~~226R~~ 227R

A REPORT

ON

DEVELOPMENT OF HORTICULTURE AND ITS IMPACT ON ECONOMIC LIFE OF THE GAROS OF GOALPARA DISTRICT OF ASSAM

Conducted By-

ASSAM INSTITUTE OF RESEARCH FOR TRIBALS AND SCHEDULED CASTES, KHANAPARA, GUWAHATI-22

YEAR: 2011-12

2011-12

PREFACE

In India the scheduled tribes numbering 678 consists of 16.4 million households and a total population of 84.3 million as per 2001 census. The percentage of scheduled tribe population accounts for 8.20 of the total tribal population of the country. Assam is having 25 scheduled tribes with 5.93 lakh households and a total population of 33.08 lakh indicating 12.41% of the total population of the state. The tribes with diverse origins and rich cultural heritage have been living in various levels of development under different environmental conditions.

Studies in horticulture and its impact on the economic life of the Garos is an important and burning aspect so far the development economic life is concerned. Studies on this aspect has seen very meagre in social sciences. Therefore, an attempt was made to find out the real picture of the so called horticultural movement and its impact on the livelihood pattern of the Garos of Goalpara district of Assam, where total twenty numbers of Garo dominated revenue villages were considered as a core area of our study.

It has revealed from our study that the Garos were basically shifting cultivators quiet a couples of decades ago when their population were very low and natural resources were more. It is stated by the older generation that there were found hardly a family within a kilometre of range during that time and they were not compelled to work hard to earn their daily bread. Mere shifting cultivation and a little bit wet cultivation could fulfil their optimum needs. Now time has got drastic changes and they have got enough population growth and single cultivation within a limited area couldn't meet their required needs. Therefore alternative cultivation other than their traditional has become an utmost way. Although certain cultivations practised traditionally by the Garos were not known as horticulture, fortunately they could earn a good amount which strengthened their family economy. It was not commercially grown in their horticultural field. According to them it was a decade ago that they have got the idea of commercialising their horticultural practices, when they observed the market demand the products. Now more or less every household are seen to practice horticulture in their hilly slopes. They cultivate good quantity of vegetables, gingers, oranges, turmeric, edible roots, tubers, black pepper, potatoes, pumpkin, bananas etc. Thus, it has been found out from the study that the horticulture has got a new shape among the Garo society, because it has brought a remarkable change in the economic life of the Garos. Even it has also influenced the non Garo people living in around their habitat. Now a competition has occurred among the people of those areas.

The present study was carried out in Goalpara district and two Garo dominated blocks namely Rangjuli and Kausdhuwa were selected for purpose of the present study. From each block ten numbers of densely populated revenue villages were taken into consideration. Most of the villages were located in the foot hills of Assam which are having close ties with the Meghalya state. Data was collected by the temporarily appointed field investigators by visiting the households with the help of interview schedule and took three months to complete the works. It was found from the study that among the Garos horticulture play a poignant role in their economic life as it determines standard of life. As

stated the horticulture has changed their total way of life. According to them horticulture has also influenced the local non Garo people to a great extent.

The report of the study has been divided into six chapters. The first chapter contains a brief introduction of the Garos, followed by chapter-ii which contains objectives, methodology, sampling design. The third chapter-iii(A) contains analysis of the village schedule followed by chapter-iii(B) which contains the analysis of the household schedule. Chapter-iv contains findings of the study and chapter-v contains conclusions, while chapter-vi contains suggestion. Annexure is incorporation in the last part of the report.

The study was carried out by Mr. Birendra Kumar Barman, Assistant Research Officer, AIRTSC and he was assisted by temporarily appointed six field investigators namely Mr. L.Das, Mr.U.Bora, Mr. J.Baglari, Mr.M.Das, Mr.N.Sarania and Miss H.M.Das. I offer my thanks to all of them. Similarly, Mr. Ashim Bora, R.O. (I/C), Mr. Horichandra Morang, Sr. Investigator, and Mr. Debobrata Laskar, Sr. Investigator, AIRTSC, have provided valuable helps at the time of schedule preparation. I consider it a privilege to offer my hearty thanks to all of them.

I am thankful to the Ministry of Tribal Affairs, New Delhi, Government of India and Department of WPT & BC, Government of Assam, Dispur, Guwahati-6, for sanctioning necessary fund for the study.

I offer my thanks to Dr.G.C. Sharma Thakur, Rtd. Joint Director, Assam Institute of Research for Tribals and Scheduled Castes, for his sincere and brilliant consultation.

I offer my special thanks to Mr. G. C. Kakati, Joint Director, AIRTSC, who carefully monitored the entire study to make it successful one. I also thanks to Mrs. J. Gogoi, ACS, Dy. Director for extending her sincere help to the concerned officer.

In fine, I tender my thanks to the people of the areas under the Study, who extended their unconditional and whole hearted cooperation to make the study to its successful end.

Dinesh Sharma, ACS
Director,
Assam Institute of Research for
Tribals and Scheduled Castes,
Khanapara, Guwahati-22

CONTENTS

		Page No.
CHAPTER-I		
	A. The Garos-A brief introduction	1-6
CHAPTER-II		
	B. Objectives, Methodology and Sample Design	7
CHAPTER-III-A		
	C. Data Analysis of Village Schedule	8-16
CHAPTER-III-B		
	D. Data Analysis of Household Schedule	17-47
CHAPTER-IV		
	E. Findings of the Study	48-55
CHAPTER-V		
	F. Conclusion	56-59
CHAPTER-VI		
	G. Suggestions	60
ANNEXURE:		
I)	Household Schedule	61-75
II)	Village Schedule	79-82
III)	A Sketch map of Goalpara District	83

CHAPTER-I

Introduction:

Assam is traditionally a horticultural state due to its unique agro climatic condition which permits growing of horticultural crops like various fruits, vegetables, flowers, spices, nuts, tubers crops, medicinal and aromatic plants. World's citrus belt encompasses Assam within it.

At present the area under horticultural crops is 5.40 lakhs hectors which is 14 percent of the total crop area of the state. The state is surplus as regards fruits, vegetables and spices production. The important crops grown include pineapple, banana, orange, jackfruit, lemon, guava, litchi, mango etc and more than ten minor fruits. In case of vegetables mention may be made of potatoes, brinjal, spices, chilly, coriander, black pepper, ginger and turmeric.

Table-1

Area and production of horticultural crops (2007-2008):

Name of Crops	Area under Cultivation (Lakh Hectors)	Total Production (Lakh MT)
Fruits	1.16	14.02
Spices	0.88	2.18
Vegetables	2.38	39.16

Source: Directorate of Agriculture, Assam.

Since 2001-2002 Technology Mission for Integrated Development of Horticulture (TMIDH), a centrally sponsored scheme is in operation in Assam for integrated development of horticulture. The objective of the scheme was to augment the productivity of horticulture with precise strategies in the form of Mini Mission.

Table-2

Production or productivity of horticulture crops during 2007-2008 of implementation of THIDH:

Name of Crops	Production (In Lakh MT)	Average Yield (in average yield in kg/hectors
Fruit Crops	14.02	12142
Spice Crops	2.18	2478
Vegetable Crops	39.16	16482

Source: Directorate of Agriculture, Assam.

Horticulture has a unique place in the socio-economic development of the tribal people living in hills. The slopes of the lower hills or foot hills are suitable for pineapple and orange as such these important horticultural crops are largely exported to the nearby markets in the towns and cities.

CHAPTER-I

Introduction:

Assam is traditionally a horticultural state due to its unique agro climatic condition which permits growing of horticultural crops like various fruits, vegetables, flowers, spices, nuts, tubers crops, medicinal and aromatic plants. World's citrus belt encompasses Assam within it.

At present the area under horticultural crops is 5.40 lakhs hectors which is 14 percent of the total crop area of the state. The state is surplus as regards fruits, vegetables and spices production. The important crops grown include pineapple, banana, orange, jackfruit, lemon, guava, litchi, mango etc and more than ten minor fruits. In case of vegetables mention may be made of potatoes, brinjal, spices, chilly, coriander, black pepper, ginger and turmeric.

Table-1

Area and production of horticultural crops (2007-2008):

Name of Crops	Area under Cultivation (Lakh Hectors)	Total Production (Lakh MT)
Fruits	1.16	14.02
Spices	0.88	2.18
Vegetables	2.38	39.16

Source: Directorate of Agriculture, Assam.

Since 2001-2002 Technology Mission for Integrated Development of Horticulture (TMIDH), a centrally sponsored scheme is in operation in Assam for integrated development of horticulture. The objective of the scheme was to augment the productivity of horticulture with precise strategies in the form of Mini Mission.

Table-2

Production or productivity of horticulture crops during 2007-2008 of implementation of THIDH:

Name of Crops	Production (In Lakh MT)	Average Yield (in average yield in kg/hectors
Fruit Crops	14.02	12142
Spice Crops	2.18	2478
Vegetable Crops	39.16	16482

Source: Directorate of Agriculture, Assam.

Horticulture has a unique place in the socio-economic development of the tribal people living in hills. The slopes of the lower hills or foot hills are suitable for pineapple and orange as such these important horticultural crops are largely exported to the nearby markets in the towns and cities.

For instances the Garo oranges fetch good competitive price in Guwahati city. The pineapples produced in the Garo hills and Dima Hasao (NC Hills) are of very high quality. The gingers, turmeric, bamboo products, bananas produced in the hills have a flourishing market in the plains.

The Garos are traditionally jhumias (shifting cultivators) but jhuming is discouraged in their homeland (Meghalaya). The Garos living in the border areas of Assam and Meghalaya used to practice jhuming, but they soon left the practice of shifting cultivation is not feasible and practicable. Thus shifting cultivation among the Garos of Goalpara district is existing only in name. Wet cultivation gains wide popularity. Of late, the practices of horticulture in the erstwhile jhum areas have become a noticeable economic approach among the Garos of Goalpara. The planned and systematic cultivation of horticulture has brought tangible changes in the life of the Garos. Due to Govt. initiative, they have brought about a revolution in the production of as many as eleven horticultural crops like pineapple, orange, banana, yams, potatoes, ginger, black pepper, green vegetables, rubbers etc. These systematic and planned horticultural products not only benefitted the Garos to uplift their economic standard, but also became a role model for other tribal and non-tribal communities who have hitherto neglected the potential source of economic development.

The Garos: A brief introduction

The Garos are one of the major scheduled tribes of the two Autonomous Hill districts of Assam viz Karbi Anglong and North Cachar Hills (now renamed as Dima Hasao). However in the hill districts their habitat is confined in the Neparpatty areas within the Bokajan tribal development block of Karbi Anglong district. The origin of these Garo villages of Bokajan could be traced back to the Garo hills district of Meghalaya. Besides there are a good number of Garo villages in the Guwahati Sub-division of Kamrup district and Goalpara and South Salmara Sub-division of undivided Goalpara district bordering Garo hills of Meghalaya.

The Garos call themselves Achik Mande which literally means hill man. Ethnically they belong to the Mongoloid group of the Indo Tibetan family. The Garos like other tribes of Assam belong to the Tibeto Burman families of the Bodo linguistic group. The Garos are divided into several sub groups or sub tribes. The sub groups are: (1)A'wes, (2) A'Kawes, (3) Chisak, (4) Dual, (5) Matchi, (6) Matjangchi or Matabeng, (7) Am'beng, (8) Chibok, (9) Ruga, (10) Ganching, (11) Atong, (12) Megam

The main feature of the sub-groups is that each of them has some cultural traits which are not common among the fellow groups. The language spoken by each of them has also a variation in a considerable extant.

Clans:

Opinions vary regarding the number of clans among the Garos. S.N. Barkataky opines that there are three original clans namely Marak, Momin and Sangma. Later on three other clans namely Abeng, Areng and Sira were created. Milton Sangma, belonging to the tribe mentions two original clans viz Sangma and Marak. Later on more clans namely Momin, Areng and Sira were evolved. All these clans are subdivided into several subclans called Ma'chong, meaning motherhood.

Demography:

As per 2001 census the Garos have a total population of 21,112 and out of these 10,739 are male, while 10,373 are female constituting 0.62 percent of the total ST population of the state. The percentage of literacy rate is low i.e. 40.06, male 44.44, female, 35.52 against the state's percentage of literacy of 62.5, male 12.3 and female, 52.4.

Family Structure:

The Garos like the Khasis are patriarchal and patrilocal. The line of descent is always traced through the females only. The mother is the head of the family while the father is considered as an outsider who is inducted to the family by virtue of marriage. The children acquire the title of the clan/ sub clan name of their mothers only.

Marriage:

In marriage the Garos strictly follow the rules of exogamy. Marriage between a boy and a girl belonging to the same clan cannot take place. For example a Sangma boy is not allowed to marry a Sangma girl. If this customary law is violated the couple gets no social status.

Generally the girl takes the initiative to select her husband and the marriage proposal shall have to be initiated by the girl's family. Negotiated form of marriage is the prevailing practice which is called Do'sia'. When a girl falls in love with a boy not belonging to her clan she reveals her intention to the family members or to the relatives. Her parents or guardians then visit the house of the boy on an appointed date to negotiate the marriage. If the boy's family accepts the proposal, a date for the marriage is fixed. Do'sia' or negotiated marriage is performed in a very simple way by killing two fouls in front of the couple followed by a feast, dancing and merry makings.

Informal Marriage:

In marriage by elopement or marriage by capture, a girl goes and sleeps with a boy of her liking stealthily at night. Marriage also takes place if a boy partake food with a girl at her invitation.

Cross cousin marriage i.e. marring the daughter of mother's brother is a preferential form of marriage among the Garos, but marring the daughter of the father's sister is a taboo. If there is no marriageable daughter of the mother's brother, a girl from her clan is chosen for their son. But now-a-days this rule has been slackened and even endogamous marriages have been recorded among them.

As per Nokrom system after marriage the son-in-law is required to stay in the house of his parents-in-law. There are two kinds of son-in-law among the Garos- one is called Nokrom and other is called Chowary. Unlike the Chowary, the Nokrom becomes the owner of the every thong. The Chowary does not stay at the father-in-law's house. He builds his own house and manages whatever landed property his wife receives from her mother as inheritance. If the father-in-law of a Nokrom is a Nokma (headman) the Nokrom automatically becomes the Nokma.

The youngest daughter is generally the most favourite member of the family. The person who marries the youngest daughter of the family becomes the Nokrom.

Another interesting feature of the Garo marriage system is the system of marring the mother-in-law by the Nokrom at the death of his father-in-law and thus he becomes the husband of the both of his mother-in-law and her daughter-in-law at the same time.

The Garos are polygamous i.e. a man can marry more than one wife. Sorrorate (marring two sisters) is in vogue. Opinion of first wife before marring the second is to be taken

compulsorily. The Garos don't have the system of bride price. Junior levirate i.e. marring the widow of the elder brother is in vogue.

Inheritance:

Among the Garos the line of descent is traced through the mother line only and at her death the youngest daughter becomes the owner of the mother's property. Now she becomes the Nokma.

Nokma:

The traditional village chief is called Nokma. All lands are administered by him. Land administration in Garo village is carried on by the Nokma and the council of the village elders in accordance with the customary laws. The Nokma is an important portfolio. The decisions of the village council headed by the Nokma are binding on both disputed parties The Nokma is to be consulted in matters of observance of festivals, religious ceremonies, marriage, death rites, starting of cultivation etc.

Religious life:

Almost all the Garos of Assam are Christians. None the less they still remember their traditional religious beliefs and practices. According to their traditional religious beliefs there is a supreme being called 'Tatara Rabuga'. They believe in the existence of various deities/spirits both benevolent and malevolent. To appease the deities, they sacrifice animals and birds.

Economy:

Like all other ethnic groups of Assam, the Garos too depend upon agriculture for their livelihood. Besides paddy they cultivate maize and other cash crops. They are very good horticulturist and they raise pineapple in large quantities. Oranges are also produced in their gardens. There are many progressive cultivators having tractors, power tillers and pump sets for irrigation purposes.

