Socio-Economic Study of Chamba Gujjars



R. Swarup

Ranveer Singh

C. S. Vaidya

Y329G:1:6.242.N8 M4 205006

AGRO ECONOMIC RESEARCH CENTRE

(For Western Himalayan Region)
Himachal Pradesh University. Shimla-5 (INDIA)
July 1984

AGRO-ECONOMIC RESEARCH CENTRE at the Himachal Pradesh University was established by the Ministry of Agriculture, Government of India to carry out research and investigation in the field of agricultural economics in the Western Himalayan Region consisting of Himachal Pradesh, Jammu & Kashmir and U. P. Hills. After the initiation of the era of planned development in India, need was felt for carrying out studies for proper understanding of the changes occuring in the structure and functioning of village economy and other specific problems arising from time to time. With this background Agro-Economic Research Centres were established in various agro-climatic regions of the country. The broad functions assigned to this Centre are:

- to make a study of changes in rural economy by means of survey of a number of selected villages each year and resurvey of the same group of villages at an interval of say, five years:
- ii) to conduct ad-hoc investigations into problems of interest to the Ministry of Agriculture, Government of India;
- iii) to carry on research work on fundamental problems relating to agricultural economics of the country; and
- to give technical advice to the Government of India and concerned State Government on such issues as, with mutual agreement, may be referred to the Centre.

Dr. R. Swarup

Agro-Economic Research Centre
H. P. University, Simla-171005

Phone: 3608 Cables: AGROCOST

Socio-Economic Study of Chamba Gujjars

Diananjayaran Gadgil Library
GIPE-PUNF-205006



R. Swarup

Ranveer Singh

C. S. Vaidya

AGRO ECONOMIC RESEARCH CENTRE

(For Western Himalayan Region)
Himachal Pradesh University, Shimla-5 (INDIA)
July 1984

THE THE PARTY OF T

PHEF CE

howeland of the Gujjars and that they came to Himachal Pradesh in search of pastures for their livestock. The Gujjars in Chamba were driven by the growing inadequacy of grazing resources in the neighbouring parts of Jamua & Kashmir. Muslim Gujjars in general are staunch believers in the teachings of the Prophet but are not fanatics. Their economic activities revolve round the buffaloes, though in the herd there is a sprinkling of other animals too. So far no economic studies have been conducted about these people and hence this task was taken up by this Centre.

Shri Ranveer Singh S.A.A. and Shri C.S. Vaidya S.A. of this Centre collected the necessary information for the study. For this they stayed in Maingal and had discussions with the people for the purpose. Our most sincere thanks are due to the people of Maingal who provided the much needed information gladly. Their hospitality will be remembered pleasantly for long. The help rendered by Tehsildar Shri T.R. Negi, Patwari Shri Dharam Chand, and Shri Suncet Singh, the local school Tencher is acknowledged.

Suggestions received for improving the study would be most welcome.

CONTENTS

Chapter		Pages
I.	INTRODUCTION	1 -7
	- Introduction	1
	- Selection of the Village	1+
	- Study Methods	5
	- Difficulties	6
II.	THE VILLAGE	8 -1 9
	- Location	8
	- History	9
	- Climate	10
	- School	. 11
	- Public Health	1 2
	- Transport and Communication	- 13
	- Market	14
	- Veterinary Dispensary	15
	- Bank	15
	- Post Office	16
	- Religious Institutions	16
	- Electricity	16
	- Drinking Water	17
	- Village Panchayat	17
	- Gurdial Gujjar Milk Producers' Cooperative Society.	18
III.	THE PROPLE	20 -32
	- Origin of Gujjars	20
	- Religion	21

22
23
25
28
29
30
33 -45
. 33
34+
35
39 [°]
43
46579
46
148
50
53
58 • 77
o f 58
illag- 60
62
65
66
68

- iii -

	 Production Pattern of Different Crops in the Village 	68
	- Use of Improved Inputs	70
	- Agricultural Implements	.73
	 Calendar of Agricultural Operation 	73
	- Storage	77
	- Marketing of Produce	77
VII.	NIMAL HISBATURY	78 -106
	- Composition of Livestocks	78
	- Pressure of Livestocks	80
	- Breeding of Cattle and Buffaloes	82
	- Feeding	85
	- Housing	87
	 Veterinary Treatment 	88
	- Subsidy on Livestock	89
	- Milk Yield	89
	 Production and Utilization of Milk and Milk Products 	91
	 Marketing of Milk 	94
	- Milk Products	96
	- Ghee	96
	- Khoya	98
	- Sheep Rearing	99
	- Yeding of Sheep 10	01
	- Shearing of Wool 10) 1
	- Wool 10)2

	- iv -	
	🕳 Skins	104
	→ Mutton	104
	Breading	105
	- Goats	105
	- Poultry Keeping	106
VIII.	MIGRATION	107-110
	- Introduction	107
	- Causes and Places Visited	108
	- Articles Taken Along	109
	→ Difficulties	109
	- Sale and Purchase of Livestock	110
IX.	SUMMARY	11 1-118

TABLE

No.	,	Pages
3.1	Use of modern durables in the village.	27
4.1	Age Composition of village population (1984).	36
4.2	Demographic Profile of the village (1984).	41
५. 3	Distribution of literate population according to different age grups (1984).	42
4.4	Workers and non-workers in the village (1984).	1+1+
5.1	Occupational Pattern of workers in the village (1984).	47
5.2	Per household employment pattern of workers in different activities,	49
5.3	Income from different sources in the village during 1982-83.	51
5.4	Indebtedness by causes in Maingal during 1961.	54
5.5	Amount borrowed from various sources by Gujjars for different purposes during 1984.	56
6.1	Land utilization pattern in Maingal.	59
6.2	Land utilization by villagers in Maingal during 1982-83.	61
6.3	fropping pattern in the village.	64
6,4	Cropping pattern by villager in Maingal during 1982-83.	67
6,5	Pr.ductivity of different crops in village during 1982-83.	69
6.6	Production of different crops in the village during 1982-83.	71
6.7	Use of fertilizer by villagers in Maingal during 1982-83.	72
6.8	Asricultural implements in the village during 1984.	74
6.9.	Calendar of Agricultural operations.	76

7.1	Composition of livestock population in Maingal (1901 and 1984).	. 79
7.2	Proportion of different livestocks (in standard cow unit) to total lievstock in Maingal.	. 8 3
7.3	Livestock pressure in Maingal.	83
7.4	Number of Gujjar households according to land holding and Buffaloes possessed.	81+
7.5	Subsidy availed by Gujjars on purchases of livestock.	90
7.6	Production and utilization of milk and milk products in Maingal during 1982-83.	92
7.7.	Distribution of households according to utilization pattern of milk and milk products.	95
7.8	Utilization pattern of wool and eggs in 'L village during 1982-83.	;:103

DIAGRAMMES

	P	ages
1.	LIFE TABLE PUPLATION OF MAINGAL BY AGE AND SEX	37.
2.	DISTRIBUTION PATTERN OF PER CAPITA INCOME (Rs./ANNUM) IN MILINGIL DURING 1982-83	52
3•	UTILIZATION PATTERN OF MILK IN THE VILLAGE	93

