.34

The progress of the Department of Veterinary of Assam as well as the progress of the study area was not satisfactory before the 4th and 5th Five Year Plans. In the Fourth Five Year Plan, emphasis was laid on the expansion of the existing live-stock farms, key village schemes and larger distribution of improved breeding stock. But more emphasis was laid in the Fifth Five Year Plan on the development of the tribal people.

But from the practical experiences, it is found that the Department of Animal Husbandry and Dairy Development is not in position to give the required technical support to the farmers due to lack of their proper extension services in the field. This is the weakest link in the department, at present, for which rapid technological development that has taken place in the field of Animal Husbandry and Dairy could not percolate from the research station to the farmers' field to a desired extent.

The hours of the Veterinary dispensaries are such that it should be attended every morning and evening by the doctors and V.F.A. Besides, their services may be required by the public at any time of the day and night or even in odd hours for treatment, first aid and A - I works etc. in the field. Hence, extension officer (Vety) and V.F.A.S. could devote very little time in the extension works in the block.

Therefore, a well-knit Extension wing right from the block level to Directorate may be created in order to assist the farmers in formulation of schemes and to give technical advice and guidance.
BACKGROUND OF SERICULTURE INDUSTRY:

Sericulture is the household industry of Assam. Whether in the art of weaving or agriculture or working in metal, ivory wood, clay, cane, bamboo and the like, the reputation of the Assamese was equal to that of the craftsmen of other parts of contemporary India.35

During the days of the Ahom Kings, the cottage industries of Assam reached a high degree of perfection. As Darrang came under the Ahom rule late, it did not share in full the industrial excellence of the Ahoms and lagged behind her sister districts like Sibsagar in respect of development of industries.

The staff competition which the indigenous industries faced from the mill made cheap goods imported from outside, quickened the decay of many industries.

Every Assamese household has had a hand loom for weaving. Most of its clothes are of exquisite beauty and durable quality.

Assam silk is produced on trees and the stuff made of them is very brilliant. Like the nobles of Jahan, the Ahom Kings in Assam took personal care and interest in the silk industry and the royal patronage contributed a lot in attaining the high degree. Mahatma Gandhi was surprised to see the hand made cloths of Assam and made the following remark.

"Assamese women are born weavers. They can weave fairytales in their clothes. No Assamese girl who does not weave can expect to become a wife."

Moreover, weaving is not the industry of a caste of Assam. While weaving is the profession of low-caste people in other parts of India, every Assamese girl whether high or low-born is expected to know this art. An Assamese girl who cannot weave is not considered fit to be a bride.

Sericulture is one of the profitable industries of the Boro-Kacharis. Their culture of the silk worm is known as eri and the manufacture of the eri cloth. The Boro-women are expert in weaving. Till to-day, the Boro-women weave their clothes in their own hand looms. They weave and spin their own dress. A Kachari woman if not interrupted can weave about half

a yard each hour and their eri cloth woven in long strips is sold like hot cakes. Thus a Boro woman without neglecting other domestic duties easily can earn extra-money for the family. 38

The art of Sericulture and rearing of cocoons for the manufacture of various silk-worms were known to the Assamese as early as the Ramayana and the Artha Sastra.

Chinese records dating as far back as 248 A.D. mention about the trade route from South China through the Shan states, the Brahmaputra river and Kamrupa to Pataliputra, (Present Patna) and through it, to the Western part of India.

The ancient trade in silk with Bhutan and Tibet through Udalguri in the Darang district still exists. 39

In Assam, there are 6,910 villages under the supervision of the Directorate of Sericulture and Weaving in 1981-82. These villages engaged nearly 53 thousand families in Muga culture and about 19 thousand families in Pat culture. In 1981-82, the production of silk worm from sericulture villages were of the order of 53,020 kg. of muga, 75,000 kg. of Pat. Besides the Directionate also maintains a number of sericul-

Sericulture is one of the important industries of Udalguri Sub-division. As many as 2500 families are engaged with this industry. Therefore, it has helped these people in their economic development. Most of the tribal people in the study area have not only skill but also interest in sericulture. In order to develop sericulture people grow 'Som' trees for muga culture. For the development of Sericulture the following Sericulture farms have been setup in the study area.

ERI CONCENTRATION CENTRE:

<table>
<thead>
<tr>
<th></th>
<th>Est.</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bhergaon</td>
<td>1986</td>
<td>13 acres</td>
</tr>
<tr>
<td>2. Sapkhati</td>
<td>1958</td>
<td>3.33 acres</td>
</tr>
<tr>
<td>3. Majbat</td>
<td>1958</td>
<td>5 acres</td>
</tr>
<tr>
<td>4. Balipara</td>
<td>1958</td>
<td>5 acres</td>
</tr>
<tr>
<td>5. Tokankata</td>
<td>1977</td>
<td>20 acres</td>
</tr>
</tbody>
</table>

Besides, an eri-spinning training centre was established at Tokankata with one supervisor and one assistant. This centre has the capacity of 20 trainees and the duration of its batch is 90 days. 41

Again, one Eri seed Grainage at Bhergaon with seven staff members two collective, two collective Mulberry gardens one at Chinakona and another at Sapkhaiti, have been established in the study area.

Apart from this, in 1958, one Chouki Rearing Centre was established at Udalguri with an area of 10 bighas 1.4 (hectares) to rear small Mulberry Silk Worms. On Japanese system of rearing. Here worms are reared upto 2nd month eumass by the villagers under the expert supervision of the departmental staff and then worms are distributed among the rearers. About eight thousand to ten thousand mulberry layings are annually reared in the centre.