The Garos rear cattle, pigs, ducks and poultry. The Garo women are expert weavers and they weave the clothes for all the members of a family. Sericulture, mainly Endi, is also an important subsidiary occupation for the people. The Garos are very labourious and strong built people. The youths get employment in police battalion service and Indian Army due to their well body built.

Food habits:

Rice is the staple food of the Garos. Rice is generally cooked in earthen pots and sometimes in bamboo tubes. In addition to rice they take maize, millet and tapioca roots occasionally. They take meat of almost all kinds of animals except tigers. Another delicacy is the curry prepared from tender bamboo shoots. Oil and ghee is not used by them for cooking purposes. They also use alkaline prepared from ashes by burning dried plantain stems.

Rice beer is the most favourite drinks for the Garos. Both men and women relish locally brewed rice beer which is also a nutritious food. But the Christian converts do not prefer drinking of rice beer.

Dress and Ornaments:

The Garos have their traditional dresses and ornaments. The traditional attire of a man is a strip of woven cloth measuring about 2 metres in length and 1.5 cm in breadth. In the past rows of white beads and cowries were used as a part of decoration of the clothes. The men also use turbans. The Nokmas use special turban on festive occasions. Women attire consists of a piece of cloth measuring about 45cm in length and 36cm in breadth. The cloth is tied around the waist leaving the entire region from the thigh to the foot bare. In the upper part of the body the womenfolk use blouse. Like men, the women also use turban keeping the top of the head bare. During winter the women also use shawls to cover the upper part of the body.

The Garos, both men and women are fond of ornaments. There are some ornaments which are exclusively used by the womenfolk while some ornaments are used by both men and women. Ear rings made of brass, rings made of brass, beads for ears, silver bangles, brass or silver necklace are widely used by the Garo. Now-a-days, however, the Garos like other tribes prefer modern dresses which are locally available and purely machine made.

The Garos have an important traditional institution called 'Nokpante' (bachelor's dormitory) which serves as an institution of informal education in the sense that the members (youths) are trained in different traditional arts and crafts, dances, playing musical instruments, use of weapons etc. Entering women in 'Nokpante' is taboo. All the young unmarried youths are required to sleep in the dormitory. At present role of dormitory is fast diminishing.

Conclusion:

Like other tribal societies, the Garo society has undergone changes in post independence days. The spread of education, development activities have the Garo society adaptable to changes. Political awareness has given rise to a new set of leadership. But the core of the culture remains unchanged even today.

CHAPTER-II

Objective:

The main objectives of the study are:

A) To find out the sphere of horticulture movement in the locality.

B) To find out the various phases in the growth of horticulture, important factors, agents that lead to the development of horticulture among the Garos.

C) To find out the variety of crops grown in the horticultural gardens/ fields.

D) To find out the economic changes in the life of the Garos after its introduction.

E) To find out the role of Government and other agencies in the development of horticulture.

F) To find out the number of individuals participating fully in horticulture.

Methodology:

The study was carried out in the Garo dominated areas of Goalpara district, adjacent to the west Garo hill district of Meghalaya. Participants observation method with the help of structured schedules for both village and households was adopted. The investigators were collecting data by visiting the Garo villages and the officers from the Directorate of Assam Institute of Research for Tribals and Scheduled Castes, guided them in fields. For secondary data, Department of Agriculture, Directorate of Agriculture and District Agriculture Officer, Goalpara were approached.

Sample Design:

Random sampling technique was followed while selecting the villages. Twenty revenue villages were selected for the study on the sampling basis and 700 households were taken for in depth micro level study. People of different age and sex grades and standardof education have been selected.

CHAPTER-III

A

DATA ANALYSIS OF VILLAGE SCHEDULES

Population:

Altogether twenty Garo villages of Goalpara district with a population of 31,654, male 16,512 (52.16%), female 15,142 (47.83%) covering 700 households have been selected for the study. There are 489 BPL households in the sample. Details of the name of the district, name of blocks, name of villages, number of households, number of population, name of Police station have been shown below in table-1.

Table-1

Showing name of the District, name of block, name of villages, nos. of households:

Name of District	Name of block	Name of villages	No. of households
1	2	3	4
Goalpara	Rangjuli	Billalpara	35
		Bardamal	35
		Sesa Jora	35
		Mariompur	35
		Landa Khanda	35
		Badakha	35
		Bhomora Pathar	35
		Amguri	35
		Melo Para	35
		Sal Para	35
		Gandam Pathar	35
		New Owguri	35
		Khalkhapara	35
		Tengabari Santipur	35
		Bilsimari	35
	Kausdhuwa	Salkhapara	35
		Belpara	35
		Kharkhuta	35
		Fenchingmari	35
		Garo Roumari	35
Total		Twenty no. of villages	700

Settlement:

Out of 20 villages under survey 13 villages (65%) are agglomerated, 3 (15%) villages are dispersed and 4 (20%) are isolated. Terrain wise the villagers may have separate habitations but there is cohesiveness and oneness in matters of socio-cultural behaviour.

Table No-2

Showing settlement pattern:

SL. No.	Pattern	No.	%
1	Agglomerated	13	65
2	Dispersed	3	15
3	Isolated	4	20
4	Others	-	-
	Total	20	100

Transport and communication:

As regards to transport and communication facilities only 2 villages are located at a distance of 3-5 kilometres from the nearest motor-able road, while the distance to the motor-able road of 7 villages is 6-10 kilometres and for 6 villages the distance is 11-14 kilometres. Five villages get such facility at a distance of 15-20 kilometres. The distance of 9 villages to the nearest transport station is 6-10 kilometres while the nearest transport station for 6 villages lies at a distance of 11-14 kilometres. The distance of 5 villages to the nearest transport station is 15-20 kilometres. Rail station is located at a distance of 20 kilometres from all the villages.

The block development office in tribal setting caters to the multifarious needs of the villagers which is supposed to be located in or near the villages. But in the instant cases we have found that only 3 villages get the facilities provided by block at a distance of 6-10 kilometres, while the distance of 5 villages to the block office is 11-14 kilometres and the distance of 12 villages to the said office is 15-20 kilometres. All the villages are located at a distance of 15-20 kilometres from the Sub Divisional head quarters. Table shows the pattern of distance.

Table No-3

Showing the transport and communication facilities.

Distance From the Village	3 to 5 km	6 to 10 km	11 to 14 km	15 to 20 km	Total
Nearest motorable road	2	7	6	5	20
Nearest Transport Station	-	9	6	5	20
Nearest Railway Station	-	-	-	20	20
Block office		3	5	12	20
Sub- Divisional Head quarter	-	-	-	20	20

Road:

The much typed tribal development in post independence period is a mockery as the condition of the village roads of the surveyed villages testifies. Even in the onset of 21st century as many as 7 villages (35%) of the 20, depend on foot tracks to have contact with outside world. Nine villages (45%) have only katcha fair weather motor-able road, two (10%) villages have katcha all weather motor-able road while one (5%) village is somewhat lucky to have gravelled road. Similarly the hilly zigjug track is the communication link of one (5%) village with outside world. Table-4 shows the actual picture of the surveyed villages.

Table No-4

Showing road condition of the Villages:

Conditions of Road of the Village	No.	%
Foot Track	7	35
Katcha Fair Weather motor-able Road	9	45
Katcha all Weather motor-able Road	2	10
Gravelled Road	1	5
Other (Hilly zigjug track)	1	5
Total	20	100

Major crops:

The major crops grown by the Garos are in the Kharif category-ginger, tapioca, paddy, leserey, pumpkin and in Rabi category, potatoes reddish, vegetables, mustered, pulses, which give them a satisfactory return etc. Besides these, the Garos of the surveyed villages practised widely wet cultivation, which gives them a major economic support to run their normal life. Table-5, shows the major crops grown in their fields.

Table No-5

Showing major crops grown in the villages:

Season	Sl. no.	Name of Crops
Kharif	1	Ginger
	2	Tapioca
	3	Wet cultivation (Sali Rice)
	4	Leserey
	5	Pumpkins of different variety
Rabi	1	Potatoes
	2	Reddish
	3	Vegetables
	4	Mustered
	5	Pulses

Sources of drinking water:

As regards drinking water, the position is not satisfactory as only 4 villages (20%) possess tube well water of which is somewhat safe. However, 5 villages (25%) get the drinking water through pipe water supply scheme. Even today the traditional dependence on river/ stream is resorted to by 3 villages (15%). Two villages (10%) depend upon tank/ pond for their drinking water supply. Six villages (30%) drink water from wells. Table-5 indicates the actual picture of the drinking water scenario of the villages.

Table No-6

Showing main sources of drinking water facilities:

Sl .No	Source	No	%
1	Rain Water	-	-
2	Tank/ pond	2	10
3	Stream/ River	3	15
4	Well	6	30
5	Tube Well	4	20
6	Water Supply Scheme	5	25

Village electrification:

Although situated in far flung areas without good communication facilities, five villages (25%) are having electric connection and four villages (20%) get regular power supply. Electric connection has been provided to five villages (25%) but the service is not regular. Six villages are yet to be provided with electric connection. Table-7 shows the electrification within the village.

Table-7

Showing the village electrification:

Sl. no.	Village Electrification	No. of villages	%
1	Electrification	5	25
2	Not Electrification	6	30
3	Electrification and Regular Supply	4	20
4	Electrified but not regular Supply	5	25

Educational facilities:

As regards educational facilities not all the villages have L.P. schools within the villages and only eleven villages have primary schools within the villages. Three villages have M.E. schools within the village, while seventeen Anganwadi centres are located in seventeen villages. High school and Higher Secondary schools are located within two to five kilometres from two villages each. Details are shown in table-8

Table-8

Showing educational facilities within the villages:

Sl. No	Educational Institution	No. of schools within the village	%	Distance from the village (out of village)
1	Primary School	11	31.42	
2	Middle School	3	8.57	
3	High School	2	5.71	4 km.
4	H S School	2	5.71	4 km.
5	College	Nil	-	
6	Anganwadi	17	48.57	
	Total	35	100	

Health facilities:

The health institutions within the villages are found only in nine (45%) villages. Two villages (10%) each have medical sub centres, three villages (15%) each have private clinic and Govt. Dispensaries and one (5%) village has private hospital. Besides, two (10%) villages get medical help from Primary health centre located beyond 14 kilometres distance. Details are shown in table-9.

Table-9

Showing the health facilities available within/out-side the village:

Sl. No	Health Institutions	No of centre Within the village	%	Outside of the village
1	Sub Centre	2	18.18	
2	Primary Health Centre	2	18.18	14 km.
3	Private Clinic	3	27.27	
4	Govt. Dispensary	3	27.27	
5	Private Hospital	1	9.9	
	Total	11	100	

Health provider:

As regards availability of health providers, it is found that eighteen (90%) villages do not have such medical personal and only two (10%) villages are served by health providers. However village health guards are found in fourteen (14%) villages out of twenty villages under the survey. As many as seventeen (85%) villages out of twenty villages do not have traditional birth attendant while Asha Karmi/ health supervisors are found in seventeen (85%) out of twenty villages. Details are shown in table-10.

Table-10

Showing the availability of health provider:

Sl. no.	Health Provider	Yes	%	No	%
1	Private Doctor	2	10	18	90
2	Village Health Guide	14	70	6	30
3	Traditional Birth attendant	3	15	17	85
4	Mobile Health Unit	Nil	-	Nil	-
5	Asha karmi/ Supervisor etc.	17	85	3	15

Other communication facilities:

All the villages have to go outside the village to get the services from post and telegraph offices. Out of twenty villages, only three (15%) villages have STD facilities within the Village. There are pharmacies cum medical shops in four (20%) villages only which are located within the villages. As regards weekly market two (10%) villages have such facility within the village while eighteen (90%) get such facilities located outside the village. The Garos are agriculturist and they produce sufficient quantities of horticultural products. But surprisingly only four villages (20%) have Agro Service centres. Details are shown in table-11.

Table-11

Showing communication and other facilities available in the surveyed village:

Sl. No	Facilities	Within the Village	Outside of the Village
1	Post Office	Nil	20 (100%)
2	Telegraph Office	Nil	20 (100%)
3	STD Booth	3 (15%)	17 (85%)
4	Bank	Nil	Nil
5	Pharmacy/ Medical Shop	4 (20%)	
6	Weekly Market	2 (10%)	18 (90%)
7	Fair Price Shop	Nil	Nil
8	Agro-Service centre	4(20%)	Nil

Agriculture credit facilities:

As regards agricultural credit facilities from institutional sources, it is seen that a branch of SBI located outside the villages provide such benefit to the villagers. Also the Assam Gramin Vikash Bank located outside the villages and UBI located outside the villages provide necessary agricultural credit facility to the villages. Self help groups within the village are found two villages while five such groups are located outside the villages. The Samabai Samiti are conspicuous by their absence which is not a healthy sign.

The village money lenders are providing credit to the villagers at high rate of interest. There are four such. Table-12 shows the actual picture of such activities. money lenders outside the studied villages

Table-12

Showing the availability of agricultural credit facilities of the surveyed villages:

Source	Institution	Within the village	Outside of the Village
Institutional	1 . State Bank of India	Nil	1
	2. Assam Gramin Vikash Bank	Nil	1
	3.United Bank of India	Nil	2
	4. Punjab National Bank	Nil	Nil
	5. Self-Help group	2	5
	6.Samabai Samiti	Nil	Nil
Non-Institutional	7. Village Money Lender	Nil	4
	8. others (specify)	Nil	Nil

Extension of services:

The extension of service in tribal areas is utmost necessary as very often the tribal people are unable to go to the district/sub-divisional centres for necessary advice due to communication bottleneck. The shows that out of twenty villages only eleven villages have extension service of Agricultural Development.

The Gram Sevaks are posted to serve the villages who very often are handicapped due to communication problems. But in the present study it is observed that only thirteen villages out of twenty get the services of Gram Sevaks. The Gram Sevaks are required to keep close contact with the villagers for giving guidance in farming and agricultural practices. The study shows that the Gram Sevaks visit the villages as per his will and out of twenty villages eleven villages reported that the Gram Sevak visits the villages once in a year, while nine villaes reported that Gram Sevaks do not visit the village regularly.

As many as sixteen villages are unaware of the agriculture extension officer of the area. Sixteen villages reported that they have not seen such officers in their while four villages reported in affirmative.

Land slide/ soil erosion is a common problem for the Garos as the foothill areas are vulnerable for such natural calamity particularly during summer. During 2009-2010 34 bighas of crops area of 80 households in the villages have been damaged by land slide. During that year 6 men and 13 animals were lost.

Socio-cultural organisation:

Socio-cultural organisations provide multifarious functions in the villages. These organisations play a poignant role in strengthening the Garo society maintains a unique unity. These organisations are not merely maintain the unity rather these take the social responsibility of the Garo society at large. There are seventeen Churches in the villages with a total membership of 700. Accordingly in our study we have found the following socio-cultural institutions in the surveyed villages.

Table-13

Showing the existence of socio-cultural organisation in the surveyed village:

Sl. No	Name of socio-cultural institution	Total No
1	Ajang guppa social unit	4
2	Garo gospel	8
3	Folk Potrok Society	3

Implementation of Govt. schemes:

After independence Government has instituted several social welfare schemes in the villages like NEREGA, IAY Midday Meal Scheme, AAY, Family Oriented Income Generating Scheme, Infra Structure Development Scheme, Rajib Gandhi Rural Electrification Scheme, which have practically benefited a sizeable number of Garo households. Thus from NEREGA Scheme 235 households have been able to get employment. The IAY has benefited 53 households. The Midday Meal Scheme provides meal to 151 households, while the AAY provides relief to 37 households. The Family Oriented Income Generating Scheme provides scope of self employment to 25 households. Under the Infra Structure Development Scheme 13 households have been benefited. Details are shown in table-14.