Chapter - I ~

INTRODUCTION

Before Independence the State functioned merely as a revenue collecting abency and for maintaining law and order. The equitable development was not the popular belief at that time. But situation changed after attainment of political Independence and government started paying greater attention towards development and welfare activities. In 1961 a commission was appointed by central government to find out problems of tribal population and it recommended that efforts should be concentrated on a few essential items eg. drinking water, food, employment for at least 300 days in a year, education, health and roads. But the problem was that the methods and norms of development efforts applied to non-tribal population were also applied to tribal population without any change or adjustment. This sort of approach did not prove successful for reasons of wide differences in the socio-economic, cultural and psychological background of the two type of people. The experience of First Five Year Plan indicated that general development does not mean equitable development of all sections of the society. This led government to form new strategy for development and walfare of poorer and weaker sections of

scciety. The result of all this was that during the Fifth Five Year Plan, a sub-Plan for tribal regions of the State was also formulated. This sub-plan aimed at identification of development blocks within the State having more than 50 per cent tribal population and launching massive efforts for its development. In this connection, Indian Constitution also includes special provisions for the protection and development of scheduled tribe population, which are about 7 per cent of the total population of the country.

Not much work has been done on tribal demography. The expression 'tribe' first of all appeared in 1981 census report and it was applied at that time to semicivilised inhabitants of nountains and forests, who were shown as a special group of agriculturists, though some of them did not practise agriculture at all. 1931 a special enquiry was conducted throughout India and cortain communities were properly classified as 'tribus'. In 1901 consus, paparate tables were prepared in respect of scheduled tribes (and also scheduled castes). There are about 45 scheduled tribes in India, mong which Gonds, Bhils and Santhals are numerically more important having a population of more then 3 millions each. The smallest tribal community is those of indomeness with a numerical strength of just 19 persons in 1901.

Gujjars are one of the dominant tribes of Himachal Pradesh. They are believed to have originated from Gujarat. In search of pastures they spread in the Shivalik ranges and migrated to this State from Jammu region of J & K. They inhabit the interiors and forest areas of Chamba, Mandi, Sirmur, Bilasjur and Shimla districts. The total population of Gujjars increased from 16,887 in 1961 to 20,634 in 1971. The distribution of Gujjars in Himachal Pradesh over the years 1961 and 1971 is presented below.

District	Total Sched.	Gu No.	jjars %.	Total .	<u>Gu</u> No.	ijars'
	Tribes					/~
Chamba	67058	38 34	7.2	71464	6504	9.1
Mandi	5044	3524	70.0	<i>5</i> 743	4500	79.4
Sirmur	28 30	2 135	93.1	3155	2506	79.4
Bilaspur	4213	4092	97.0	5236	4911	93.8
Simla (Mahasu)	3382	1802	53.0	3971	2151	54.2
H.P.	1,22,320	16887	13.8/	141610*	20,634**	14.5

^{*} Includes entire tribal population of the Himachal Pradesh

Gujjars are reported to be Muslims as well as .

Hindus. The former are largely nomadic. Hindu Gujjars have mostly settled down permanently and own cultivable

^{**} Includes 2 Gujjars of Kinnaur District.

lands. Agriculture has become their main stay of life. Muslim Gujjars still continue to move from place to place in search of pastures and grass lands to graze their animals. There have also been efforts on the part of the State government to help the Muslim Gujjars in settling down permanently. As an experiment, they were helped to settle at Sahu in Chamba District and Haurangabad in Sirmur. These experiments have been largely successful. At other places like village Maingal Gujjars settled down of their own. . Yere they own lands and produce grains for consumption. But the caphasis is still on enimal husbandry. Such Cujjars may be termed as semi-settled or semi-nomadic as they do migrate to higher hills, but only temporarily in search of pastures during summers. It was considered important to study the socio-economic conditions of such people who are not fully settled permenently, are backward aconomically as well as in their out look and are located in the interior areas. Hence, this study envisages to probe into the socio-economic conditions of these people.

Selection of the Village:

According to 1971 census Gujjars constitute about 14.5 per cent of total tribal population of Himachal Pradesh. Chamba district has the largest

number as well as proportion of Gujjars. In this district, village Maingal was selected purposely for the study because the village is predominantly inhabited by Muslin Gujjars. Moreover, this village was taken up for a detailed study by 1961 census and a separate report on the same was also brought cut. The choice of village Maingal was also discussed with certain knowledgeable persons and it was ascertained that problems of Maingal are fairly typical of Gujjar tribe. The survey report of village Maingal by census of India 1961 is biased more to cultural and social aspects rather than economic and agricultural. It was, however, considered necessary to study the economic aspects of Gujjars life along with their social and cultural life.

Study Methods:

A large variety of information is needed for such 'ype of studies and all of these are not available in official records. Therefore, stress has to be laid on primary data to be collected from households of the village. Thus the study is based on both primary as well as secondary information. For the collection of primary information, a team of personnel stayed in the village and interviewed every household for the purpose. But the stress was laid more on personal observations.

Difficulties:

Survey work in a remote village where the investigators are foreigners and not strangers, is bound to present numerous inesembale difficulties that are solvable only partially. The problem of lodging and boarding is not worth mentioning, because experience has convinced us that backwardness and hospitality are positively and highly correlated. The dreadful imagination of living with and investigating into the problems of a community having an entirely wifferent culture and dialect had been haunting the investigators from the time the work was assigned to them but all that disappeared as soon as they came into contact with the loving people of Maingal. Not only the people were hospitable and lovable, but most of them understood Hindi and quite a few could convey their ideas in an understandable form. The present problem of sex segregation and 'Purdah' in Muslim community was conspicuous by its complete absence. The first visit of the investigators to the village was at a time when the farmers were busy in grazing of animals and some of them had gone to market their milk produce. So they were busy throughout the day. Since the hill women participate fully in field and other works, they too were quite busy. Hence they

had to be contacted in their field or in nearby pastures. The difficulties involved in reaching the village were also great as the village is located on a hill top, involving about two hour; continuous ascend for which nothing except one's own legs were the means of carriage. The various hamlets are also scattered and distance between the two farthest ones is about two kms. and hence required strenuous physical efforts.

THE VILLAGE

Location:

maingal is a small hally village situated at a distance of about 24 kms. from Chamba. The village is approachable up to kehru by bus and rest of the 11 kms. have to be covered on foot. The road runs parallel to Sahu stream up to about 7 kms, then starts a narrow Kutcha dusty road though still negotiable by bus up to Rehru. Though the bus is supposed to go up to Judera, another two kilometers, and the transport authorities too claim that it plies up to that place but actually it never goes beyond Rehru. The rest of the path up to Shilaghrat can be managed by Jeep except for a few big boulders, which descended to road during the last rainy season and are still there. This is a good indicator of the quality of maintenance gian to the roads. From Shilaghrat to Maingal there is a continuously ascending bridle path, about ! 3 kilometers long. During 1963 the road leading to Maingal was all Kutcha and was negotiable by Jeep only up to about 10 kms. After that one had to walk. The panaramic view of surrounding hills is breathtaking. The western part of Chamba is partially visible from here. The village lies at an altitude

of about 7500 ft. above MSL. At one time the village was surrounded by thick forests but presently only a few spruce are to be seen on the slopes. The large proportion of area under forest is presently under plough or is lying barren because of gradual deforestation. Down below, passing through Shilaghrat, is Sila stream, a small nullah, which converges with Sahu stream to form a tributary of the river Ravi.