One concentration centre of Mulberry Silk Worms Rearing was established at Kaporpora (Udalguri) in 1958 with contribution from Central Board of India to assess and gauge the sericulture activities in a concentrated place. There are about 98 mulberry silk worm rearers under the centre who own a total mulberry acreage of 160 bighas (about 22 hectares) of land. Annually about 90 kgs. of Pat Silk is also produced by the centre.

41. Baruah, Swapnanil (ed), - Udalguri (a journal) 15th August, 1985, P. 120.
Another Reeling and Spinning Centre is functioning at Majbat. This centre was originally established at Dhekiajuli during the 1st Five Year Plan but with the normalazation of the Community Development Block, it was shifted to Majbat. Sericulture farm originally established under the auspices of the community Development Block, it was shifted to Majbat. It covers an area of 15 bighas of which 11½ bighas of land are under the Silk Food Plants. The centre is now confined to preparation and distribution of seeds and Mulberry leaves. To impart training on Sericulture, ' a Boa Kata ' Society has been functioning since the 1st Five Year Plan. The Department also granted a sum of Rs. 28,604.52 as sub-sidies and contributions to about 409 individuals and organisations in the district during the 2nd Five Year Plan period.

FACILITIES EXTENDED TO THE SCHEDULED TRIBAL AND SCHEDULED CASTE PEOPLE:

Sericulture and weaving is widely practised in Darrang District specially among the Boro-Kacharis. It is mainly a household industry and generally the rearing of worms is done by the female members of the household in their leisure times. Mostly, the rearing is done to meet the requirements of the family, though there are a few professionals who practise it more or less on commercial lines. The tools and

implements required for the industry are few and simple and almost all of these are made by artisan himself and by the members of his family or can be had from the market at a moderate price. The tools generally required are: bamboo stray (dela), bamboo chandraful, thread net, charkha (Fidhi Ram), Takli, boiling pan and looms.

Sericulture though household industry, is a profitable business. It has been playing an important role in self-employment. There is a demand for muga thread in the market. The price of muga thread is Rs. 1600.00 per kg. Moreover, by rearing muga in a pair of 'Som' trees easily can be earned Rs. 1,000.00 annually. Hence, by rearing in an area of 3 bighas of land containing 75 'Som' trees at least Rs. 8040/- can be earned annually.

The Government of Assam extended subsidy to 420 scheduled caste families and 1213 scheduled tribe families under the anti-poverty scheme during 1986 and 1988. Moreover, these families were extended monetary assistance ranging from Rs. 3,000.00 to 3,500.00.

Besides, the Government extended financial assistance to 773 scheduled caste families 1185 scheduled tribe families ranging from Rs. 500/- to Rs. 1,000/-. Moreover, the Government extended financial assistance to 255 scheduled caste families, 620 scheduled tribe families under the anti-poverty scheme. Besides, 320 scheduled tribe families, 321 scheduled caste families were extended financial assistance ranging from Rs. 500/- to Rs. 1,000/-.
Apart from this, during 1986 and 1987, 500 hundred scheduled caste women, 520 scheduled tribe women and 120 women of general caste were provided training in eri spinning for three months. Moreover, in the 7th Five Year Plan the Government earmarked an amount of Rs. 8,228 crores for Sericulture department.

The Government has proposed to establish a full fledged science college for sericulture and for this purpose the Government has earmarked Rs. 8.29 crores.43

Since the declaration of Udalguri Sub-division in 1983, the Government of Assam has been extending financial assistance or subsidy to the poor tribal people under the anti-poverty scheme.

In 1985-86, 23 eri-rearers were extended Rs. 92,000.00, 25 people were provided Rs. 66,000.00 for Mulberry scheme and Rs. 5,000/- were distributed to 5 muga rearers.

Again, 40 tribal women received Rs. 23,400.00 at the rate of Rs. 6.50 per trainee for 90 days.

Similarly, six eri-rearers were extended Rs. 13,500/- and scheduled caste women were paid Rs. 20,500/- for mulberry scheme. Also, four women belonging to general caste were paid Rs. 12,000.00 for eri-rearing.

In 1986-87, 48 tribal families were extended Rs. 97,000/- for eri-rearing and 31 families were provided Rs. 33,000/- for mulberry scheme. Besides, 40 tribal women received training for eri-spinning for 90 days for which they received Rs. 23,000/-. Besides, Charkhas worth of Rs. 10,000/- were distributed among 40 tribal women.

Again, in 1987-88, 16 tribal families received Rs. 4,000/- each for eri-scheme, 9 families received Rs. 4500/- each for mulberry scheme. Similarly, two families received Rs. 500/- each for eri-scheme and six families received Rs. 500/- each for mulberry scheme. Apart from this, special central assistance was extended to four scheduled caste families for eri and mulberry scheme. They received Rs. 4,500/- each and one family received Rs. 1000/- as simple economic assistance. Moreover, special central assistance was extended to four scheduled caste families for mulberry scheme. They received Rs. 1000/- each for this scheme. On the other hand, only six scheduled caste families were extended Rs. 1000/- each for muga.  

In spite of there, the Boro-Kacharis of this region are lagging behind. They do not even get opportunities to act as labourers.

From time immemorial, the Boro-Kacharis of the study area have been engaged with Sericulture industry. They should be provided with improved processes and improved implements so that they can earn more at home working in leisure hours.

If the Government takes up schemes on mulberry and other feeding plantations in large scale through social Forestry schemes and the Rural Development Department, more and more unemployed youths will get opportunities to absorb themselves.