Table-14

Showing the various Govt. Scheme so far implemented in the surveyed villages:

Sl. no	Schemes/ Programmes	No. of households	%
1	NREGA	235	33.57
2	Indira Awaaj Yojana (IAY)	53	7.57
3	Mid-day Meal Scheme	131	18.71
4	Antodaya Anna Yojana (AAY)	37	5.28
5	Family Oriented Income Generating Scheme of WPT&BC	25	3.57
6	Infrastructural Development Scheme	13	1.85
7	Rajiv Gandhi Rural Electrification Scheme	206	29.42

CHAPTER-III - B

DATA ANALYSIS OF THE HOUSEHOLD SCHEDULE:

Sex wise distribution of population:

Altogether 700 households of the 20 sample villages were selected for the household study. The total population of the surveyed household is 29,555, male 14891 (50.38%), female 14,664 (49.69%). Details are shown in table-1

Table-1

Showing sex wise total population of the surveyed village:

1	Total population	29,555	%
2	Total Male	14,891	50.38%
3	Total Female	14,664	49.62%

Age and sex distribution of population:

In the age and sex distribution of population 1748 males (11.7%) falls within the age grade of 10-14 years that constitutes the highest figure followed by 1732 males (11.63%) in the age grade 20-24 years and 1730 males (11.61%) in the age grade 25-29 years, while among the females 1834 females (12.5%) is in the age grade 15-19 years which constitutes the highest female population, followed by 1740 females (11.8%) in the age grade 25-29 years and 1642 females (11.1%) in the age grade 20-24 years and 1622 females in the age grade 10-14 years. Highest male and female persons fall in the age grade 25-29 years the figure being 3470 (11.7%). Details are shown in table-2.

Table-2

Showing the age and sex distribution of the studied villages:

Age group	Male	%	Female	%	Total male and female	%
0-4	1052	7.0	1056	7.2	3108	10.5
5-9	981	6.5	998	6.8	1979	6.6
10-14	1748	11.7	1622	11.0	3370	11.4
15-19	1598	10.7	1834	12.5	3432	11.6
20-24	1732	11.63	1642	11.1	3374	11.4
25-29	1730	11.61	1740	11.8	3470	11.7
30-34	1184	7.9	1121	7.6	2305	7.7
35-39	1145	7.6	1153	7.8	2248	7.6
40-44	1326	8.9	1289	8.7	2615	8.8
45-49	801	5.3	689	4.6	1490	5.0
50-54	648	4.3	709	4.8	1357	4.5
55+	948	6.3	812	5.5	1760	5.9
Total	14,891	100	14,664	100	29,555	100

Marital status of the population:

Regarding marital status it is found that the unmarried males fall in the age grade o-4 to 10-14 years and the figure being 1052 (7%) in 0-4 years age, 981 (6.5%) in 5-9 years and 1748 (11.7%) in 10-14 years. Among females the unmarried status falls in the same age grade i.e. 0-4 years 1056 (7.2%), 5-9 years 998 (6.8%) and 10-14 years 1622 (11%). Highest marriage among males take place in the age grade 20-24 years and the percentage being 11.4, while highest marriage takes place among the females in the age grade 15-19 years and the percentage being 12.2.

Unmarried male persons are more in the age grade 15-19 years. There are 97 males (0.6%) against unmarried females of 34 (0.2%). In the age grade 20-24 the number of female unmarried members are more i.e. 41 (0.2%) against male unmarried individuals i.e. 30 (0.2%). Besides there are 17 (0.1%) unmarried females in the age grade 30-34 years while there is no unmarried males in that age grade.

As regards divorce there are four female divorced persons in the age grade of 25-29 years and 35-39 years, two each in both age grades. There are 25 widows against 3 widowers. Details are shown in table-3.

Table-3

Showing the marital status of the surveyed village:

Age group	Married				Unmarried				Divorce				Widow		Widower	
	Male	%	Fem ale	%	Male	%	Fem ale	%	M	%	F	%	No	%	No	%
0-4	-	-	-	-	1052	7.0	1056	7.2	-	-	-	-	-	-	-	-
5-9	-	-	-	-	981	6.5	998	6.8	-	-	-	-	-	-	-	-
10-14	-	-	-	-	1748	11.7	1622	11	-	-	-	-	-	-	-	-
15-19	1501	10	1800	12.2	97	0.6	34	0.2	-	-	-	-	-	-	-	-
20-24	1702	11.4	1601	10.9	30	0.2	41	0.2	-	-	-	-	-	-	-	-
25-29	1184	7.9	1733	11.8	-	-	-	-	-	-	2		-	5	0.03	-
30-34	1145		1102	7.5	-	-	17	0.1	-		-	-		3	-	-
35-39	1326	8.9	1151	7.8	-	-	-	-	-	-	2	-			-	-
40-44	799	5.3	1280	8.7	3	0.02	-	-	-	-	-	-		9	-	-
45-50	648	4.3	387	2.6	-	-	-	-	-	-	-	-		2	-	-
55+	948	6.3	705	4.8	-	-	-	-	-	-	-	-		4	-	-
Total	9253	-	9759	-	3911	-	3768	-	-	-	4	-	-	22	-	-

Educational status of population:

In the educational level females are not very much lagging in class vi-x, HSLC level as there are 4347 males in class vi-x and 1742 males in HSLC against 5042 females in class vi-x and 1855 females in HSLC passed. In HS passed the females are lagging much behind as there are 230 females against 846 males. There are 28 male graduates against 25 female graduates. In post graduate only 3 male are found. There are total 111 male and female illiterates in the studied households. Details are shown in table-4.

Table-4

Showing the educational status of the surveyed village:

Age group	Male						Female					M + F
	i-v	vi-x	HSLC	HS	Graduate	P G	i-v	vi-x	HSLC	HS	Graduate	Illiterate
0-4	2032	-	-	-	-	-	2054	-	-	-	-	-
5-9	1524	942	-	-	-	-	1356	2101	-	-	-	-
10-14	980	900	-	-	-	-	1342	1059	-	-	-	-
15-19	944	560	281	40	-	-	428	745	715	80	11	-
20-24	541	435	145	8	-	-	454	145	255	50	5	-
25-29	486	134	390	92	8	-	234	121	185	51	4	-
30-34	436	422	120	93	7	2	289	200	129	35	5	-
35-39	213	183	112	194	6	1	292	131	120	9	-	-
40-44	171	145	146	135	7	-	275	127	143	-	-	39
46-49	450	392	312	200	-	-	275	123	123	-	-	37
50-54	196	199	130	84	-	-	177	301	141	-	-	10
55-59	52	35	106	-	-	-	225	112	144	5	-	25
60+	-	-	-	-	-	-	-	-	-	-	-	-
Total	8025	4347	1742	846	28	3	7301	5042	1855	230	25	111

Occupation:

Agriculture in the main occupation of the tribal people and similarly the Garos too have agriculture as the main occupation as 342 households (48.8%) have practiced agriculture as their main occupation. There are quite a good number of persons engage in service and it is found as106 (15.1%) households who have Govt. service. One hundred and seventy four households (24.8%) have wage earners. Only 18 (2.5%) households are engaged in business and 13 households possess non Govt. service holders. Details are shown in table-5.

Table-5

Showing the occupational distribution of the surveyed village:

Sl. No	Occupation	No. of Population Engage	%
1	Agriculture	342	48.8
2	Govt. Service	106	15.1
3	Business	18	2.5
4	Non Govt. Service	13	1.8
5	Daily Wage Earner	174	24.8
6	Others	47	6.7
TOTAL		700	99.7

Types of family:

The traditional joint family pattern is becoming unpopular as today out of 700 households 267 (38.1%) households prefer joint family against 326 (46.5%) households of nuclear family. There are only 76 (10.8%) extended families and 31(4.4%) belongs to other category. Details are shown in table-6

Table-6

Showing the types of family prevalent among the Garos:

Sl. No	Type of Family	No.	%
1	Nuclear Family	326	46.5
2	Joint Family	267	38.1
3	Extended Family	76	10.8
4	others	31	4.4
	Total	700	99.8

Size of family:

The Garos prefer small size (1-4 numbers) families an there are 413 (59%) small size families. Big size(5-7 members) an (8-10 members) are found in 170 (24.28%) and 113 (16.14%) households respectively. Similarly large sized (11-14 members) and 15 member and above are found among 89 (12.71%) and 15 (2.14%) households respectively. Table- 7.

Table-7

Showing the size of family:

Sl, No	No. member	Small	Big	Large	Total
1	1 to 4	413 (59%)	-	-	413 (59%)
2	5 to 7	-	170 (24.28%)	-	170 (24.28%)
3	8 to 10	-	113 (16.14%)	-	113 (16.14%)
4	11 to 14	-	-	89 (12.71%)	89 (12.71%)
5	15 above	-	-	15 (2.14%)	15 (2.14%)
	Total	413	283	104	700

Types of cultivation:

As regards type of cultivation, Garos were originally shifting cultivators but lately they have switched over to plough cultivation. Thus plough cultivation is practised by 45.65% whereas shifting cultivation is restricted to 1.78% of the households. They are good horticulturist as 52.31% of the households produce horticultural crops. The total area covered under agricultural activities is 18029 bighas. Table-8 throws light on it.

Table- 8

Showing the type of cultivation and total areas of operation:

Sl. No.	Type of cultivation	Area (in bighas)
1	Shifting cultivation	321 (1.78%)
2	Plough cultivation	8,231 (45.65%)
3	Horticulture	9,432 (52.31%)
4	Terrace cultivation	Nil
5	Other	45 (0.24%)
6	Total areas of land under agricultural operation.	18,029

Crops pattern:

Unlike many other ethnic communities, the Garos are expert horticulturists which constitute one of the major income sources. They produce as many as II horticultural products among which pineapple tops the list with involvement 321 families. The total area covered under pineapple is 1200 Bighas. The total annual income form pineapple in the sample villages comes to Rs. 2,32,420.00 Rubber Plantation is another major horticulrural activity where 67 families are engaged. The area covered under rubber plantation is 3241 Bighas. The annual income from this crop is Rs. 23,32,432.00 for the entire surveyed villages. They also produce ginger, turmeric, lemon, betel leaves and nuts, black pepper, banana, muga cocoon and orange. As many as 1048 families are engaged in the horticulture. Total area in the elven items of horticulture is 18,383 Bighas. Details are shown in table-9

Table-9

Showing the crop pattern usually grown by the Garos of surveyed village:

Sl. No.	Name of crops	No. of families	Total area of land	Total Annual income Approximate (20 villages)
1	Pine apple	321	1200	2,32420
2	Rubber plantation	67	3241	23,32432
3	Ginger	35	1587	1,22343
4	Turmeric	67	912	57,432
5	Lemon	89	54	45,231
6	Betel nut	123	5054	15,23141
7	Betel leaf	123	412	32,3321
8	Black Paper	54	134	34,321
9	Banana	86	4321	7,54342
10	Muga (cocoon)	12	234	5,43223
11	Orange	71	1234	5,54342

Land holding pattern:

The land holding pattern indicates that the households possess 12,231bighas of cultivable land. The area under leased is 102 bighas and leased out 87 bighas. They also possess 2054 bighas of land under forests and 35 bighas under fishery. The total area of the villages comes to 45,984 bighas. Details are shown in table-10

Table-10

Showing the land holding pattern:

Sl. No.	Particulars of Land	Total Land (in bighas)
1	Total areas of land possessed by the villagers	45,984
2	Total Cultivable land	12,231 (26.60)
3	Total area lease in	102 (0.22)
4	Total area lease out	87 (0.18)
5	Under forest	2054 (4.47)
6	Fishery	35 (0.08)

Type of houses:

Majority 441(63%) households have only thatched roofed bamboo houses, followed by Katcha Assam type houses of 132 (18.85%) and Pucca Assam type houses 114(16.28%). There are 3(0.42%) traditional Chang ghar (house built on plate form) in the villages. There are some houses which are specially built by using a special type of splited bamboo even in roofing also and number of this category is 10 (1.42%). Table-11 shows the type of houses.

Table-11

Showing the type of house:

Sl. No.	Type of House	No.	%
1	RCC	Nil	-
2	Pucca Assam Type	114	16.28
3	Katcha Assam Type	132	18.85
4	Thatched Roofed Bamboo made	441	63
5	Chang Ghar	3	0.42
6	Others	10	1.42
Total		700	99.97

Annual income:

As regards annual income of the households 71 households earn Rs.10-15 thousand from agriculture, 37 households earn Rs.15-35 thousand, 43 households earn Rs 35-65 thousand and 21 households earn Rs.65 thousand and above annually. Highest income comes from horticulture. As many as 202 households are engaged in horticulture. Majority of them are from age group 15-35, the income being 99 thousand each. The income from animal husbandry for 86 households is Rs.10-15 thousand each, While the annual income of 10 households are Rs.15-35 thousand and for 12 households Rs.35-65 thousand. Surprisingly no annual income has been reported from weaving. But the women folk weave clothes for family members, which is a common and regular practice. They also weave shoulder cloth bags for local use. Twenty nine households earn annually Rs.10-15 thousand from handicraft. Though income from fishing is negligible, yet it has reported that 5 households earn Rs. 10-15 thousand annually. As many as 174 households earn their livelihood as wage earner and each earns below Rs. 10,000.00 per annum. There are quite a good number of households having Govt. service and 104 households earn Rs. 10,000.00 to Rs. 15000.00 per annum while 15 households earn Rs. 15-35 thousand from service.

The Garos are recently entering into business and traditionally they are shy towards business. There are, however, 18 households doing business and those houses earn Rs.10-15 thousand per annum. From other sources mostly casual income from selling crops/fruits, fire wood etc. 47 households earn Rs. 10000.00 to 15000.00 per annum each. Details are shown in Table-12.

Table-12

Showing annual income pattern of the households:

Sl. No.	Source of income	Annual Income (Rs. in thousands)				Total Household
		10-15	15-35	35-65	65-above	
1	Agriculture	71	37	43	21	172
2	Animal Husbandry	86	10	12	-	108
3	Horticulture	22	99	81	-	202
4	Weaving	Nil	Nil	Nil	Nil	-
5	Handicraft	29	Nil	Nil	Nil	29
6	Fishing	5	-	-	-	5
7	Wage	174(below 10,000)	-	-	-	174
8	Service	104	15	Nil	Nil	119
9	Business	18	-	-	-	18
10	Others (specify)	47(below 10,000)	-	-	-	47
		556	161	-	21	-

Expenditure on food items:

Most of the incomes are spent on food items and the annual expenditure in this head for 501 to 700 families is 50000-60000. The annual expenditure of 100 to 300 families on food items is Rs. 35000-40000 and 301-500 families on food Rs. 40000-50000. The annual expenditure on dress and ornaments items of 100-300 family is 10000-15000, of 301-500 family is 15000-20000 and of 501-700 family is Rs. 20000-30000. The tribal people are becoming conscious of essentially of education of their children and the annual expenditure of 100-300 family in education is 5000-10000, of 301-500 family is 10000-15000 and of 501-700 family is 15000-20000. On health the annual expenditure of 100-300 family is Rs. 3000-5000 of 301-500 family is Rs. 5000-10000 and of 501-700 family the expenditure is 10000-15000. On social obligation head of 100-300 family the annual expenditure is 500-1000, of 301-500, is 1000-1500 and of 501-700 family, the expenditure is 1500-2000. Details are shown in table-13.

Table-13

Showing consumption pattern of the households:

Sl. No	Head	Annual Expenditure of 100 to 300 family	Annual Expenditure of 301 to 500 family	Annual Expenditure of 501 to 700 family
1	Food Items	3500.00—40,000	40,000—50,000	50,00—60,000
2	Dress /Ornament	10,000—15,000	15,000—20,000	20,000-30,000
3	Education	5000-10,000	10,000-15000	15,000—20,000
4	Health	3000--5000	5000--10000	10,000-15000
5	Social Obligation	500-1000	1000--1500	1500--2000
6	Others (specify)	-	-	-

Expenditure on daily consumable items:

The expenditure on regular consumable items have been categorised into five categories such as. daily, weekly, occasionally and never. It is seen from the analysis that14.57% of the families take milk or curd daily, 56.85% of the families take milk or curd weekly, 21.14% families take milk occasionally and 7.42% families do not take milk or curd at all. Use of pulses is rare among the Garos and 96.28% of the families take pulses weekly and 3.71% take pulses occasionally. Green vegetables are favourite items in their daily menu and 87.42% households take green vegetables daily and 12.57% take weekly.