History:

It is believed that Gaddis were the original settlers of this village and Gujjars came to stay here only three-four generations ago. But none of the inhabitants of the village was able to confirm this story. They were also not sure as to how the village derived its present name. It was rather funny that research team had to tell them why village was having its present name. The team has members/got the clue from already published literature and were able to confirm the story from revenue sources.

The story goes that once the Raja of Chamba initiated a 'hawan'. The priests demanded some fire for igniting the fire for hawan. Then a brahmin named Sala asked priests to produce fire by reciting Mantras. As priests could not do this, Raja ordered

Sala to do this which he did. Raja became very happy and was pleased to award some land to him. Later on, other persons got 'mautors' and started settling in the village still later mand Onjars; Eured by pastures, settled here. Since the Lawan was performed on Tuesday (Mangal), the village acquired its name Maingal, slight distortion of the word

Climate:

As the village is located at a height of about 7500 ft, above MSL it generally remains cool even during summers. The winter commences with the onset of November and lasts till the end of March during which period snowfall is generally heavy. Average snowfall, which used to be around 5 ft. during 1960's, has r come down to around 3 ft. It hinders the out-door activities of the villagers and burdens them with the task of clearing snow off the roofs after every snow all. They dwell in Autoba houses with flat roofs, they cannot afford to endanger their dwellings by neavy weight of show. The change of climate from cold to mild hot of summers is very gradual. April remains quite cool and pleasant. The rains start in early July and till then the coather remains surny, clear and pleasant. Fill september the atmosphere remains humic and hills are often shrouded with mist

and clouds. Briefly, the climate is conducive for hard physical labour, which they have to put in tilling their fields, in tending of cattle and carring the milk for sale to Judera and Rehru every morning.

School:

A primary school for backward classes was started in the village during 1900-61 by State Social Welfare Department. But it was closed down in 1963 because of very low enrollment. This meagre enrollment was result of directions given by Qazi. It was asserted that a Muslim should not learn Hindi and if it was taught in the School, the Muslim children should not go there for studying. Then the School was again started in 1980 for primary classes. The school functions in a single room of a hired 'Kotha'. One chair and a table are the only furniture provided. The work on the pucca building for school is in progress. The students have to sit on mud floor, even jute mats were reported to have not been provided. In 1980 when the School was re-started there was ray one student on its rolls but steady and sincere efforts put by the only teacher of the school raised the strength to 18 in 1983. Presently there are 20 students studying up to 4th class. The beacher confided that

in next year the students will be promoted to 5th class and hence there will be a full-fledged primary School. There is no other staff in the School except a lone teacher. As the School is housed in a rested room, there is a lot of disturbance from the family of the nouse owner. It hinders the study of children who are already reluctant to study. Not all the children of the village are enrolled in the School. This is so because must of the villagers do not appreciate the importance of education, and engage their children in h usehold and other jobs. A few persons lamented that even if they wished, their own poverty would stand in the way of their children for higher education. Because of this there is no child from this village studying at middle or matric level as they have to go to Judera and Barog respectively for these classes. Blucation does not weigh much in the order of their priorities and therefore no efforts are made to educate their children. They even threaten to withdraw their children from even primary classes if there is any complaint about the teacher's strictness to ensure punctuality or even just attendance.

Public Health:

Maingal can neither boast of a dispensary nor of a private practitioner. However, a government dispensary

There is no shop dispensing exclusively medicines in shillaghrater nearby areas. The only Sikh shopkeeper at Shillaghrater nearby certain patent medicines for common and minor ailments. For all major ailments people have to go to Chamba, the district headquarter. The condition in 1963 was even worse when not even ordinary medicines were not available.

In general Gujjars seem to be healthy people. It was however learnt during the course of investigation that few persons were suffering from diseases like T.B, etc., some others were found having disabilities like dumbness, polio, etc. since birth. The cases of T.B. may be for reasons of poor sanitary conditions particularly because generally the animals share the living space in house. Despite all this, people are healthy and sturdy, which the hard work has made them.

Transport and Communication:

The village is not connected with motorable road. The nearest bus terminus is Rehru which is about 11 kms. from the village. The nearest bus stand used to be Chamba in 1963. From Maingal there is a bridle path to Shilaghrat from where Jeepable road leads up to Rehru. Road is still Kutcha from Rehru but is negotiable by bus up to Chamba. Less than half of

the road to Chamba is netalled. All these difficulties in transportation pose a great problem for people of that area especially in the marketing of their produce which being milk in most of the cases is perishable and cannot be retained even for a day.

The very nature of the area has taught the people to depend on their legs to cover distances, as far as possible, which sometimes are fairly long. A few persons use penies and mules to transport the goods of doily consumption. The nearest railway station is Pathankot which is about 150 kms. from the village and therefore it may not be surprising to note that most of the people of Maingal never saw a railway engine all their life.

Markat:

There is no shop of any kind in the village. The nearest shop is in shillaghrat, where articles of daily use can be lought. There is only one such shop dealing in almost all articles of daily usage and resembles a small departmental store. The people go to Mahru and Judera for selling their milk and only a few visit Chamba for this purpose. But 'Khoya' and 'Ghae' are invariably sold at Chamba. Thus Chamba can be assumed to be the nearest established market for tuying and selling of every thing. People are in the

habit of bringing their provisions from Chamba whenever they happen to visit that place. There has not been any positive change in this respect after 1963.

Veterinary Dispensary:

The nearest veterinary dispensary too is at Shilaghrat. It is managed by a Stock Assistant and very few medicines are available there. Hence the people have to rely more upon their own tips for curing the animal diseases. The villagers told that even if proper medicines were available in the dispensary, they would not be able to make use of them during their migrations. So they are compelled to make use of their own knowledge on the subject. which at times is not effective.

Bank:

The nearest bank for this village is at Chamba. So the people have to keep their savings, if any, with themselves and thus have to forego the interest thereon. Whenever necessary, leans are taken from the local shopkeeper, relatives and friends. It was also learnt that the berrowings are mostly for consumption purposes and for that the local shopkeeper is the best and most convenient person to help them. Banks and other institutions do not lend for such purposes.

Post Office:

The village has no post office and the nearest on. is located at Shilaghrat which started functioning during January 1961. The postal service is not very efficient. both clearance and delivery of mail is most irregular and not more than twice a week. The nearest telegraph office and telephone are located in Chamba. Both these hardly matter to the villagers because they do not use any of these.

Religious Institutions:

The village population comprises Cujjars who are faithful Muslims and Gaddis who pursue Hinduism.

Therefore, there is a small mosque in the village as well as a small temple of lord Shiva. Though two tribes follow different religions but there is no disharmony of any sort on this account. The Muslims bury their dend in a grave-yard situated at Bhalala, whereas Gaddis cremate the deed bodies.

Electricity:

Though the electric line was brought to village senetimes during the middle of 1983 but the first house was electrified towards the end of March 1984 only. This was due to the high cost involved one energed by the Department for laying wires up to the hous., of electric fitting etc. It was also

learnt that the people could not afford the minimum charges too. As a result, the use of electricity remains restricted.

Drinking Water:

At present there is no drinking water supply scheme in the village. The people have made their own arrangements for getting water from nearby sources through PVC pipes by gravity. But the system is not very effective because the pipes are laid open on the surface and are thus often damaged by animals. A scheme for providing water was initiated three years ago for lifting water from a Nallah and then distributing to various hamlets.

Village Ponchavat:

The Village is covered by Shilaghrat Panchayat. The Panchayat also covers Gogreta, Thundu, Shilaghrat, Gyal and Sanotha in addition to Maingal. Two uninhabited villages viz. Maned and Badwa are also covered by this panchayat. The entire group is called Shilaghrat Gram Panchayat. The meeting of Panchayat members is held at Panchayat Bhawan Shilaghrat. It was reported that the Panchayat did not meet for the last several months, whereas a meeting should normally be held once a month.

Panchayat comprises seven numbers. Village
Maingal is represented by Mr. Mossa, who is serving
his third consecutive term in this position. It was
reported that Mr. Mossa from Maingal has been
successful because of his integrity, character and
hard work. He also helped the research team in all
possible manners.

Girdial Gujjar Milk Producers! Co-operative Society:

The villagers have shown interest in co-operative movement and benefited therefrom. This society was established during 1955 to market the milk produced by its members. Initially it had 25 members. But due to certain reasons this could not survive beyond 1950. This society was revived again in 1983 with the hard and active efforts of its President Mr. Ratton Chand. Presently, the Society is working with a share capital of hs 475/- and working capital of hs 2485/-. Out of 58 members of the society, 9 are from naingal. Juring the year 1982-83, the society handled business of hs 46207/-.

The modus-operanci of the society is that the individual manbers have to bring their own produce to me of the collection points at Judera, Chunga, Klung, Galera, Garjan, Chambi, Langi or Baror.

Society is planning to open a collection point at shilashrat also which will be of great benefit to producers from Maingal. Milk is tested by lactometer before it is accepted and sent to Chamba by bus.

Previously it was sent by jeep which was hired by the society but the practice was abandoned as it turned out to be uneconomical. The milk is sold from door to door in Chamba. For collection and disposal of milk a salesman is employed. Presently, society is handling about 1.5 Qtls. of milk each day.

The membership fee of society is as 10/- and this entitles a member for sale of his produce through the society at remunerative prices. Because society offered higher prices, the private traders too, who are also in this business, had to enhance their rates to compete with the society. Thus, the society has been beneficial to even non-members, indirectly.

The society provides mustard cakes, salt etc. to their members. But it has not been possible for them to provide loans to members because of financial stringencies. The society has ambitious plans of laying down modern equipment for milk testing, a rest house and providing modern know-how about modern emimal husbandry to its members.

Chapter - III

THE PLOPIE

Maingal is predominantly inhabited by Muslim Gujja s while the Galdis are in minority. Of the total 51 households, 41 belong to Gujjars whereas rest 10 are those of Gaddis. Seven Gujjar households migrated to Punjab, almost permanently, about 5 years ago. Both Gaddis and Gujjars are listed as scheduled tribes since 1950. The population of Maingal is spread over 13 homlets viz. Maingal, Ragnal, Jhundi, Gandera, L'hulu, Malos, Tritha, Galoo, Bhalala, Dapaythaget, Manaiti, Manait and Manaita. The population of the village was 249 in 1901 comprising 122 males and 127 funales living in 31 households. At the time of the present survey, there were 34 Living in 51 households. The distribution of population is given below:

	No. of	•		
	house- holds	Male	Fenale	Persons
Gujjers	41	148	140	288
Gudas	10	31	25	50
Total in 198+	51	179	165	3144
Total in 1961	31	122	127	249

Origin of Opinge:

According to Cunningham Gujjars existed even buffre Christ. It is scherally believed that Gujarat

is the original homeland of Gujjars, where they led normal and settled life. Then they migrated to Northern India due to some unknown causes and spread their empire. Later on with their downfall they took to rearing of beffaloes. The Gujjars of Charba are migrants from Jamua and Kashmir. There is a story about their migration. It is said that Rani of Chamba invited some Gujjars to augment the supply of milk to royal family. Later on some more Gujjars migrated to Charba lured by pastures and abundance of fodder. with the passage of time, the Gujjars also undertook I farming alongwith their traditional occupation of cattle rearing. Being inhabitants of remote area they are still educationally and economically backward. They live peacefully without much ambitions in their life and with least interference from outside.

Religion:

s stated earlier, the village people are Muslim Gujjars and Hindu Gaddis. Though the Gujjars are descendents from Hindus, now they have become devout Muslims observing all traditions and rituals of Islam. It is natural that with time they have forgotten their origin and have slowly and slowly been absorbed completely into Muslim brotherhood. Similarly Gaddis are staunch Mintus and were shop traditional Gods and Deities of this religion.

Housing:

The village is spread over a length of about 2 kms. Indicates that there has never been any layout plan for the nouses. They are generally scattered and located near the fields except for haingal and Bhalala hamlets where the houses are closely clustered.

The houses are planned for a single storey. It was learnt that there is neither dearth of space nor any need for double storeyed houses. The houses are Kutcha. The houses of Sujjars are called Kothas which are rectangular structures having flat roof of mud. Generally their houses contain two rooms with single entrance. In one room cattle are housed whereas for ily lives in the other. There are no windows or ventilators provided in houses. Hence the inside is sacky and stuffy. The Cajjars are immune to the otherwise unbearable stink of cattle dung and urine in the Living room. On the whole, these houses are very filthy and unhygicaic. On the other hand, the Gaddi houses are much clamer, with separate cattle sheds. Of course, the type of construction is the same. Mindows are also provided in Gaddi houses which make fresh air available and hence it is not stuffy and sucky inside. The close and compact houses are an outside of the cold weather of that area. The carlier report, Cansus of India, Vol. 20-PT.6 - No.27, reveals that situation was all the same in that period also. Thus, there has not been any improvement in this regard despite such a long period. This may be due to their being cut off from the main stream of society which could teach them the modern and hygienic way of living.

For construction and repair of houses, villagers enjoy rights in the forests to get timber. But, it was leant during the course of investigations that there is lot of difficulty in getting permits from Forest Department, delay is very common and the quantity allowed is generally much less to the need. As a result, villagers feel compelled to illicit felling and face legal actions. At the time of this survey one person was reported to be in Jail and four others were facing trials for such offences.

Dress:

The villagers wear simple but characteristic dress. It is possible to recognise a person from his/her dress whether he/she is a Gujjar or Gaddi. The Gujjar men wear a turben which is of white or colcured cotton and coiled loosely in a peculiar style. The shirt is long touching knees with small collar and single breast pocket. Over the shirt,

a half cont without sleeves is worn in all seasons.