Eggs do not form a daily item of food 85.57% of the households take eggs occasionally, while 96.14% households consume chicken/meat/fish weekly. Daily consumption of rice beer is

fast disappearing and 31.57% take rice beer weekly, 39.85% occasionally and 28.57% do not take rice beer at all. Details are shown in table-14.

Table-14

Showing the approximate regular expenditure pattern of the households:

Sl. No	Items	Daily	Weekly	Occasionally	Never
1	Milk or Card	102(14.57)	398 (56.85)	148 (21.14)	52 (7.42)
2	Pulses	-	674 (96.28)	26 (3.71)	-
3	Green Vegetable	612 (87.42)	88 (12.57)	-	-
4	Eggs	-	51 (7.28)	599 (85.57)	50 (7.14)
5	Chicken/meat/Fish	-	673 (96.14)	27 (3.85)	-
6	Rice Beer	-	221 (31.57)	279 (39.85)	200 (28.57)

Asset holding pattern:

The horticulture becomes a boon for the people if we consider the possession of modern assets like motor cycles, T.V, watch, tractor, power tiller, bicycle, mobile phone etc. There were 19 TV sets before introduction of horticulture and it was increased to 27 after, watch increased from 765 to 1032, Tractor increased to 2 from nil before, power tiller increased to 7 from nil, mobile phone increased to whopping 1567 from nil, bullock cart from 376 to 486, plough from 734 to 1023 while Motor cycle, radio became constant before and after. Increase of pump set is also noticed from 11 to 34. Also bicycles increased from 586 to 845. Thus horticulture brought fortune to most of the villagers. Details are shown in table-15.

Table-15

Showing the asset holding pattern of the households before and after introduction of horticulture:

Sl. No.	Item	Before	After	Sl. No.	Item	Before	After
1	Motor cycle	15	15	8	Mobile	Nil	1567
2	Television	19	27	9	Radio	133	133
3	Watch	765	1032	10	Bullock cart	376	486
4	Car	Nil	Nil	11	Plough	734	1023
5	Tractor	Nil	2	12	Telephone (land line)	Nil	Nil
6	Power Tiller	Nil	7	13	Pump set	11	34
7	Bi- Cycle	586	845	14	Others	-	-

Cropping pattern:

As regards cropping pattern the households produce betel nut in 5754 Bighas. Bananas are produced in 4321 Bighas, various kinds of paddy are grown in 3641 Bighas. The people earn money from orange and pineapple cultivation and the areas of those two crops are 1323 Bighas and 1200 Bighas respectively Tapioca is produced in 654 Bighas while 1587 Bighas of land are used for growing ginger. Details are shown in table-16.

Table-16

Showing cropping patter that gives more financial support:

Sl. No.	Crops Grown Local Variety	Total Area (in bighas)	Marketable Surplus (yes/no)
1	Tapioca	654 (3.30)	No
2	Ginger	1587 (8.02)	yes
3	Banana	4321 (21.85)	Yes
4	Turmeric	912 (4.61)	yes
5	Various kinds of paddy	3641 (18.41)	yes
6	Pine apple	1200 (6.06)	yes
7	Orange	1323 (6.69)	No
8	Varies kinds of lemon	532 (2.69)	Yes
9	Betel nuts	5054 (25.56)	Yes
10	Betel leaf	412 (2.08)	Yes
11	Piper	134 (0.67)	yes
Total areas covered by crops		19770	

Economic support from horticultural crops:

The horticultural items are giving much economic support to the villagers. It is observed that from pineapple and banana the villagers earn Rs. 30000 each annually. Orange is extensively produced and the quality is of high order which is highly demanded in the nearby towns specially in Guwahati city. The income from orange is above 60000 per annum the hilly region provides good scope for ginger crops and the Garos earn Rs. 25000 from ginger anually. Similarly turmeric is grown in sufficient quantity and besides meeting the local needs, the villagers could learn Rs. 20,000 in per annum. The annual income for chilly, Income from lemon, ginger, black pepper is moderate type. Details are shown in table-17.

Table-17

Showing horticultural crops that give more economy:

Sl. No	Name of Crops Local Variety	Approximate amount per annum	Sl. No	Name of Crops Local Variety	Approximate amount per annum
1	Pine apple	30,000	9	Potato	Nil
2	Banana	30,000	10	Cole Crops	Nil
3	Orange	60,000	11	Brinjal	700
4	Lime/Lemon	1,000	12	Chilly	1200
5	Jack fruit	Nil	13	Coriander s	Nil
6	Guava	Nil	14	Black Pepper	23,00
7	Litchi	500	15	Ginger	25,000
8	Mango	Nil	16	Turmeric	20,000

Other crops grown by the villagers:

Besides horticultural products, the households also grow ahu paddy, bao and Sali paddy in 1400 bighas mostly for local consumption. Only 20 quintals are sold in market. Potatoes are grown in 28 bighas of land and there is no marketable position. Sugarcane is produced in 45 bighas as only 3 quintals are sold in market. Thirty bighas of land are used for growing vegetables usually for local consumption. Only 6 quintals of vegetables could be sold in market Mustard seeds are also grown in 10 bighas of land on 11 quintals are sold in market. Details are shown in table-18.

Table-18

Showing the other crops grown by the villagers:

Sl. No.	Crops	Total areas (in bighas) within the 20 nos. of villages	Marketable Surplus (in quintals)
1	Ahu/Bao/Sali	1400	20
2	Mustard	10	11
3	Pulses (green pea, dal etc)	No	-
4	Potato	28	-
5	Sugarcane	45	3
6	Jute	No	-
7	Vegetables	30	6

Traditional crops grown by the villagers:

The Garos also grow traditional crops like Badhana, Bokha in 2341bighas. 231 households adopt irrigation in their cultivable lands, where 23 households are seen to use manure/fertiliser in their field and the traditional crop like laojali which gives more products is grown in 867 bighas of land. 49.28% villages (households) grow these crops with help of irrigation. Fertilizer is used by 12.28% households in this crops. Bekhi is grown in 997 bighas and 10.85% households irrigate their field and 8.28% households use fertilisers in their crops Kalua is grown in 353 bighas by 48 households (56.85%) where irrigation is extensively done and some of them (cultivators) i.e. 10.42% use fertilisers in this crops. Table-19 shows the details.

Table-19

Showing the crops grown traditionally:

Sl. No.	Name of traditional variety of crops	Area (in bighas)	No. of households who irrigate the field	Used of manure/ fertilizer
1	badhana, bokha,	2341	231 (33)	23 (3.28)
2	lawojali	867	345 (49.28)	86 (12.28)
3	Bekhi	997	76 (10.85)	58 (8.28)
4	Kalua	353	48 (6.85)	73 (10.42)

Use of traditional implements:

The Garos of the surveyed villages use good number of traditional implements for their horticultural operation. Wooden plough, digging, stick, wooden hook, sickle, bamboo leveller, wooden dumbel are used by the households in every agricultural purposes. Details of the implements are shown in table-20.

Table-20

Showing the traditionally used horticultural implements of the villagers:

SL. No.	Name of Implement	No. of implements used
1	Wooden Plough	845 (23.73)
2	Digging Stick	234 (6.57)
3	Wooden Hook	221 (6.20)
4	Sickle	887 (24.91)
5	Bamboo leveler	917 (25.75)
6	Wooden dumbel	456 (12.80)

Use of irrigational tools:

As regards irrigational implement following implements are used. Cikcha is used by 73.44% households, beldond is used by 21.62% households and bamboo tube is used by 4.92% households. Details are shown in table-21.

Table-21

Showing the indigenous irrigation system used by the villagers:

Sl. No	Name of implements	Number of households
1	Cikcha	343 (73.44)
2	Beldond	101 (21.62)
3	Bamboo tube	23 (4.92)

Use of both improved and traditional practices:

Improved agricultural production are recorded to by 64.71% are traditional agricultural practices are followed by 35.28% of the Garo households. Table-22

Table-22

Showing the no. and percentage of households adopting improved or traditional horticultural practices:

Sl. NO.	No. of households using improved practices	No. of households using traditional practices
1	453 (64.71)	247 (35.28)

Use of HYV seeds:

Regarding use of the seeds Macuri, collected from other sources as used by 48.85% of the families in 6 bighas, Balam procured from others is used by 7. 71% families in bighas Bahadur collected from others in used by 43.42% families in a bighas of land. Productivity of Macuri, Balam and Bahadur are 7 to 8 and 9 quintals respectively.

Local varieties like Badhana, Bokha, Lawajali Bekhi are also cultivated and productivity is 5 to 5.5 and 4.5 quintals per bighas respectively. Actual picture is seen in table-23.

Table-23

Showing the use of HYV crops by the villagers:

SL. No	Varity of seed	Area covered (in bighas)	NO. of family	Collected from other/ Govt. supply	Productivity per bighas (in quintal)	Name of local variety	Producti vity of local variety per bighas (in quintal)
1	Macuri	6	342 (48.85)	From others	8	badhana, bokha,	5
2	Balam	7	54 (7.71)	From other	7	lawojali	5.5
3	Bahadur	9	304 (43.42)	From other	9	Bekhi	4.5

HYV seeds and its benefits:

HYV seeds benefitted wholly 65% of the households, while 17.71% households have been benefitted moderately and 17.28% households were not benefitted by HYV seeds.

Table-24

Showing the households benefited by the use of HYV of seeds:

Sl. No.	No. of households fully benefited	No. of households moderately benefited	No. of households not benefited
1	455 (65)	124 (17.71)	121 (17.28)

Use of chemical fertilizers:

The Garos, of late are using Chemical fertilisers in the fields. The NPK, DOP product is used in 2243 bighas and the total consumption being 4102 quintals. Super Phosphate is used in 1543 bighas, the amount being 3212 quintals, while 6453 quintals of Urea are used in 2315 bighas of land. Details are shown in table-25

Table-25

Showing the variety of fertilizer used and total consumption:

Sl. No.	Name of fertilizer	Total consumption	Total area covered
1	NPK, DOP,	4102 quintal	2243 bighas
2	Super phosphate	3212 quintal	1543 bighas
3	Urea	6453 quintal	2315 bighas

Advice from Govt. officials:

While using chemical fertilisers 105(15%) household consulted Gram Sevaks, 93 (13.2%) households took advice from extension officers and 502 (71.7%) households did not consult the GSW Extension Officers. Table-26 shows the details.

Table-26

Showing the number of households consulting the Govt. Officials regarding the systematic use of fertilizer:

Sl. No.		No. of households	%
1	Gram Sebak	105	15%
2	Extension officer	93	13.2%
3	Not consulted	502	71.7%
Total		700	99.9%

Use of bio-fertilizers:

Use of bio-fertiliser is restricted to 324 (46.28%) households only and 432 (61.71%) households are using irrigation in the fields. Details are shown in table-27

Table-27

Showing households using bio-fertilizer and irrigation:

Sl. No.	No. of households using bio-fertilizer		No. of households using irrigation.	
	Yes	No	Yes	No
1	324 (46.28)	376 (53.71)	432 (61.71)	268 (38.28)

Availability of agricultural facilities:

There are 34 pump-sets owned by equal member of household (4.85%). Shallow tube-wells are owned by 231 (33%) households and tractors are owned by 3 (0.42%) households. There are power tillers sanctioned by Govt. to service (1.00) households as spraying machines have been sanctioned by Govt. to 70 (10.00%) households. Actual picture is shown in table-28.

Table-28

Showing the extent of agriculture facilities available in the households:

Sl. No	Name of Items	Own/not own	Total no of households having this facilities
1	Pump set	own	34 (4.85)
2	Shallow tube well	own	231 (33.00)
3	Tractor	own	3 (0.42)
4	Power tiller	Gove ,schemes	7 (1.00)

Use of insecticides:

BSE 50%, Malathian pesticides are used by 61.71% households, while 19.85% are not using these insecticides. Traditional insecticides like cow urine, lime water, water mixture of ashes are used by 18.42% of the households. This is seen in table-29.

Table-29

Showing name of pesticides used by of the villages along with the number of households:

Sl. No	Name of pesticides	No. of households using pesticides	No. of households not using pesticides	Name of traditional pesticides	No. of households using traditional pesticides
1	Roger BSE 50% Malathian	432 (61.71)	139 (19.85)	Urine of cow Lime water Water mixture of ashes	129 (18.42)

Use of mechanised tools in cultivation:

There are only 23 (3.28%) households using tractor for agricultural operation while power tiller is used by 17 (2.42%) households. The traditional wooden plough is widely used. As many as 648 (92.57%) household are using wooden plough. The wooden hoe is used by 12 (1.71%) households.Table-30 shows the details.

Table-30

Showing the number of agricultural implements used by the households:

Sl. No	Item	Number of households
1	Tractor	23 (3.28)
2	Power tiller	17 (2.42)
3	Wooden Plough	648 (92.57)
4	Wooden hoe	12 (1.71)

Problem faced by the villagers engaged in horticulture.

1. Labour employment in agricultural operation becomes expensive and it becomes difficult to find labourers.
2. Division of paternal lands into small plots among sons/brothers and relatives has made it impossible to use the modern equipments for agriculture purposes.
3. Due to lack of suitable facilities of irrigation and manuring it has become difficult to get high yield.
4. The govt. officials entrusted to assist the agriculturists are not easily available.
5. Lack of marketing facilities for their crops.
6. Lack of cold storage facilities.
7. Lack of financial support from govt.
8. Artificial crises of price fall by middle men.
9. Lose of soil fertility

Table-31

Showing the problems faced by the villagers:

Sl. no	**Problems faced by the villagers**
1.	Expensive labour and non-availability of sufficient labour.
2.	Splitting of land into small plots among the brothers or relatives.
3.	Proper irrigation problem due to non- availability appropriate facilities, manure etc.
4	Non co-operation from Govt. Officials.
5.	Lack of proper market facilities within the reach of the locality.
6.	Lack of proper cold storage facilities.
7.	Lack of financial support from Govt.
8.	Artificial crises of price fall made by out- side buyers.
9.	Lose of fertility.

Distance of the markets:

The distance factor to the nearest daily and weekly market is a determinant factor for getting competitive price of the horticultural products. The distance to the wholesale market compels the villagers to sell their products at village itself at very cheaper price. Even local market is located at a distance of more than 2.5 kilometres for all the villages. The distance to weekly hats is more than 7 kilometres for all the villages and to the wholesale market the distance from all the villages ranges 20 kilometres to 33 kilometres. Details are shown in table 32.

Table-32

Showing the distance of the markets:

Sl. no	Number of villages	Distance of local market (in kms.)	Distance of weekly market (in kms.)	Distance of wholesale market (in kms.)
1.	4	5	11	28
2.	3	2.5	19	31
3.	4	4	10	23
4.	2	2.5	7	21
5.	3	2.5	7.5	20
6.	4	5.5	14	33

Production of crops:

In respect of area of production for horticultural crops during last three years 2007-08, 2008-2009, 2009-2010 the areas under fruits cultivation reduced from 465 bighas in 2007-08, to 443 bighas in 2008-2009 but increased to 448 bighas in 2009-10. The production also decreased from 219 quintals in 2007-08, to 201 quintals in 2008-2009, but increased to 228 quintals in 2009-10.

The area under cultivation of nuts/betel nut of 5654 bighas in 2007-08 remained constant in next two years but there was variation in production. During 2007-08 245 quintals were produced but in 2008-09 the products showed upward trend to 342 quintals in 2009-10 perhaps resulted due to increased input of chemical fertilizers and insecticides and timely care.

Regarding spices areas of 231 bighas in 2007-08, were increased to 342 bighas during 2008-09 but fell to 121 bighas during 2009-10. Production increased to 95 quintals in 2008-09 from 85 quintals of 2007-08 and again decreased to 87 quintals in 2009-10.

Vegetables are grown in large quantities. During 2007-08 1212 bighas were covered by vegetables but during 2008-09 the area fell to 567 bighas and during 2009-10 the areas slashed down to 457 bighas. Accordingly production showed sharp fall from 524 quintals to167 quintals in 2007-08, and in 2008-09 and 109 quintals in 2009-10. Table-33 shows the details.