Velvet or any such shining cloth is chosen for this half coat. Woollen coat is used during winters.

Lower portion of the body is covered by a Tehmat of square design, or a loose and short Salwar or a tight pyjama.

The traditional head gear of Gujjar women is called 'Joji'. It consists of small round cap with a cloth sown to it with plaits. It reaches up to the waist. The Gujjar women wear long and loose shirt having side pockets. Some women wear Punjabi salwar whereas other wear 'Suthan' which is very tight between ankle and knees and quite loose up till waist. During winters they wrap themselves with cotton sheets. Embroidery on female headgear and shirt is popular. Both mon and women wear shoes unde of raw leather though FVC shoes are getting hall. The wanch don't ut their hair it all but men, in the absence of any barber, have to help each other in this resard.

like every where else the Gujjar women are fond of ornaments. Same of the ornaments are worn saily while certain others are used for festive occasions only. The quantity of jewelry possessed reflects, the economic status of the family within

the tribe. These ornements are generally made of silver and the use of gold is rather rare. The list of organist is long as they have items for almost all parts of the body. They also use ornamental silver buttons on the shirt or Joji.

Cleanliness, as generally understood, is not known to the people of Maingal. It is very rare that they take bath. The men take bath 3-4 times a year especially on some festive occasions like Id. etc. But the women are reported to be taking bath once or twice a month. Some is not in much use.

Modern Durable:

With passage of time, there is also a change in the attitude and outlook of the Gujjars. This fact is also verified in Maingal. From close observation of the residents it seems that they have been adopting the gods and commodities of the present time. For example it was observed that so many persons were wearing the PVC shoes instead of the traditional leather ones. The traditional brass or copper utensils are being replaced by the modern and cheap aluminium utensils. Their dresses were also found to be made from synthetic cloths but its use is very restrictive because of the high prices.

During the course of survey it was found that three Gujjar households and four of Gaddis possessed portable wireless receiving sets (Table 3.1). The first one of these was reported to have been purchased nearly 14 years ago. During 1961 they possessed only one such set which seemed to have degenerated and was out of use. Though they cannot appreciate the quality of programmes being broadcasted, it only provides them a cheap source of the only entertainment available in the village. This is also considered as a status symbol. The same is true for the wrist watches which were found to be worn in 17 households of the village which used to be one during 1961. Though exactness of timings has no significance in their routine, they possessed the watches just for the sake of social prestige. None of the Gujjar households possessed a sewing machine though Gaddis had there such items. Thus, during last 22 years, one more machine has been added to already two existing. While Oujjar, generally purchase readymade clothes, the Gadlis even verve woolen cloth as well as stitch it for their use.

The village, being very near to the dense forest areas, is always susceptible to the attacks by wild bears or other nocturnal enimals. Thus, for their

Table 3.1: Use of modern durables in the village

Items	. Gu	ij∂rs i	Gaddis		Total	
rcems	1984	1961	1984	1961	1984	1961
. Transistor		· \			. ·	
- No.	3	1	4		7	1
– Purchase value (‱)	1.50	-,	1175	-	2525	-
— Range of adoption year	4-10		3-14	gene	3_14	-
. Wrist watch						
- No.	11	- 1	6	•	17	1
- Purchase value	2270	-	1255	dire	3525	
 Range of adoption year 	160		1-4	-	1-67	
. Sawing Machina						•
- No.			3	. 2	3	2
- Purchase value (Rs.)	Area .	874	630		630	-
 Range of adoption year 	-	-	1-24	•••• ·	1-24	·
4. Handloom						
- No.		 .	6	. 3	6	3
– Purchase value (8₅)	-	-	540		540	, , , ,
⊷ ?⊃nge of ado, tion year		, : 	1–10		1–10	
5. Gun			•			
- No.	10	2.	4	3	14	5
- Purchase value	4420	-	610	-	ຸ503≘	-
- Range of adoption year	3-34	-	5–71		3 - 71	-

bears and other animals some of the families keep licensed guns. These arms are very cheap and of obselete quality. Invariably they are the muzzle loading guns. Earlier the people used to peach in the forests but recently after the strict enforcement of the law concerning the protection of the wild life, they have given up this practice in fear of punishment.

From the observations it can be gathered that the villagers have open heart for modern durables but they cannot buy them because of the prohibitive prices or because of their being located in the place which is not easily approachable. Due to the last factor, they smetimes do not even come to know about goods and services which they would have otherwise made use of. Thus the main, if not the only, reason of their backwaraness is lack of knowledge for reasons of remoteness.

Red and Brink:

The villagers have very simple diet. Their stople food is noize which is their only and normal crop. The loaves of noize flour are taken with black gram or whatever cheep lentils are available at Shill phrat. The butter milk is also consumed clargwith. There are very few vegetables like

brinjal, purphins etc. grown in very small quantities in the village. Hence they are taken rather rarely. Certain wild herbs and werds are also cocked as vegetables. Paddy is not grown in the village hence they don't use rice at all as they are in no position to purchase it from market. Therefore they eat rice only on festive occasions like marriage, etc. Among Gujjars, consuming alcohol is a social taboo and anybody found drunk is socially boycotted. But even then a few of them drink, taking care that they are not detected.

Birth Customs:

The expectant mothers are not permitted to go near a grave-yard. Delivery takes place in a safe corner of the room. It is, however, kept clean before hand. The services of a trained milwife are generally not required. Old women of the neighbourhood of the expectant mother attends to outside work.

The birth of a son is more welcome although there is also a rejoicing when a daughter is born. The umbilical cord is cut by a pair of scissors and the placenta is buried cutside the house. Allaho-akbar is whispered into the child's ears three times?

Jaggery is distributed to all those present. The time of child's birth is not noted. On the seventh day, mother takes her bath. She is not permitted to touch utensils and milk buffaloes for forty days. A feast is given to all relatives and friends on the 41st day. She starts doing little household work after a week's rest.

The ceremony of circumcision of a male child takes place after four or six months at any auspicious day suggested by the Maulvi. A Gujjar barber from Sahu or Chamba is invited to perform the ceremony. A feast is thrown to relatives, friends and neighbours to make the circumcision ceremony. The feast consists of rice, shee, milk and maize bread. The invitees give cash presents to the child's parents. This is known as 'Naindra' ceremony.

Marriage Custons:

There are two types of marriages celebrated among Gujjars. The first is 'Batta-Satta' marriage by exchange and the other type is marriage on payment consideration. Under the second system money is paid to the bride's father for making the contract final. Essides this, marriage by elopatent is prevalent among Gujjars. The man after eloping with the girl, may negotiate with her father at a

later stage. The father generally gives his consent. Mikah is performed by Maulvi. The religious ceremoney may be held even when the boy and the girl are very young but the bride comes to stay with the husband only after puberty.

Initiative with regard to marriage is invariably taken by the family of the boy. Some elderly family members or near relations visit the house of the girl and get her parents' consent. Again, a day is fixed for re-visit when the boy's father takes some gur or sugar, ghee, an ornament and a garment. A feast is arranged in their honour. Jaggery is distributed among all those present. Usually the betrothal takes place when the boy and girl are minor. It is at later stage that marriage is performed.

Certain essential articles like a couple of armaments, one couplete areas, five to six utensils, a tin box and a light badding are given as dowry. A well to do ramily may give a buffalo also. The boy is also given one set of dress as a present.

Divorce is also prevalent among Gujjars. It takes place if the wife is found guilty of adultery. The consent of the husband is necessary. On her steamed marriage, ausband gets back all the ornaments given to her. Besides, he may get a certain amount of

money as compensation as decided by the community.

Widow re-marriage is also pensissible. She may marry after about four months of her becaming widow. A widow may also oblide by marrying one of the deceased husband's trother. Polyandry is not permissible under Islanic law. Polygyny is parmitted and a Muslim male can have four wives at a time. But this practice is not observed by Gujjars. Here Muslim Gujjars, in practice, have only one living wife.

DEMOGRAPHIC PROFILE

11 the inhabitants of Maingal village belong to scheduled tribes. The Muslim Gujjars form the majority by having 41 households in the village whereas the remaining 10 belong to Gaddis. The total population of the village was 344 persons at the time of survey. The Gujjar population in the village was 288 and the rest 50 is accounted for by Gaddis. Table 4.1 gives the communitywise population of Maingal village. children account for the major proportion of the village population and hence suggests that birth rate in the village is considerably high. This established that most of the villagers do not appreciate the importance of having a small family. Moreover the village being situated in quite interior of the district, the family planning drive may not have covered this village.

Family Composition:

The Cujjars, in general, have nuclear families.

Mostly, the son after marriage separates out from
his parents and lives only with his wife and children.

This separation does not necessarily mean that he
goes to live in a separate house, but he may occupy
a portion of the some house and live independently

in his illotted portion. His due share in land and animal wealth is also given to him at the time of separation. In contrast to this, the Gaddis mostly follow joint family system. Father, sons, brothers and even uncle and nephews of the same descent generally live together under the same roof and own property in cumon. Of late, there has been developing a tendency among some young Gaddis to live separately.

The average family size in the village was found to be little below 7 persons per family. Even though the Qujjars have mostly nuclear families, their average family size is still considerably greater than that of Gaddis. It was found to be little above than 7 persons for Gujjars whereas for Gaddis average family size is 5.6 persons. This again can be explained in the light of higher birth rate among Gujjars. When comparing results with that of 1961 Will be survey of Village Maingal the fact emerges but that average family size has been marginally reduced. This uses to be abound 8 persons per family curing the said period. Though family size is still quite high, it seems there has been some improvement in this regard.

Cax Actio:

The balance between the two sexes is an important aspect of population structure. The birth rate, the

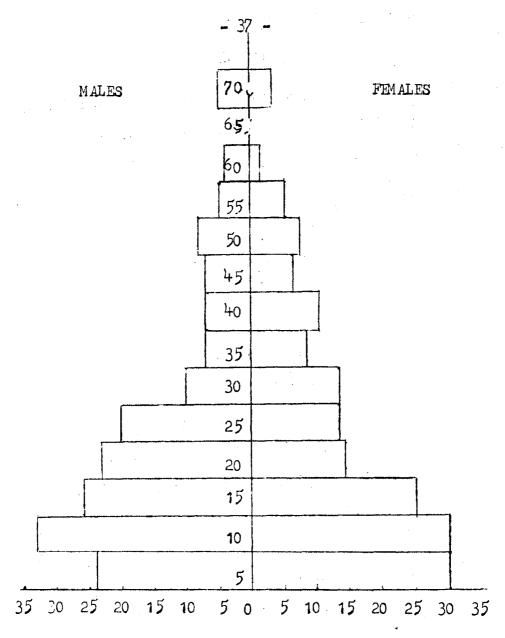
marriage rate, the magnitude and direction of migration etc., are all significantly affected by the proportion of males and famales in the population. Also demographic factors affecting the potential labour are not confined to trends in the number of person only, for women have always played an important role in the labour market. This is most true for the women of interior area and backward classes where a large majority of population depends upon agriculture and animal husbandry, and it is they who bear the burden of all work connected with it except a few The number of femalesper thousand of males is found to be higher (940) among Gujjars as compared to Gadds (800). On the average there are 920 females in the village for every thousand males. situation during 1901 was entirely different. Gujjars who currently have higher sex ratio. were then having 970 families per thousand of males as compared with 1090 among Gaddis. The overall sex ratio in the village was 1042 per thousand of males. ige Cormosition:

The age factor has a considerable social significance because it exerts a big influence upon social phenomenon in so many ways. Age has an important bearing on the limit above and below which

Table 4.1: Age categorisation of village population(1984)

Aga Group	Gullars				Gaddis			Total		
(Years)	Male	Fema le	Total	Male	Femal _e	Total	Male	Female	Total	
0-5	20	26	46	4	4	8	24	30	54	
6-15	53	49	102	6	6	. 12	5 9	55	114	
16-60	71	63	134	20	14	34	9 1	77	168	
61 - 70	4	2	6	4	1	2	5	3	8	
Total	148	140	288	31	.25	56	179	165	344	

· 36 -



1. LIFE_TABLE POPULATION OF MAINGAL BY AGE AND SEX

a person cannot be expected to work for economic benefits. Therefore, the age composition of a society sets limits to the availability of working force and hence it also sets a limit to the economic gains which can be had by a particular society/group.

The distribution of population according to different age groups has been presented in Table 4.1. In presenting the data the whole of the population has been divided into 4 groups: below 6 years, 6-15 years, 10-60 years and above 60 years. This has been done with a view to have better insight of the age exposition in details. The first group is that of infants who are not supposed to study or do any useful work. The next group up to age of 15 years is supposed to study but it has been observed that this group helps substantially their families in different household chores and other light works connected with various economic activities. This is because the importance of education has very little meaning to the people of this village. It has been assumed that the persons right from the age of 16 years to 00 years should be notively engaged in useful economic activities and are termed as working force. These particular groups folling in this age limits form a considerable proportion of village

population. The last two groups of ages ranging between 61 to 70 years can be termed as dependents. The se of such persons sees not allow them to take active participation in production activities. Though they may help the main workers in some manner, they cannot be considered much useful as far as income generation is considered.

It may be further seen from the Table that among Gujjar population about 35 per cent are infants thereas this percentage is about 27 per cent among Gaddis. This suggests that Gujjars have higher birth rate as compared with the other community. The further details of male and female composition in various age groups in both the communities can also be observed from this Table.

Literacy:

The education received by children can be taken as a direct measure of the efforts that have been putforth by parents, the community, the State and the Nation as a whole for the mental and economic development of the people. Modern living also takes for granted the ability to read and write. The proportion of literate in the entire population is, therefore, an important indicator of its quality.