Table-33

Showing the areas of production of horticultural crops of last three years:

Name of the crops	Area	2007-08	2008-09	2009-10
Fruits	Areas in Bighas	465	443	448
	Production in quintal	219 (20.41)	201 (24.96)	223 (27.59)
Nuts/ Betle leaf	Areas in Bighas	5054	5054	5054
	Production in quintal	245 (22.83)	342 (42.48)	389 (48.14)
Spices	Areas in Bighas	231	342	121
	Production in quintal	85 (7.92)	95 (11.80)	87 10.76)
Vegetables	Areas in Bighas	1212	567	457
	Production in quintal	524 (48.83)	167 (20.74)	109 (13.49)

The horticultural crops have given the households a good relive from economic hardship. The surplus earned from turmeric, ginger, orange, yams benefitted 342 (48.85%) households. Again the surplus of orange, ginger, bananas, yams benefitted 289 (41.28%) families and surplus products of rice, betel nuts and leaves, oranges, ginger gave additional benefit to 45 (6.42%) families. There was no surplus for 24 (3.42%) families. Table-34 shows the details.

Table-34

Showing the numbers of households who got surplus of their horticultural crops.

Sl. No	No. of families	Name of crops
1.	342 (48.85)	Turmeric , Ginger, Orange, Yams
2.	289 (41.28)	Orange, Ginger, Bananas, Yams
3.	45 (6.42)	Rice, betel-nut, leaf, Orange, Ginger
4.	24 (3.42)	No surplus

Horticulture an alternative:

Horticulture has been accepted by 235 (33.50%) households as fully alternative, while 465 (66.40%) households as semi alternative source of income. 33.50% of the households are fully satisfied with horticulture and 66.40% households has stated as moderately satisfied. Details are shown in table-35.

Table-35

Showing the number of households who viewed horticulture as an alternative source of household economy and satisfied by its earnings:

Sl. No.		Fully alternative	Semi alternative	Fully satisfied	Moderately satisfied
1	Horticulture	235 (33.50)	465 (66.40)	(33.50)	(66.40)

Horticulture a basic means:

Horticulture has been accepted as basic means of household economy by 465 (66.4%) households while 235 (33.5%) households do not consider it as basic means of household economy because according to them it is an alternative what helps a little bit to their main source of economy. Table-36 shows the actual picture of views.

Table-36

Showing the number of households who viewed horticulture as a basic means of household economy:

Sl. No.	No. of households viewed as basic means	465	66.4%
1	No. of households viewed not as basic means	235	33.5%

Weekly expenditure pattern:

It is seen that expenditure pattern of the households escalated in all items after the introduction of horticulture in commercial way. Thus expenditure per week on fish, meat, egg have been increased from Rs. 100.00 to Rs. 170.00 after introduction of horticulture. Similarly weekly expenses increased from Rs. 15.00 to Rs. 25.00 in dal, Rs. 100.00 to Rs. 150.00, in rice, Rs. 10.00 to Rs. 30.00 in tea, Rs.50.00 to Rs. 80.00 in potato Rs.15.00 to Rs. 40.00, in green vegetables Rs.10.00 to Rs. 30.00 in betel nuts after introduction of horticultural commercially. Details are shown in table-37.

Table-37

Showing weekly expenditure pattern of the households before and after introduction of horticulture in their economic activities:

Sl. No.	Name of the consumable items	Expenditure before (per week) Approx. In Rs.	Expenditure after (per week) Approx. In Rs.	Difference
1.	Fish/Meat/Eggs	100	170	70
2.	Dal/Pulses	15	25	10
3.	Rice	100	150	50
4.	Milk	-	20	Nill
5.	Tea	10	30	20
6.	Potatoes/Onions etc.	50	80	30
7.	Green Vegetables	15	40	25
8.	Others (Tobacco, Betel nut etc.)	10	30	20

Credit organisation:

Only the SBI and UBI Provide credit to the villagers under KCC scheme on repayment condition of the loan in 3 years. It is very unfortunate to see the real scenario of farmers that no single farmers had been able to avail the agriculture credit loan from those so called credit organisation merely for red ribbon naught. As stated by the villagers that most of the time a class of brokers having illegal nexus with the bank's officials cheated the village farmers in the name of bank's loan. That is the reason perhaps the table-38 has not able to highlight the expected scenario.

Table-38

Showing credit facilities availed by the villagers:

Sources	Institutions	Scheme	Repayment duration	Amount of loan received
Institution	a. State Bank of India	K C C	3 years	Nil
	b. Assam Gramin Vikash Bank			Nil
	c. United Bank of India	K C C	3 years	Nil
	d. Punjab National Bank	-	-	Nil
	e. Self- Help Groups	-	-	Nil
	f. Samabai Samiti	-	-	Nil
Non-Institution	g. Village Money Lender	-	-	Nil
	h. Others	-	-	Nil

Causes of damages:

Storm, drought and soil erosion, wild animals cause much damage to the agricultural activities of the people. During 2009-10 and 2010-11 storm damaged 58 bighas and 65 bighas of Land. Drought caused damage to 21 bighas in 2009-10 and 11 bighas in 2010-11, soil erosion caused damage to crops of 12 bighas in 2009-10 and 3 bighas of land in 2010-11. Thus total damaged caused by above agents is 91 bighas in 2009-10 and 79 bighas during 2010-11. Depredations of wild animals and pests in another constraint as wild animals (elephants) damaged crops of 70 bighas of land during 2009-10 and crops of 58 bighas during 2010-11. Pest caused havoc to the crops of 12 bighas of land during 2009-10 and crops of 21 bighas during 2010-11. Wild elephant menace is one of the big problems. During 2009-10 crops of 35 bighas of land and during 2010-11 crops of 42 bighas were destroyed. In total crops 117 bighas of land were damaged during 2009-10 and crops of 121 bighas of land were damaged. Table-39

Table – 39

Showing damage caused by nature and animals, pests etc. during 2009-10 and 2010-11:

Sl. No.	Damage cause by	Approximate areas (in bighas)		Sl. No	Damage caused by	Approximate areas (in bighas)	
		2009-10	2010-11			2009-10	2010-11
1	Strom	58 (63.73)	65 (82.27)	4	Wild animals (Elephant)	70 (59.82)	58 (47.93)
2	Drought	21 (23.07)	11 (13.92)	5	Pests	12 (10.25)	21 (17.35)
3	Soil Erosion	12 (13.18)	3 (3.79)	6	Damage of houses by wild Elephants	35 (29.91)	42 (34.71)
	Total damages	91	79		Total damages	117	121

Lose of domestic animals and human lives:

It has been revealed from the survey that the villagers had to bear a lot of mental pain due to lose of their domestic animals. It is reported that during 2009-10 total 33 cows/bulls and in 2010-11, 22 cows/bulls had lost their life because of diseases. No treatment was done due to non-availability of doctors or proper medicines. During 2009-10, 10 buffaloes and during 2010-11, 5 buffaloes died due to disease. Though treatment was done, it was too late. Goats numbering 23 in 2009-10 and 7 in 2010-11 were lost due to diseases though treatment was done in perfect time. Pigs numbering 7 in 2009-10 and 3 in 2010-11 died and treatment was not done

due to lack of money. It was very unfortunate that during 2009-10, 145 poultries died in 2009-10 and another 50 poultries died in 2010-11 due to birds' flue. Treatment was done. Lose of human lives during 2009-10 was 14 during 2010-11 it was 7 and mostly of them died due to old age and diseases. Following table-40 shows the details:

Table-40

Showing lost of domestic animals, human lives during 2009-10 and 2010-11:

Sl. no	Name of animals	2009-10	2010-2011	Causes of lost	Treatment done/not
1	Cow/Bull	33 (14.22)	22 (23.40)	Diseases	Not done
2	Buffalo	10 (4.31)	5 (5.31)	Diseases	Done
3	Goat	23 (9.91)	7 (7.44)	Diseases	Done
4	Pig	7 (3.01)	3 (3.19)	Diseases	Not done
5	Poultry	145 (62.50)	50 (53.19)	Birds flue	Done
6	Human	14 (6.03)	7 (7.44)	Diseases/old age	Done
Total lost		232	94		

Major problems:

There are multifarious problems for the villagers which create economic loss. Like problem of workers, irrigation facilities, marketing, credit facilities, natural calamities, damage create by wild elephants and age old indebtedness. As many as 342 (48.85%) households face problem of labourers but only 5 households (0.71%) were in a position to overcome the problems to some extent. Marketing of surplus is another problem for 654 (93.42%) households and a mere 3 (0.42%) households capable to tackle the problem. 654 (93.42%) households face problem of credit, but the problem could not be solved. As many as 456 (65.14%) households face problems created by wild elephants but no solution has been done yet by the district forest authority even after their repeated appeal. The age old indebtedness continues among 432 (61.71%) households. However 231 (33%) households could overcome the same. Details are shown in table-41.

Table-41

Showing the problems faced by the villagers in their economic life:

Sl. No.	Nature of problems	Number of households faced by problems	Number of households able to overcome a little bit
1	Problem of worker	342 (48.85)	5 (0.71)
2	Irrigation facilities	213 (30.42)	7 (1.00)
3	Marketing problem	654 (93.42)	3 (0.42)
4	Problem of credit	654 (93.42)	Nil
5	Problems related to the protection of crops from calamities and wild animals	456 (65.14)	Nil
6	Problem of indebtedness	432 (61.71)	231 (33.00)

Allied economic activities:

The Garos rear pigs not only for the purpose of consumption but also for religious occasions. Thus 75.42% households rear pigs. Poultries are reared by 15.28% households and goats are reared by 6.14% households only. There are very few households (1.71%) having cattle and buffalo although these are essential for cultivation of the lands. Remarkably 10 households have fisheries. Thus it is observed that rearing of these animals not only solace their mind but also it gives them a substantial support to their family economy and this can be assumed from the following table-42.

Table-42

Showing other allied economic activities followed by the villagers:

Sl. No.	Activities	No. of households	Sl. No.	Activities	No. of households
1	Poultry rearing	107 (15.28)	4	Cattle and buffalo rearing	12 (1.71)
2	Piggery rearing	528 (75.42)	5	Fishery	10 (1.42)
3	Goat rearing	43 (6.14)	6	Others	-

Knowledge about Gram Sevaks and Agriculture Extension Officer:

It was rather strange that as many as 84.71% households and 95.14% households do not know either Gram Sevaks or agriculture Extension Officers whom have been appointed by government to assist the cultivators, while 107(15.28%) households and 34(4.85%) households respectively heard about Gram Sevaks and Agriculture Extension officers. They also stated that any technical ideas regarding agriculture can be gained from them though practically they have not done it. Only 23(3.28%) households have consulted the Gram Sevaks and 12 (1.71%) households consulted Agriculture Extension Officers and got benefited. Details are shown in table-43.

Table-43

Showing the knowledge of the villagers regarding the Govt. functionaries related to the development of agriculture:

Sl. No.	Name of Govt. functionaries	Number of individuals who has hard about Govt. functionaries	Number of individuals who has not hard about Govt. functionaries	Number of individuals who has consulted with them
1	Gram Sevaks	107 (15.28)	593 (84.71)	23 (3.28)
2	Agriculture Extension Officer	34 (4.85)	666 (95.14)	12 (1.71)

Weaving and handicrafts:

Besides agriculture and horticulture the villagers have other economic activities like weaving (for women folk), bamboo and cage product, sericulture and carpentry. In hand loom 34 (4.85%) households, in bamboo and cane products 234 (33.42%), in sericulture 213 (30.42%) and in carpentry 38 (5.42%) households are engaged. Except hand loom other products are meant for commercial purposes. It was observed that the Garos of the surveyed villages are very industrious in nature and weaving in their family looms has a special position in their society because most of demands of the clothes required in their day-today life is purely fulfilled by their family looms. Details are shown in table-44.

Table- 44

Showing the some other economic activities followed by the villagers:

Sl. No.	Item	No. of households	Number of village member engaged	Whether Commercial purpose/ or not
1	Hand loom	34 (4.85)	75 (0.25)	No
2	Bamboo & cane Product	234 (33.42)	600 (2.03)	Yes
3	Sericulture	213 (30.42)	456 (1.54)	Yes
4	Carpentry	38 (5.42)	38 (0.12)	Yes

Treatment of ailment:

Very few individuals take medical assistance for their ailments. Only 17 (2.43%) individuals have been found to go to govt. hospital for treatment of diseases. However 333 individuals (47.57%) go to PHC for medical assistance, 13 (1.85%) individuals consult private doctors while 281 (40.14%) prefer to take help from village medicine man for their ailments. Only 2.14% individuals go to private hospitals while in the others category of medical attendance attracts 41 (5.86%) individuals. It is assumed from the study that although the Govt. has implemented various health related schemes to meet the health needs of rural people, it has not able to reach mentality of the rural people perhaps due to negligence of Govt. health workers, what has clearly been seen in the following table-45, where people still rely on traditional village medicine men for their immediate treatment.

Table-45

Showing the number of households usually take medical assistance for their ailments:

Sl. No.	Institution	No. individuals
1	Govt. hospital	17 (2.43)
2	Primary health centre	333 (47.57)
3	Private Doctor	13 (1.85)
4	Village medicine man	281 (40.14)
5	Private hospital	15 (2.14)
6	Others	41 (5.86)

Drinking water facilities:

Before introduction of horticulture among the people there were only 76 (10.85%) tube wells in the villages but after introduction of horticulture 318 (45.42%) households possess tube wells for drinking water purposes. Before the implementation of horticultural scheme, 212 (30.28%) households depended on ponds but after introduction of horticulture only 13 households (1.85%) are found to be dependent on ponds and number of households having wells remain same i.e. 267 (38.14%) before and after introduction of horticulture. Dependence on river water still persists and 14.5% of the households depend on river for their drinking water. Before introduction of horticulture 20.71% households depended on river. Details are shown in the following table-46.

Table-46

Showing sources of drinking water of the households before and after introduction of improved horticultural practices:

Sl. No.	Sources	Before	After
1	Tube well	76 (10.85)	318 (45.42)
2	Pond	212 (30.28)	13 (1.85)
3	Well	267 (38.14)	267 (38.14)
4	River/stream	145 (20.71)	102 (14.57)
5	Any others	Nil	Nil

Sanitation:

It is found from our comprehensive studies that after spending huge amount of money during the 12 Five Year Plan periods, under tribal Sub Plan by constituting so many Govt. agencies and NGOs to ameliorate the sanitation progrrame among the tribal dominated areas, practically it has reached the goal of the project and hence the Garos of Goalpara have been compelled to live in most unhygienic condition where open sanitation is a common habits of the people and it is found that 45.85% households are still using open field even after introduction of horticulture to boost up the economy. However before introduction of horticulture the percentage of open sanitation was 62.14% and after introduction it has decreased by 16.29%

which can be termed as positive approach in this regard. Details are shown in table had that habit of using open field. Before introduction of horticulture there were 232 household (33.14%) having katcha latrine but after introduction the figures come down to 187 (26.71%) households. Households having sanitary latrines improved from 33 (4.71%) to 45 (6.42%). Details are shown in table-47.

Table-47

Showing sanitation facility before and after introduction of improved horticultural practices:

Sl. No.	Type	Before	After
1	Open field	435 (62.14)	321 (45.85)
2	Katcha latrine	232 (33.14)	187 (26.71)
3	Sanitation	33 (4.71)	45 (6.42)
4	Any other	-	-

Savings:

Regarding savings practice, the scenario of households are not satisfactory because most of them 564 (80.57) households do not have savings accounts, which indicates their unplanned economic life. It is seen that only 93 (13.29%) households possess savings account in SBI, while 43 (6.14%) households have accounts in Assam Gramin Vikas Bank which practically represents very unfortunate banking or saving habits. Details are shown in table-48.

Table-48

Showing the saving pattern of the households:

Sl. No.	Name of the Bank	No. of households
1.	State Bank of India	93 (13.29)
2.	Assam Gramin Vikash Bank	43 (6.14)
3.	No. of households without having savings	564 (80.57)

Educational status:

Improvement of female education has been noticed. In case of L.P. school going students girls students are more (53) than male students (34). In the high school level also same trend is noticed. Out of 34 high school going students, there are more (21) girls than boys (13). But in

ME and college level girls are lagging behind. Out of 11 ME students, there are 3 girls and out of 79 college going students, the figure of girls stands at 34. But the overall picture shows a high position as out of 211 students there are 111 girls.