The majority of persons in the village is illiterate. As stated earlier, the primary school was re-established in the village during 1980. There are also no tacilities for higher education in the vicinity of village. All this put together along with the attitude of villagers, who don't attach any importance to education, form the basis for high illiteracy rate in the village. One of the important causes of illiteracy, not covered above, is that the inhabitants are semi-settled who migrate during summers making it impossible for the children to centinue their studies, as they also have to accompany the parents. Table 4.2 depicts that only 12.75 per cent of villagers are literate. It looks that among uales literacy percentage (21.93%) is better than for families (only 2.22%). This may be due to the fact that the villagers being predominantly Muslim are - elatively more ortholox and conservative in their attitude and outlook and therefore, consider female education of no importance. This observation is also supported by the higher literacy percentage (29.10%) among Gaddis. Out of total population of 344 only 37 persons of both the sexus are literate (Table 4.3). The three female literates are students t the local school. This is a very encouraging fact

Table 4.2: Demographic Profile of the village(1984)

Particulars	Gujjar	ibbe2	Total
1. Male Female ratio	940	800	920
2. Mage of workers in total population			
- Male workers	24.65	35.71	26.45
← Female workers	21.87	25.00	22.38
- Total worker:	46.52	60.71	48.83
3. Literacy percentage			
- Male	16.40	48.14	21.93
- Female	1.75	4.76	2.22
- Total	9.50	29.16	12.75

Table 4.3: Distribution of Literate population according to different age group(1984)

1.0		Gujjars			Gaddis			Tatal	
ng: group in y⊼rs	Litérate	<pre>ttained educational institute</pre>	Total	Literate	Attained educational institute	Total	Literātu	Attainad educ⇒tional institute	Tot31
– 15				•			· .		
-Mala	**	12	12		6	6		18	18
⊷Female		2	. 2		· 1	1	-	3	3
3 4		,	i .	,	į.				
6 - 30									
-Malo	_	¹ 3*	3	-	4	4	-	, 7	7
⊶Fomala	-	•	-	-		_			
	•	ž	11		Şi.	•	•		
31 - 45	•		٨	•	3	3	2	.' 5	7
⊸Malo ⊸Femalo	2	2 -		-	-	-	_		,
6 - 60		ē ,							
⊷Male	2	****	2	-	-	_	2		2
—Femala	-	-	-	41	- . :	-	_	-	-
	••	•			*		1		
otal		:						_	 .
-M313	4	17	21		13	13 1	. 4	3 0 3	34 3
—Fəmala —Total	4	2 19	2 23	-	1 14	14	4	3 33	37

^{*} One person passed Matric in 1980.

indicating that the attitude of the villagers is undergoing a positive change, however small it may be. Most of the literates, it appears, got their education from the established educational institutions. They may have obtained their literacy standard within the village or they may have joined the school at Shilaghrat. The highest qualified person in the village belongs to Gujjar community and this boy passed his matriculation examination during 1980 from Barog, a village at a distance of about 12 kms. from Maingal. It seems on comparison that there has been some improvement in literacy standard of village population after 1961. In this year there were only 8 literates in the total population of 249. Only two persons out of 8 had some educational qualification and the rest were literates without any educational qualification.

Workers and Non-Workers:

The eco.omy of a village depends on the strength of active workers. The number of workers and non-workers in the village is given in Table 4.4 wherein it is revealed that there is a significant difference in the proportion of potential workers in both the communities. The active workers(16-60 years of age) comprised 47.97 per cent of total males

Table 4.4: Workers and Non-Workers in the village(1984)

Indicator	Gujjers	Gaddis	Total
. Total population	288	56	344
. Person upto 15 year age	148	20	168
. Person above 60 years age	6	2	8
Total(2 + 3)	154	22	176
Person 16 - 60 year aga	134	34	168
Family size	7	5.6	7
No. of active member in a family	3	3	3
Dapandancy ratio	2.33	2,00	2.30
Proportion of Family worker in a family	47.01	41.18	45.83
Proportion of male worker in a family	5 2 . 99	58.82	54.17

and 45 per cent of total females in Gujjar households, whereas this proportion is high among Gaddi households. In case of Gaddispopulation, active workers are 64.51 per cent of the total males and 56 per cent of the females. The maximum number of persons in the village are in the age of below 16 years (non-workers). an average the family size was of the order of 7 persons in Gujjars households of which 43 per cent were observed to be potential workers. Though communitywise results have not been presented in the Census report of village for 1961 but in aggregate there were 48 per cent of total nales and 50 per cent of total females classified as workers. Dependency ratio indicates that on an average a worker supports about 2 persons in a family. Even in the tender group of 5-10 years, the children are burdened with the task of grazing cattle, though only part time. After the age of 10 years both males and females participate in work and in a bigger way. It has generally been observed that above children aged above 15 years help full time in the family occupation. Both males and females have been considered dependents at the age of 60 years or above nainly because of their weak physique.

WILL GE ECONOMY

Occupational Pattum:

For their livelihood the people of the village are not dependent upon any single occupation. Animal husbandry is the main occupation of the villagers. Agriculture is a subsidiary occupation for Gujjars. Table 5.1, 5.2 depict the activity status of the villagers. It would be observed that animal husbandry is the mainstay of the Gujjars. This is also their necessity tocause their size of holding are much smaller to those of Caddis in the village. At the same time, the Gujjar have traditionally been cattle rearers and therefore they lay more importance to this vocation. No Aujjor household was reported to be possessing more than 20 mighas of land. It shows that there is great pressure on lond, and no waste land is found in the village for cultivation purpose. There are no irrigation facilities, and the productivity of crops is very low. Hence they rear cattle to supplement their income. Around 50 per cent of Gujjar workers and 71 per cent of workers many Gaddis (Table 5.1) were following double occupation, whereas, rest of the workers had more than two occupations to earn their liveline a. The proportion of workers engaged

- 47 Table 5.1: Occupational pattern of workers in the village(1984)

		* *	•	
Particular s	Gujjars	Gaddis	Total	****
No. of households	41	10	51	
Total population:				
Males	148	31	179	
- 16 - 60 years	71	20	91	
- Others	77	11	88	
Females	140	2 5	1 65	
- 16 - 60 years	63	- 14	77	
- Others	77	11	88	
ccupations:				
Agriculture & Animal . Husbandry	,		. :	-
- No. of households	. 20	7 ·	27	
- Workers - Male	42	14	56	
- Female	36	10	46	
Total	78	24	102	
Agriculture, Animal Husb and others	andry		raes a serie :	, agir a tre
- No. of households	21	3	24	
- Workers - Male	29	6	35	
- Femala	27	4	31	•
Total	56	10	66	-
Other occupation only				_
No. of households	-	. -	- -	

in multiple occupation is more among Gujjar households as compared to Goddi households. This may be due to higher productivity of individual occupation among Goddi households than Gujjar households. Therefore, to supplement the family income occupation diversification among workers was higher in Gujjar community. This contention is also confirmed by the fact that dependency ratio was noticed to be higher in Gujjar households.

part in all jobs pertaining to agriculture and animal husbandry. The women cut and carry heavy loads of grass while their menfolk take milk and ghee to market. Major demestic work is carried on by the women. Ploughing is exclusively done by men while interculture and harvesting is done by both men and wimen.