Dropouts are more among girls than boys. In i-iv standard out of 134 dropouts, the figure of girls stands at 78 (58.2%) and boys dropout is 41.7. Similarly in v-vii standard also the drop out of girls is more i.e. 81.00%, whereas the percentage of boys dropout stand at 19.9%. Similarly dropout of girls is more in the viii-x standard. Dropout of girls is 87 (60.5%) against boys dropout of 57 (39.5%). In the next higher standard xi also girls are dropping more than boys. Against 15 boys dropout, there are 21 dropout in this category. Details are shown in the following table-49

Table-49

Showing the no. of students continuing schooling:

Standard	Boys	Girls	Total
L .P School going	34 (16.11)	53 (25.11)	87
M E School	8 (3.79)	3 (1.42)	11
High School	13 (6.16)	21 (9.95)	34
College level	45 (21.33)	34 (16.11)	79
	100	111	211

CHAPTER-IV

FINDINGS OF THE STUDY

The Garos of Goalpara district lives in the foot hill areas maintaining their distinct traditional characteristics. Although they are a scheduled tribe in the state list, they constitute one of the major tribes of Meghalaya. They are expert horticulturists and the present study has been undertaken to assess the socio-cultural and socio-economic condition of the people after introduction of horticultural development package by government.

The twenty villages under survey are not agglomerated and only 13 villages (65%) are agglomerated. There are three dispersed villages and four isolated villages. Terrain wise the villagers may have separate habitations but there is cohesiveness and owness in matters of socio-cultural behaviour.

It is observed that transport and communication stands as barrier for socio-economic development as only 2 (10%) villages are located at a distance of 3-5 kilometres from the nearest motorable road while the distance of rest of the villages to the nearest motorable road varies from 6-10 kilometres to 15-20 kilometres. Same is the case in case of block office, SDO office, and telegraph office.

The conditions of roads of all the villages are far from satisfactory. Even on the 21st century 7 (35%) villages have only foot tracks to go out from the villages, one village has to use fully Zig-Zag track and 9 (45%) villages have katcha all weather roads. Only one village appeared to be lucky to get a gravelled road.

Drinking water facility through public health water scheme is provided to only 5 (25%) villages. Rest of the villages3(15%) depend upon tube wells, river and ponds and katcha wells. Regarding electrification only 5(25%) villages get electric connection but the power supply is irregular.

As regards educational facilities not all the 20 surveyed villages have LP Schools although it was the norm to have LP Schools within the villages. It is seen that only 11 (55%) villages have LP Schools within the villages. Only 3 (15%) villages have ME Schools within the villages. However 17 (85%) villages have Anganwadi centres within the villages.

Health centres are found only in 9 (45%) villages. Two villages have medical sub centres 3 (15%) villages have private clinics and govt. dispensaries and one village has private hospital. But two (10%) villages have to go to the primary health centres located beyond 14 kilometres. Health providers are found only in 2 villages. Village health guides are posted in 14 (70%) villages. Traditional birth attendants are found in 85% of the villages while similar numbers of Asha karmis are functioning in the villages.

Only 3 (15%) villages have STD booths within the villages, while pharmacy cum medical shop is located in 4 (20%) villages only. Weekly huts are located outside the villages. Agro Service Centres are rendering helps only to 4 villages.

SBI and Assam Gramin Vikash Bank are the only institutions providing credit to the villagers. It is strange that co-operative societies are not formed in the villages although such societies can help the villagers in various ways. Due to absence of sufficient institutional credit facilities, the village money lenders are still having a flourishing business charging high interest. Most of the village money lenders live outside the village.

Only 11 (55%) villages have Extension Service of Agriculture Department. The Gram Sevaks meant to serve the villages for necessary guidance in agricultural activities but 17 (85%) villages reported that Gram Sevaks do not visit the villages regularly. Only 13 (65%) villages get some service from Gram Sevaks.

As many as 16 (80%) villages are unaware of the Agricultural Extension officers of their areas and they have not seen such officers in the villages.

Land slide/soil erosion in a common problem of the Garos as the foot hill areas are vulnerable for occasional natural calamities, particularly during summer. During 2009-10, 34 bighas of crop areas belonging to 80 households have been damaged by erosion. During the year 6 men and 13 animals/cattle were lost due to land slide.

There are 12 cultural organisations in the villages which are performing constructive activities. The churches located in the villages provide guidance in religious matters.

In post Independence period government have instituted several social welfare schemes in the villages such as NREGA, IAY, midday meal for school children, Infrastructural Development Scheme, Rajib Gandhi Rural Electrification Scheme which have benefitted the Garos of the surveyed villages. Thus from NREGA scheme 235 households have been benefitted. The IAY benefitted 53 households while AAY provides relief to 37 households. The

Family Oriented Income Generating Scheme assisted 35 households. Similarly under Infrastructural Development Scheme 13 households have been benefitted.

In the micro level study (household study) 700 households of 20 selected villages were taken for in-depth study. The total population of these households is 29555, where male 14891 (50.38%), female 14664 (49.62%). To get information from cross section of people in various age and sex, persons from 10-14 years to 25-29 years including female were interviewed. Data were collected from married unmarried male and female, divorced females, widows and widowers also.

Although there are 111 illiterate persons both male and female, the overall educational scenario is not very disheartening. There are quite a good numbers of HSLC passed male and female although in HS level the females are lagging behind as there are 230 HS passed females against 846 HS passed males. There are 28 male graduates and 25 female graduates in the studied villages. In post graduate level, however there are only 3 male post graduates.

Agriculture is the main occupation of the villages and 48.8% are engaged directly in agriculture. There are quite a good number (106) of persons in govt. service. As they are strong and stout people, the youths get employment in Armed forces and home department of the state. But the economy of the 24.8% households is not sound as they are compelled to take out their livelihood by resorting to wage earning. Besides the tribal people are not proficient in business and only recently some enthusiastic youths have taken business as their profession for regular earning. Thus there are only 18 (2.5%) households having business. Non Govt. service also attracts the villagers and there are 13 households in non govt. service sector. The traditional joint family pattern is followed by 38% households. Individualism has grown in the Garo society. Extended families are very few. They (59%). prefer small sized family.

As regards type of cultivation the Garos were originally shifting cultivators but those living in the border of Assam have abandoned the same due to non availability of hilly areas for shifting cultivation, besides paddy fields in the plains are suitable for wet paddy cultivation. Thus shifting cultivation is followed by only 1.78% households. The Garos are good horticulturist and 52.3% households produce variety of horticultural crops which constitutes one of the major source of income. There are as many as 11 horticultural products among which pineapple tops the list with involvement of 321 households. The total area under pineapple is 1200 bighas. The total annual income from pineapple is Rs.23,2420. Rubber plantation is another major horticultural activity where 67 families have been engaged. The area covered under rubber cultivation is 3241 bighas. The annual income from this crop is Rs. 23,32432.00 for the surveyed households. They also produce ginger, lemon, turmeric, betel leaves and nuts,

black pepper, orange, banana and muga cocoons. As many as 1048 households are engaged in horticulture. The total area covered by 11 horticultural products is 18,383 bighas.

The land holding pattern indicates a preponderance of cultivable lands with 12,231 bighas. They also cultivate is 2054 bighas of land owned by Forest Department. Fisheries covered only 35 bighas of land.

Majority (63%) households have thatched roofed houses followed by 18.85% households Katcha Assam type houses and 16.28% households Pucca Assam type houses. The traditional Chang type houses are found only in 3 households.

The highest income of the surveyed villages accrues from horticulture as quite a good number of the households (202) are engaged in horticulture the annual income being 99 thousand each. The Garos earn quite a good amount from animal husbandry ranging from Rs. 10-15 thousand to 35-65 thousand per annum. But most of the households fall in the range of Rs. 10-15 thousand per annum, Income from weaving is nil while from handicrafts 29 households earn Rs. 10-15 thousand. Similarly income from fishing is also negligible. Only 5 households earn Rs. 10-15 thousand per annum from fishing. As many as 174 households have wage earners and they earn (each) below 10000.00 per annum. Service holders of lower grades earn Rs. 15-35 thousand per annum. Business as a source of income has taken place in the Garo villages recently. There are 18 households doing petty business and the annual income does not exceed Rs. 10-15 thousand. It is thus assumed that some of the Garo households are living below poverty line.

Most of the incomes are spent on food items. The annual expenditure on food of 100-300 families is Rs. 35000.00-40000.00. Expenditures on dress, education health and social obligation are also not negligible.

Daily use of milk/curd is limited to negligible households and most of the households take milk weekly and occasionally. Use of pulses are limited to a very few households. Green vegetable is favourite and is used daily by most of the villagers. Eggs are who taken occasionally. The traditional habit of taking rice beer is fast changing. Today most of the households avoid daily consumption of rice beer. Only 39% people take occasionally and 28.5% households do not take rice beer at all.

The horticulture became a boon for the people as number of modern assets, like bike, TV, tractor, power tiller, mobile phones, pump sets, bicycles etc. increased after introduction of horticulture among the Garos. While there was no mobile phone before introduction of horticulture there are whopping 1567 mobile phones in the surveyed households. TV sets

increased from 19 to 27, tractor increased from nil to 2, power tiller increased to 7 from nil. It is seen overall standard of living of quite a good number of households was improved after introduction of horticulture.

The villagers produce betel nut, bananas varieties of paddy, orange, pineapple, tapioca ginger etc. As many as 5054 bighas of land are used for betel nut cultivation. 3641 bighas of land are used for growing paddy, 1323 bighas for orange and 1200 bighas of land are used for pineapple cultivation. Ginger is produced in 1587 bighas, bananas are grown in 4321 bighas. Thus horticultural products are providing good source of income to the Garos. From pineapple and banana most of the families earn Rs. 30,000.00. The Garo orange is a very popular because of its high quality. The income from orange alone is Rs. 60,000.00 per annum. From ginger cultivation the households earn Rs. 25000.00 per annum. Turmeric is grown in large quantities and besides meeting local needs the villagers could earn Rs. 20,000.00 per annum. The annual income from chillies, lemon, bringal black pepper is moderate.

Besides horticultural products they grow Ahu, Bao and Sali paddy in 1400 bighas of land. Paddy is grown mostly for local consumption. There is no marketable excess of potatoes. Although sugarcane is produced in 45 bighas of land, the growers are in a position to sell only 3 quintals in the market. Vegetables grown in 30 bighas are used locally and only 6 quintals could be placed for sale in market. Mustard seeds are grown in 10 bighas and 11 quintals could be sold in market.

Very few households adopt irrigation in the fields and only 31 households are irrigating their lands. Use of fertilizers/manures are limited to 23 households.

Traditional crops like Badhana, Bokha Laojali, Bekhi, Kalua are grown with the help of irrigation. These crops are produced mainly for local consumption.

The people use traditional agricultural implements like wooden plough, digging stick, wooden hook bamboo leveller, sickle, wooden dumbel etc. The Garos have their own irrigation implements like Cikcha, Beldond and bamboo tube. Tractors are used by 23 (3.28%) households and power tiller are used by 17 (2.42%) households. The traditional wooden plough is widely used.

Improved agricultural practices are adopted by 64.71%. High yielding variety seeds like Macuri, Balam and Bahadur are used widely, which benefitted 65% of the households fully, 17.71% moderately and 17.28% households did not get the benefit.

Chemical fertilisers are becoming popular among the Garos. The fertilisers like NPK, DOP are used in 2243 bighas and superphosphate is used in 1543 bighas, while Urea is used in 2315 bighas of land. Use of bio-fertilizers is restricted to 324 (46.28%) households only and 61.71%) households are using irrigation in their fields.

Although Gram Sevaks and Agriculture Extension officers have been appointed to assist the cultivators particularly in the application of chemical fertilizers, pesticides, only 13.2% households took advice from Agriculture Extension officers and 15% consulted Gram Sevaks. As many as 71.7% households did not consult either G.S. or AEOs.

Shallow tube wells, pump sets are used for irrigation purposes, but only 34 households possess pump sets and shallow tube wells are owned by 231 households. Seven number of households use power tillers and 3 households use tractor to plough the fields. Govt. has provided 70 spraying machines to the villagers for spraying pesticides.

BSE 50%, malathian pesticides are used by 61.71% households, while 19.85% households are not using pesticides. Traditional pesticides like cow urine, lime water, water mixture of ashes are used by 18.42% of the households. The distance factor to the nearest daily and weekly market is disheartening as the households are not getting expected price for the horticultural products. Due to distance to the wholesale market the villagers are compelled to sell their products within their village at a very cheaper rate

There is fluctuation of productions of horticultural crops as revealed in the assessment of 2007-08, 2008-09 and 2009-10 years. The areas under fruits cultivation has reduced from 445 bighas in 2007-08 to 443 bighas in 2008-09 but increased to 448 bighas in 2009-10. Production also fell from 219 quintals in 2007-08 to 201 quintals in 2008-09 but increased to 228 quintals in 2009-10. The vagaries of nature are largely responsible for this fluctuation. The areas under betel leaves, nuts by and large remained constant over these years but production varied. From 245 quintals in 2007-08 the production grew to 389 quintals in 2009-10. Some fluctuation is noticed in case of spices. The areas under spices increased to 342 bighas during 2008-09 from 231 in 2007-08 but fell to 121 bighas during 2009-10. Production also increased to 95 quintals in 2008-09 from 85 quintals in 2007-08 and again fell to 87 quintals during 2009-10.

Fluctuation of areas under vegetables and production of crops was noticed during these three years. There was less production in last two years from 524 quintals in 2007-08, the production fell to 167 quintals and in 2008-09, 109 quintals.

The horticultural crops gave dividend to the households. The surplus from turmeric, ginger, orange yams benefitted 342 (48.85%) households. Again the surplus of orange, ginger,

bananas and yams 289 (41.28%) families got extremely benefited and surplus products of rice, betel nuts, oranges, gingers gave additional benefits to 45 families (6.42%).

It is seen that horticulture has been accepted by 235(33.50%) households as fully alternative and 66.50% households as moderately alternative source of income.

Along with rising income after introduction of horticulture, daily/weekly expenditures of the households have also increased.

Only the SBI, UBI provide credit to the households under KCC scheme on repayment condition of within 3 years, but nobody has availed the credit till the time of survey.

Storm, drought, soil erosion, pests, wild animals cause much damage to the agricultural activities of the villagers. Menace of wild elephant is one of the biggest problem of the villagers. During 2009-10 crops of 35 bighas of land and during 2010-11 crops of 42 bighas were destroyed. In total crops of 127 bighas of land were damaged during 2009-10 and crops 121 bighas of land were damaged during 2010-11 by the above mentioned agents.

Diseases caused sufficient loss of cattle, pigs, goats, buffaloes, poultries during 2009-11. In most case timely treatment was done. Even during 2009-10, 14 human lives were lost.

The villagers have multifarious problems. As many as 654 (93.42%) households face the problem of credit and 65.14% households face the problem of wild elephants. The age old problem of indebtedness continues among 432 (61.71%) households. However 231 (33%) households could overcome the problem after introduction of horticulture.

The pigs, poultries are reared by the Garos, not only for consumption but also for religious occasions. There are few households having cattle and buffalo although these are most essential for plough cultivation. Only 10 households have fisheries.

It was strange that as many as 84.71% households are unaware about the Gram Sevaks and 95.14% households do not know that Agricultural Extension officers are appointed by govt. to assist the agriculturists. However 15.28% households heard about the Gram Sevaks and 4.85% households heard about Agriculture Extension officers. Only 3.28% households and 1.71% households consulted the Gram Sevaks and AEO respectively.

Besides agriculture and horticulture the villagers have other economic activities like weaving, bamboo and cane products, sericulture and carpentry. In hand loom only 4.85% households, in bamboo and cane products 33.42% households, in sericulture 30.42% and in

carpentry 5.42% households are engaged. Except hand loom other products are meant for commercial purpose.

Very few individuals take medical assistance for their ailments. Only 2.43% go to govt. hospitals for treatment of diseases. However 47.57% individuals go to PHCs for medical assistance and 1.85% takes advice from private doctors while 40.14% prefers to take help from village medicine man. Only 2.14% individuals go to private hospitals. The distance factor prohibits the people to go for modern medicines and the people consider ailments like influenza, fever, diarrhoea etc. are minor diseases and prefer to approach the village medicine man for treatment. The poverty condition also prohibits the people to go for modern medicines.

Much improvement has taken place in various sectors after introduction of horticulture. Thus number of tube wells increased from 76 to 318. Another improvement was noticed in case of ponds. Before introduction of horticulture as many as 212 households depended on ponds for drinking water purposes but after introduction of horticulture there are only 13 households having ponds. River water is used by 14.57% of the households.

Even in the onset of 21st century 45.85% of the households still use open field for sanitation purpose. Before introduction of horticulture 33.14% had temporary latrine but after introduction there are only 26.71 households using temporary latrine. Similarly after introduction of horticulture numbers of sanitary latrines have increased to 45 from 33.

The Garos of the surveyed households are not keeping the habit of savings and 80.57% the people have no bank account.

Improvement of female education has been noticed. In LP standard girls out number boys. In High School standard also there are more girls. However in ME and College level girls are lagging behind. Over all the standards of education the girls are not lagging behind as out of 211 boys there are 111 girls.

Dropout of girls however is more among girls. Dropout of girls is more in class vii-x standard. In the next standard class xi girl dropouts are more than boys. Thus after introduction of horticulture drop out of girls is not showing any improvement.

CHAPTER-V

Conclusion:

The Garos of Goalpara district are mainly concentrated in the foot hill areas of the district. They are maintaining their distinct tribal characteristics in plains setting surrounded by the plains tribes like the Rabhas, the Bodos and non-tribals. Although they constitute one of the scheduled tribes in the state ST list, they are a major tribe of Meghalaya maintaining affinity with their counterpart. The areas they live are congenial for horticultural crops and naturally they are expert horticulturists. The present study has been undertaken to assess the socio-cultural and socio-economic condition of the Garos after introduction of horticultural development package by Government.

It has been observed in the present study among the Garos that transport and communication becomes a barrier for the people for business transactions. The nearby motorable roads for most of the villages lie at a distance of 6-10 kilometres to 15-20 kilometres. Since the villages have foot tracks and katcha all weather roads only. Only 25% villagers have provided public health water and electricity power supply by the Govt.

All the villages have L P Schools within the villages but higher educational centres are located outside the villages. However 85% villages have Anganwadi centres within the villages.

In case of health facilities health centres are found only in 9 (45%) villages. Not all the villages have health providers while the people have to go to a distance of 14 kilometres to get medical assistance from PHC. Only 15% villages have easy access to private clinics and Govt. dispensaries. Pharmacies and medical shops are located in 20% of the villages. The most essential Agro Service Centre is also not provided to all villages. Only 4 villages have such centres. Similarly only 15% of the villages have STD booths. Weekly huts are located outside the villages.

Although SBI branches and Assam Gramin Vikash Bank are providing credits due to distance factor the villagers mostly depend upon village money lenders from out the tribal villages.

The Extension service of Agriculture in available for 53% of the villager. The role of Gram Sevaks in most disheartening and 85% of the villages reported that G. Sevaks do not visit the villages regularly. Awareness part is deplorable regarding the service of Agriculture Extension Officers who are supposed to

be persons for providing guidance to the villagers and 80% villagers are unaware about the existence of such officers.

The main problem of the villagers is landslide and soil erosion which creates havoc during summer. Social welfare Schemes like NREGP, IAY midday meal; Infrastructure Development Scheme, Rajib Gandhi Rural Electrification Scheme are functioning in the villages.

The micro level study covering these households revealed that female education is encouraged by the people. There are quite a good member of HSLC passed boys and girls. There are 230 HS passed females against 840 HS passed males. Although there is no post graduate females, the graduates among girls are negligible. There are 25 female graduates against 28 male graduates.

Agriculture is the main occupation followed by govt. and private service and business. Rubber cultivation is also practiced by 67 households. The Garos were basically shifting cultivators but the Garos living in Goalpara have almost abandoned the practice as hills are occupied by population. Only 1.78% households continues the practice of shifting cultivation.

Garos are good horticulturists. There are as many as 11 horticultural products among which pineapple tops the list with involvement of 321 (45.8%) households. The total annual income from pineapple alone comes to Rs. 3,32420.00. Rubber cultivation covers 3241 bighas of land. The annual income from rubber is Rs. 23,32432.00. Among horticultural products mention may be made of ginger, lemon, turmeric, betel leaves and nuts, black pepper, Orange, banana and muga cocoons. The total area covered by horticulture is 18,383 bighas.

The land holding pattern indicates a preponderance of cultivable lands with 12, 231 bighas of land. The villagers also cultivate 2054 bighas of land owned by the Forest Development. Fisheries are not very popular among them. Under fishery there is only 35 bighas of land.

The highest income comes from horticultural products as quite a good number of households (202) are engaged in horticulture and the annual income being 99 thousand each.

The annual income from animal husbandry ranges from Rs. 10-15 thousand to 35-65 thousand. The monthly income from handicraft is Rs. 10-15 thousand. There are 174 wage earners. Only 18 households are doing business of the annual income does not exceed Rs. 10-15 thousand each.

Most of incomes are spent on food items, followed by dress, education, health and social obligation.

The horticulture becomes a boon for the households as the villagers were in a position to improve the standard of living useful modern items like pump sets, power tiller, tractor chemical fertilizers,

pesticides and high yielding variety seeds etc. Properties of the households today include T.V. mobile phones, motor bikes. Besides traditional items like plough, Irrigation is done by very few households i.e. 31 numbers of households.

Besides Bao and Sali paddy, the Garos also produce their traditional crops like Badhava, Bokha, Laojali, Bekhi, kalua with help of irritation. Traditional agricultural implements are widely used.

Chemical fertilizers are becoming popular among the well to do sections. Fertilizers like NPK, DOP are used. Use of bio-fertilizers is restricted among 46.28% of the households while BSE 50% malathian is used by 61.71% of the households. The traditional manures and pesticides like cow urine, lime water, water mixture of ashes are also used.

Due to vagaries of nature like hail storm, drought, erosion land slide, pests, wild animals etc. there is fluctuation of horticulture crops as revealed in the assessment study during 2007-08, 2008-09, 2009-10.

It is observed that horticulture has been accepted by 33.50% households as fully alternative and 66.33% as moderately alternative source of income. Along with rise of income from horticultural crops, the expenditure is also increasing.

The villagers have been facing multifarious problems. As many as 93.42% households face the problem of credit and 65.14% households have problem of wild elephants. The age old problem of indebtedness continues and 432(61.71%) households were in debt. But introduction of horticulture in modern way could help 31% of the indebted households to overcome the debt problem.

It was rather strange that as many as 84.71% households of the surveyed villages are unaware of posting of Gram Sevaks and 95.14% households do not know that Agriculture Extension officers have been posted to assist the villagers in agricultural operations, especially in the application of chemical fertilizers, pesticides and for providing necessary guidance in respect of HYV seeds, manures etc.

Besides agriculture and horticulture the villagers have other economic activities sericulture, carpentry, bamboo products, cane products and hand loom.

Very few individuals take medical assistance for their ailments. The Garos and for that matter almost all the tribal people do not take seriously about ailments like influenza, diarrhoea, fever, loose motion etc. and they prefer to consult the local medicine man. The distance factor as well as poverty prohibits the people to approach doctors at PHC or hospitals for treatment.

Much improvement has taken place after introduction of horticulture in the villages. Most of the people converted the ponds/wells into tube wells. But it is surprise to note that even in the onset of 21st century and implementation of so many awareness campaign, as many as 45.85% households still use

open field for sanitation. Minor improvements, however is noticed in respect of conversion of open field to temporary latrine, which is also not hygienic, and sanitary latrines. From 33 sanitary latrines before introduction of horticulture, the figure rose to 45 after introduction of horticulture.

Saving habit in banks has not attracted the villagers and 80.5% households have no bank accounts, which is a negative development.

Improvement of female education is noticed particularly in the LP standard. But in ME and College level the girls are lagging behind. Over all educational scenario is not very disheartening but there is scope for improvement. But dropout girls are more in comparison to boys. Dropout of girls is more in class vii-x standard. Same is the case in next standard class xi. Main reasons for dropout of girls in higher standards are required to examine. The reason perhaps can be listed as distance to the schools and colleges, lack of educational atmosphere in the households, less earning of parents, lack of facilities like proper sets of uniform, books, more festive occasions etc.

Horticulture, no doubt contributed lot in the matters socio-economic development of the people in various ways. But the most vital problems like land slide during summer, soil erosion, menace of wild elephant have to be taken into account.

CHAPTER-VI

SUGGESTIONS

1. Transport and Communication facilities should be improved. At present only 2 out of 20 studied villages are located at a distance of 3-5 kilometres from the nearest motorable road. The distance of rest of the villages to the nearest motorable road varies from 6-10 kilometres (for 7 villages) 11-14 kilometres (6 villages), 15-20 kilometres (5 villages).

2. Roads are in a pitiable condition. Seven villages out of 20 surveyed villages have foot tracks and nine villages have only katcha fair weather roads. Unless condition of the roads is improved, the ambitious schemes will not be implemented.

3. L.P Schools should be established in all the villages. At present only 11 (out of 20) villages have LP Schools within the villages.

4. Health providers, village health guards, Asha karmis should be provided in each village.

5. Agro service centres should be established in all the villages. At present only 4 villages have such centres.

6. Co-operative Credit Societies should be established in or near the villages.

7. The village money lenders should be checked by providing easy credit to the horticulturists. At present SBI and Assam Gramin Vikash Bank branches are located outside the villages.

8. The Gram Sevaks and Agricultural Extension officers should have spirit of dedication and commitment, which is not seen among most of the officials.

9. There should be awareness campaign regarding govt. facilities to the agriculturists, the lack of which is noticed in respect of using chemical fertilizers pesticides, use of tractors, spraying machines and HYV seeds.

10. There should be cold storage facilities to preserve the horticultural products.

11. Marketing facilities should be improved.

12. Middle man who create artificial crisis of price fall should be controlled and punished.

ANNEXURE

GOVERNMENT OF ASSAM

ASSAM INSTITUTE OF RESEARCH FOR TRIBALS AND SCHEDULED CASTES,
JAWAHAR NAGAR, KHANAPARA,
GUWAHATI-781022

Research Study on "Development of horticulture and its impact on Economic Life of the Garos of Goalpara District, Assam."

Year: 2011

Household Schedule:

1. Identification:

i) Name of the Village:

ii) Police Station:

iii) Sub- Division:

iv) Name of the Head of the Household

Age:	*Sex*	*Caste/Tribe*	*Education*	*Occupation*	*Religion*

v) Name of the Informant .....

a) Age ..... *b) Sex .....* *c) Marital Status .....*

d) Relation to Head of the Household .....

2. Population Profile of the household:

A. Population:

i)	*Total population*	
ii)	*Total Male*	
iii)	*Total Female*	

B. Age group:

Sl. No	*Age Group*	*Sex*			*Marital status*	
		Total	*Male*	*Female*	*Married*	*Unmarried*
1	*0-6*					
2	*7-15*					
3	*16-25*					
4	*26-35*					
5	*36-45*					
6	*46-55*					
7	*55-above*					

C. Distribution of Population as per Occupation:

Sl. No	*Occupation*	*No. of Population Engage*
1	*Agriculture*	
2	*Govt. Service*	
3	*Business*	
4	*Non Govt. Service*	
5	*Daily Wage Earner*	
6	*Others*	

2. Land Holding Pattern:

Sl. No	*Particulars of Land*	*Total Land (in Bigha)*
i)	*Total land possessed*	
ii)	*Total Cultivable land*	
iii)	*Total area lease in*	
iv)	*Total area lease out*	
v)	*Under forest:*	
vi)	*Fishery :*	

3. Type of house of the house hold:

Sl. No	Type of house	Use tick
1	RCC	
2	Pucca Assam type	
3	Katcha Assam Type	
4	Thatched Roofed bamboo made	
5	Chang ghor	
6	Others	

4. Annual Income Pattern of the household:

Sl. No	Head	Annual Income (Rs. in thousands)			
		1000-15	15-35	35-65	65-above
a)	Agriculture				
b)	Animal Husbandry				
c)	Horticulture				
d)	Weaving				
e)	Handicraft				
e)	Fishing				
f)	Wage				
g)	Service				
h)	Business				
i)	Others (Specify)				

5. Total approximate annual Expenditure pattern of the Household:

Sl No	Head	Expenditure Amount in (Rs.)
1	Food Item	
2	Dress Ornament	
4	Education	
5	Health	
6	Social obligation	
7	Others (specify)	

6. Consumption pattern of the Household:

Sl. No	Item	Daily	Weekly	Occasionally	Never
1	Milk or Card				
2	Pulses or bean				
3	Green vegetable				
4	Eggs				
5	Chicken/meat/Fish				
6	Rice Beer				

7. Asset Holding pattern of the Household:

Sl. No.	Item	Before	After	Sl. No.	Item	Before	After
1	Motor Cycle			8	T.V		
2	Television			9	Radio		
3	Watch			10	Bullock Cart		
4	Car			11	Plough		
5	Tractor			12	Telephone/Mobile		
6	Power Tiller			13	Pump Set		
7	Bi-Cycle			14	Others(Specify)		

8. a)Varieties of Crops grown on Horticultural Field (both Local and HYV)

Sl. No	*Crops Grown* / *Local Variety*	*Total Area*	*Marketable Surplus (Yes/No)*	*HYV*	*Total area*	*Marketable Surplus (Yes/No)*
1	*Pine apple*					
2	*Banana*					
3	*Orange*					
4	*Lime/Lemon*					
5	*Jack Fruit*					
6	*Guava*					
7	*Litchi*					
8	*Mango*					
9	*Potato*					
10	*Cole Crops*					
11	*Brinjal*					
12	*Chilly*					
13	*Corianders*					
14	*Black paper*					
15	*Ginger*					
16	*Turmeric*					

b) Which variety according to you more productive?

Local/ High yielding Variety *(use tick)*

C) According to you which type of horticultural crops give you more financial support?

Sl. No.	*Name of Crops* / *Local Variety*	*Approximate amount per annum*
1	*Pine apple*	
2	*Banana*	
3	*Orange*	
4	*Lime/Lemon*	
5	*Jack Fruit*	
6	*Guava*	
7	*Litchi*	
8	*Mango*	
9	*Potato*	
10	*Cole Crops*	
11	*Brinjal*	
12	*Chilly*	
13	*Carinders*	
14	*Black paper*	
15	*Ginger*	
16	*Turmeric*	

9. Cropping Pattern of the household other than horticulture:

Sl. No	*Crops*	*Total Area*	*Marketable surplus (Yes/No)*
1	*Ahu/Bao/Sali*		
2	*Mustard*		
3	*Mati/Motor Mah*		
4	*Potato*		
5	*Sugarcane*		
6	*Jute*		
7	*Vegetables*		

10. Traditional agricultural practices:

i) Do you practice traditional agriculture? *Yes/No*

If yes, Give details of the following-

Sl.No	*Name of Traditional variety of Crop*	*Area (Bigha)*	*Irrigated or not irrigated (yes/no)*	*Use of manure fertilizer (yes/no)*
1				
2				
3				
4				

ii. Whether any surplus horticultural product during last year? *Yes/No*

iii. Name briefly the traditional horticultural implement used by you.

Sl. No	*Name of implement*	*Total*
1	*Wooden plough*	
2	*Digging Stick*	
3	*Wooden hook*	
4	*sickle*	

iv. Give details of indigenous irrigational instrument.

SL. no	*Name of Instrument*	*Total*
1		
2		
3		

v. Do you want to continue your traditional agriculture? *Yes/No*

11. Adoption of Improved horticultural Practices of the Household:

A. Have you adopted new improved horticultural practices? *Yes/No*

If yes, give details of the following-

i. Use of HYV seed.

Sl. No	*Variety of seed*	*Total area covered*	*Collected from-(own or Govt. supply)*	*Productivity per bigha (in quintal)*
1				
2				
3				
4				
5				

a) Are you satisfied with the productivity HYV? *Yes/No*

ii. Do you use chemical fertilizer? *Yes/No*

If yes, give details

a) Application pattern of chemical fertilizer:

Sl. No	*Name of Fertilizer*	*Total consumption*	*Total area covered*	*Per bigha*
1				
2				
3				
4				

b) Have you consulted with Gram Sevok/ other govt. personnel for using Chemical fertilizer? Yes/No

c) Do you use any bio-fertilizer? *Yes/No*

iii. Do you irrigate you land? *Yes/No*

a. If yes, mention the total area covered under irrigation facilities:
.....

b. What type of Irrigation facilities mainly use for cultivation?

Sl. No	*Item*	*Own/ not own*	*Total No.*
1	*Pump set*		
2	*ShallowTube well*		
3	*Man power*		
4	*Govt. Schemes*		
5	*others*		

c. Did you receive any horticultural loan/assistance from the Govt. to irrigate your land? *(Yes/No)*

If yes, mention the amount received .....

d. What are the common diseases that affect your crops?

Please give details.....

d) What types of traditional pesticides do you use to prevent it?

Please give names.....

iv. Whether applied any modern pesticides? *(Yes/No)*

a) If yes, Did you use it as per consultation of Gram Sevok/ other govt. personnel
Please give names.....

v. Have you mechanized your horticulture ? *(Yes/No)*

a. If yes, give details-

Sl. No	*Item*	*Total*
1	*Tractor*	
2	*Power Tiller*	

b. Is there any market facilities within your locality? *Yes/No*

i. If yes, how far it from your residence?

ii. If no, where do you usually go?

c. Are you satisfied with the value that you get from your local market?

Yes/No

i. If no, what is your opinion? Give details of the opinion

.....

.....

.....

d. Is there any cold storage facilities in your Locality? *Yes/No*

e. Is there any NGO's or Horticulture Development society in your locality formed by your local people *Yes/No*

i) If yes, what is there role? Give details.

.....

.....

f. Actually from when the horticultural movement did start in your locality?

g. Who took first initiative for this movement?

h. Do you think that your horticultural movement has influenced the other non Garo people? *Yes/No*

i. Do they cooperate with you regarding the technological knowhow?

j. Is there anybody or Society that fixes the prices of your horticultural product? *Yes/No*

k. Who are the members that take active part in your horticultural operations? (Use tick only)

i) Only the male members of my family.

ii) Both male and female including children of my family takes active part.

B. Did you receive any loan/ horticultural implement from Government? *Yes/No*

If no, give details.....

C. Have you any surplus horticultural product to sell during last year? *Yes/No*

i. If yes, state approximate amount sold in the last year.....

ii. Name the product.....

iii. Give details, where do sell your surplus produces? *(Use tick)*

a. In the market *b. In the Village*

c. To the village Mahajan *d. Co-operative societies etc.*

D. Whether satisfied after introduction of new horticultural practices? *Yes/No*

i) If no, specify the problems facing by you- *(Use tick)*

a) Very expensive than traditional agriculture.

b) Fragmentation and sub division of land holding.

c) *None co-operation of Govt. official.*

d) *Inadequate fund etc.*

e) *Possibility of lost of fertility of land.*

12. *Please give a details of the area, production of your horticultural crops of last three years.*

Name of the crops	*Areas*	*2007-08*	*2008-09*	*2009-10*
Fruits	*Areas in Bighas*			
	Production in quintals			
Nuts/Betleleaf	*Areas in Bighas*			
	Production in Quintals			
Spices	*Areas in Bighas*			
	Production			
Vegetables	*Areas in Bighas*			
	Production in Quintals			

N.B: (Fruits, Orange, Papaya, Pineapple, Jackfruits, Banana, Line/Lemon, Spices, Chilly, Black paper, Ginger, Garlic, Parveric, Other Masalas-Vegetables, Yams or tubers, pumpkin, Green Leafy vegetables, Brinjals, Redish, Caurt etc)

13. *Do you think horticulture as an important alternative for your family economy? Yes/No*

14. *Do you think that horticulture only can fulfill your economic needs? Yes/No*

15. *Which type of cultivation do you encourage?*

i) Paddy cultivation/Horticulture/Others (Specify)

If horticulture, give reason

.....

16. Employment opportunities:

a) Do you think that horticulture has increased the employment opportunities? Yes/No

If yes, please give details of employment structure of your family?

17. Credit Facilities:

i) Whether horticultural operations are entirely financed by your own resources? Yes/No

a) If no, did you receive any agricultural credit from following sources-

Sources	*Institutions*	*Scheme*	*Repayment Duration*	*Specify loan Amount*
Institutional	*i)State Bank of India*			
	ii)Assam Gramin Vikash Bank			
	iii) United Bank of India			
	iv) Punjab National Bank			
	v) Self-Help Groups			
	vi) Samabay Samittee			
Non-Institutional	*vii) village Money-lender*			
	viii) others (specify)			

b) If you have received loan, then specify-

i) Whether total amount is spent on agricultural purposes? *Yes/No*

ii) If no, whether half/ total amount is spent on consumption purposes? *(Use tick)*

iii) Whether repayment of loan is made in terms of agricultural product? *Yes/No*

18. Problems pertaining to horticulture:

A. Identify the Natural problem: *(use tick)*

Sl. No	*Problem*	*Use tick*	*Total area affected (last year)*
1	*Storm*		
2	*Drought*		
3	*Soil Erosion*		

B. Identify the Biological problem:

Sl. No	*Problem*	*Use tick*
1	*Pests and Diseases*	
2	*Problem of animals*	
3	*Poor health of peasant*	

C. Identify the Techno-Economic Problem: *(Use tick)*

i) Problem of surplus worker

ii)Unable to continue irrigation facilities

iii) Problem of Marketing

iv) Problem of plant protection

v) Problem of credit etc.

vi) Problem of indebtedness

19. Prospects of Allied activities:

a) Specify, the most important and viable allied activities to improve your economic-condition.

Sl. No	*Activities*	*Use tick*
1	*Poultry rearing*	
2	*Piggery rearing*	
3	*Goat rearing*	
4	*Cattle and Buffalo rearing*	
5	*Fishing*	
6	*Others*	

20. Extension service of Agriculture Department:

a. Do you know your Gram Sevok? *Yes/No*

b. Have you consulted him on farming problem? *Yes/No*

c. Do you know the Agricultural Extension Officer of your area? *Yes/No*

d. Has he visited in your area? *Yes/No*

e. Are you aware of the various schemes for agricultural development? *Yes/No*

f. If yes, give details of the scheme.....

21. Whether you have been affecting by the Natural calamities? Yes/ No

If yes, mention the following-

i)

Sl, No	Item	Total
1	Total Crop area affected during the last year	
2	Total home damaged during the last year	
3	No. of animal lost during last year	
4	No. of Human life lost	

ii) Whether govt. has provided any compensation against the lost of crop area, home damage, animal lost and human life lost? Yes/No

iii)Have you ever faced any communal problem that affected you horticultural field or product along with habitat? Yes/No

If yes, How did you compensate it?

Please, give a brief note.....

.....

iv) Whether the govt. provides relief to you during such problem? Yes/No

22. Whether you have been affecting by erosion or landslides? Yes/No

i) If yes, mention the total approximate area lost during last 10 years.

Total area: .....

ii) Whether you have to shift during last10 years? Yes/No

If yes, mention, how many time you have to shift? .....

iii)Whether Govt. has taken any measures to rehabilitate you? Yes/No

23. Other Economic Activities:

i) Do you engage in following activities?

Sl.No	Item	Yes/No	Total Family Member Engage	Whether Commercial Purpose/ or not
1	Hand loom			
2	Bamboo & Cane Product			
3	Sericulture			
4	Carpentry			
5	Others			

ii) Did you receive any assistance from the Government? Yes/No

24. Health care Facility?

i) Do you think medical service is easily available in case you need? *Yes/No*

ii) When members of your house hold falls sick where do you generally take the patient?

Sl.No	*Institutions*	*Use tick*
1	*Govt. hospital*	
2	*Primary health center*	
3	*Private Doctor*	
4	*Village medicineman*	
5	*Private hospital*	
6	*others*	

iii) Have you administered any vaccinations to your children? *Yes/No*

iv) Have your family member benefited from Health and Family welfare schemes of Govt.? *Yes/No*

25. Main Sources of Drinking Water of the Household before and after introduction of Improved Horticultural Practices: *(use tick)*

Sl. no	*Sources*	*before*	*after*
1	*Tube well*		
2	*Pond*		
3	*Well*		
4	*River/stream*		
5	*Any others*		

26. Sanitation facility before and after introduction of Improved Horticultural Practices:

Sl. No	*Type*	*before*	*after*
1	*Open Field*		
2	*Katcha Latrine*		
3	*Sanitary*		
4	*Any Other*		
5	*Other*		

27. Particulars of Savings:

i) Do you have a savings account in a post office/bank/LIC etc.? *Yes/No*

ii) Do you save regularly? *Yes/No*

iii) Do you think that the savings habit has been increased due to introduction of horticultural practices? *Yes/No*

28. Particulars of Students and Dropouts:

i) How many students you have in your family?

Standard	*Boys*	*Girls*	*Total*
L.P School going			
ME School going			
High School level			
College level			

ii) Do you have any school dropout in your family? *Yes/No*

Standard	*Boys*	*Girls*	*Total*

29. Govt. Schemes:

Sl. no	*Schemes/Programmes*	*(yes/no)*
1	*Indira Awaaj Yojana (IAY)*	
2	*Family Oriented Income Generating Scheme of WPT&BC*	
3	*Midday Meal Scheme*	
4	*Antodaya Anna Yojana (AAY)*	
5	*Crop Insurance Scheme*	
6	*MGNREGA*	
7	*ASHA*	

Collected by ..... ***Supervised by .....***

Date ..... ***Date .....***

GOVERNMENT OF ASSAM

ASSAM INSTITUTE OF RESEARCH FOR TRIBALS AND SCHEDULEDCASTES, JÄWAHAR NAGAR, KHANAPARA, GUWAHATI-781022

Research Study on "Horticulture Development and its Impact on the Economic life of the Garos Of Goalpara District, Assam.

Village Schedule:

1. Identification:

i)

Name of the informant	*Age*	*Sex*	*Education*	*Occupation*

ii) Name of the Village :

iii) Gaon Panchayat :

iv) Police Station :

v) Development Block :

vi) Sub-Division :

vii) District :

viii) No of Household :

a	*Total no of household*	
b	*Total no of ST household*	
c	*Total no of household*	

ix) Total no of BPL house hold :

x) Population :

Sl, No.	*Category*	*Population*		
		Population	*Scheduled Tribe*	*Total Population*
1	*Male*			
2	*Female*			
3	*Total*			

2. Settlement Pattern:

Sl. No	Pattern	Use tick
1	Agglomerated	
2	Dispersed	
3	Isolated	
4	Others	

3. Transport and Communication facilities:

Sl. No	Distance from the Village:	In Kilometer
i	Nearest motor able road	
ii	Nearest Transport Station	
Iii	Nearest Railway Station	
Iv	Block office	
v	Sub-Divisional Head quarter	

A.Conditions of Road to the village: (Use Tick)

Sl. No	Conditions of Road to the village	(Use Tick)
a)	Foot Track	
b)	Katcha fair weather motor able road	
c)	Katcha all weather motorable road	
d)	Graveled road	
e)	Other (Specify)	

4. Total Area of Village : ..... (In Hectare/ Bigha)

5. Major Crops Grown in the Village:

Season		*Name of Crop*
1.Kharif	*i*	
	ii	
	iii	
	iv	
	v	
	vi	
2. Rabi	*i*	
	ii	
	iii	
	iv	
	v	

6. Main Sources of Drinking Water Facilities:

Sl No	*Source*	*Use Tick*
i	*Rain Water*	
ii	*Tank/ Pond*	
iii	*Stream/River*	
iv	*Well*	
v	*Tube well*	
vi	*Water Supply Scheme*	

7. Village Electrification: *(Use tick)*

Sl No	*Village Electrification*	*Use tick*
i)	*Electrified*	
ii)	*Not Electrified*	
iii)	*Electrified and Regular supply*	
iv)	*Electrified but regular supply*	

8. Educational Facilities:

Sl No	*Educational Institution*	*Within the Village (Total No)*	*Distance from the Village (If Not Within the Village)*
i)	*Primary School*		
ii)	*Middle School*		
iii)	*High School*		
iv)	*HS School*		
v)	*College*		
vi)	*Anganwadi*		

9. Health Facilities:

Sl No	*Health Institutions*	*Within the Village (Total No)*	*Distance from the Village (If Not Within the Village)*
i)	*Sub Centre*		
ii)	*Primary Health Centre*		
iii)	*Govt. Dispensary*		
iv)	*Private Clinic*		
v)	*Private Hospital*		

10. Availability of Health Provider in the Village: *(Use tick)*

Sl No	*Health Provider*	*Yes*	*No*
i)	*Private Doctor*		
ii)	*Village Health Guide*		
iii)	*Traditional Birth attendant*		
iv)	*Mobile Health Unit*		
v)	*Asha Karmi /Supervisor etc.*		

11. Other Facilities:

Sl No	Facilities	Within the Village (Total No)	Distance from the Village (If Not Within the Village)
i)	Post Office		
ii)	Telegraph office		
iii)	STD Booth		
iv)	Bank		
v)	Pharmacy/Medical Shop		
vi)	Weekly Market		
vii)	Fair Price Shop		
viii)	Agro-service centre		

12. Whether, Agricultural Credit facility is available within the village? *(Yes/no)*

i) Give details of the following

Sources	Institutions	Use tick, If Within the village	Distance (KM), if not the Within the village
Institutional	i)State Bank of India		
	ii)Assam Gramin Vikash Bank		
	iii) United Bank of India		
	iv) Punjab National Bank		
	v)Self-Help Group		
	vi) Samabay Samittee		
Non-Institutional	vii) village Money-lender		
	viii) others (specify)		

13. Extension service of Agriculture Department:

a. Do you know your Gram Sevok? Yes/No

b. Has he visited your village to consult the farming problem? Yes/No

c. Has he visited regularly in the village? Yes/No

c. Do you know the Agricultural Extension Officer of your area? Yes/No

d. Has he visited in the area? Yes/No

14. Whether the village has been affecting by the Land slides or soil erosion (Yes/no)

If yes, mention the following-

i)

Sl, No	Item	Total
1	Total Crop area affected during last year	
2	Total home damaged during the last year	
3	No. of animals lost during last year	
4	No. of Human life lost	

ii) Whether govt. has provided any compensation against the lost of crop area, home damage, animal lost and human life lost? Yes/No

iii) Whether the villagers have to take shelter outside the village for safety during Communal riot? Yes/No

iv) Whether the govt. provides relief to the villagers during riots or any other calamity? Yes/No

v) Is there any Embracement near the village? Yes/No

15. Revenue sources of the Village:.....

16. Mention the Socio-Cultural Institution in the Village:

Sl, No	Name of Socio-Cultural Institution	Total No
1		
2		
3		

17. Religion, professes by the villagers:

A) Mention the religion: i).....

ii).....

iii) .....

B) Major Religious Institutions:

Sl, No	Name of the Religious Institution	Total No
1		
2		
3		

18. Whether the Village having any tourist place: *(yes/no)*

If yes, mention the name of places. *i)* .....

19. Implementation of Govt. Schemes in the Village: *yes/no*

Sl. no	*Schemes/Programmes*	*(yes/no)*
1	*NREGA*	
2	*Indira Awaaj Yojana (IAY)*	
3	*Midday Meal Scheme*	
4	*Antodaya Anna Yojana (AAY)*	
5	*Family Oriented Income Generating Scheme of WPT&BC*	
6	*Infrastructural Development Scheme*	
7	*Rajiv Gandhi Rural Electrification Scheme*	

20. Any other related information:

Collected by.....

Date.....

Supervised by.....

Date .....

GOALPARA (Assam)