Source of Family Inchie:

Income generating sources of households in the village are cattle and buffal, rearing, cultivation, goat and shoep rearing, weaving and wage saming in non-agricultural pursuits. Tables 5.2 and 5.3 contain data on the relative importance of the various sources of income. Cattle and buffalor rearing seems to be the main spring for income in the village. Economy of dujjars who form the unjer population of the village depends largely on buffalo rearing. It may be seen from the Table that the saddi households earned more

Table 5.2: Per household employment pattern of workers in different activities.

		13			· · · · · · · · · · · · · · · · · · ·		Ma	an days/year	
0-14-44-1		Gujjars			Gaddia		Total average		
Activities	Male	Female	Total	Ma l e	.Female	Total	Male	Female	Total
1. Animal husbandry	442 (69.9)	454 (80.9)	896 (75.1)	468 (64.1)	399 (78.1)	867 (69.8)	447 (68.7)	443 (80.4)	89 0 (74.0)
2. Agriculture	148 (23.4)	107 (19•1)	255 (21.4)	240 (32.9)	112 (21.9)	352 (28,4)	166 (25.5)	168 (19.6)	274 (22.8)
3. Other(Non-agril. labour, Business, Artis#n etc.)	42 (6.7)	- -	(3.5)	22 (3.0)	-	22 (1.8)	38 (5.8)	• • • • • • • • • • • • • • • • • • •	38 (3,2)
4. Total Man days available	632 (100.0)	561 (1 0 0.0)	1193 (100.0)	730 (100.0)	511 (100.0)	1241 (100.7)	651 (100.0)	551 (100.0)	1202 (100.0)

Note: Figures in perenthesis are the percent_age to total.

income from agriculture than Oujjars. In this context it may be noted that the cultivated land per household is less in case of Oujjars than Gaddi households. Gaddis do household weaving and spinning. Tailoring is also practised by one household in the village.

Income of the Households:

Categorywise annual income of total households showing different occupations is given in Table 5.3 wherein a general idea of the economic standard of the villagers life may be had. The major source of Gujjars income is animal husbandry and accounts for 74 per cent of the total gross income. On the whole agricultural activities (crop production and livestock) contributed about 96 per cent to the total gross income of Gujjar families. Rest of income is obtained from nonagricultural activities such as labour, business, etc. As Coddi families owned more cultivated land than Oujjars, therefore, the proportion of their income from agriculture is also higher. However, the major source of their income still remains animal husbandry constituting about 51.6 per cent of their gross income. Further, the annual per capita gross income among Oujjars ranged between is 292 to Rs 2790 while such figures for Gallis come to hs 374 to Rs 2387 - lesser variation. This indicates that the per capita annual

Table 5.3: Income from different sources in the village during 1982-83

n negerin en en en		in percentage			
Particulars	Gujjars	Gaddis	Total		
No• of households	41	10.	51		
Income from			•		
- Crop production	21 • 6	45.3	25.2		
- Animal husbandry & Poultry	74.0	51.6	70.6		
- Others	4.4	3.1	4.2		
Total Income	100.0	100•0	100.0		
Total income per household(Rs.)	7052.1	5161.9	6681.4		
Total income par capita(Rs.)	1003.9	921.8	996.6		
Gini concentration ratio	0.78	0.66	0.81		

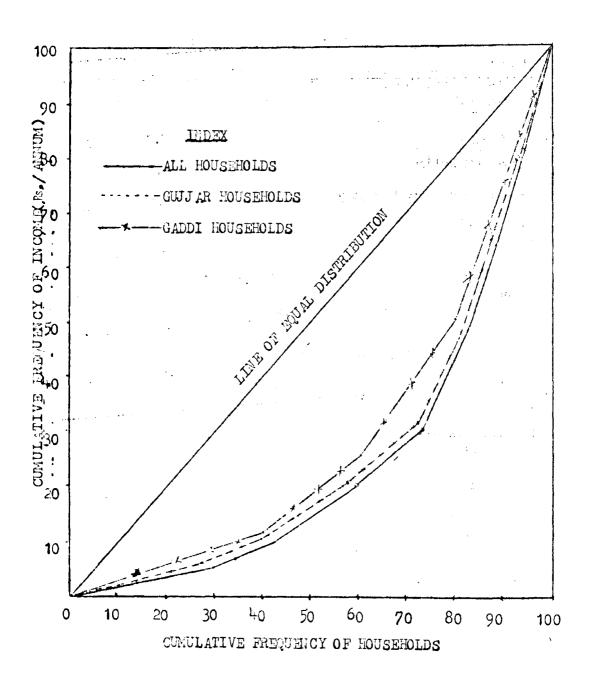


Fig. 2. DISTRIBUTION PATTERN OF PER CAPITA INCOME (%./ARRUM) in Maingal during 1982-83.

income distribution in the village is quite skewed. Gini concentration ratio shows that disparity in per capita gross income was relatively higher among Gujjars as compared to Gaddis. Relatively large gap in economic status in this category could be due to differential level of production resources and their productivities.

Indebtedness:

The incidence of indebtedness is very high among Gujjar households. A comparison between 1901 and 1984 data shows that in 1961 the number of households under aebt were higher as compared to those now in the village. During 1961 Survey, out of 31 households in the village 27 were in debt. Every household was under debt, but only three households of Gaddis of the village were in debt at that time. Total amount of debt with the debtors was Rs 20,750 and the number of families in debt was 27 in the village. The main purposes for which loans were taken included purchase of cattle, marriage and domestic needs (Table 5.4). Only six families incurred debts on account of purchase of cattle and two households were under heavy debts due to marriages. The larrest number of households incurred debts to meet their domestic needs. nost common rate of interest in 1961 was 30 per cent per annum.

Table 5.4: Indebtedness by causes in Mairgal during 1961.

Purpose	Amount Borrowed (Rs.)	No. of households in debt
1. Purchase of cattle	4,100	6
 House construction or repairs, to existing buildings 	, 4,000	, 2
3. Marriages	4,000	2
4. Domestic needs	12,650	19
Total	20,750	27

Source: A Village Survey of Maingal, Chamba Tehsil, Chamba Cistrict, H.P.,Cansus of India, 1961, Vol. XX- Park VI_No. 27. - *//* ·

of During the period/the present survey no case of Gaddi household was reported to be under debt, while among 41 households of Gujjars 11 were reported to be so. Whenever there is the need to purchase gracery or animal, they go to the noney lender who supplies the needed items and the cash as well as buys their milk and milk products. Presently the prevalent rate of interest is 72 per cent annually. It was also learnt that in practice the profits of the noney lender are much higher because he purchases milk, etc. at lower rates and sells his commodities to the villagers at higher rates. In 1984, out of 11 debtors six borrowed money from money lender for the purchase of ration and animal (Table 5.5). Gujjars also borrowed money from friends/relatives for various purposes. Five of the dajjar households were reported to have incurred debts for purchase of ration, land, repair of house and litigation. It may be surprising to note that the rate of interest in at least two cases was reasonable - 15 and 16 per cent. It was also learnt that in many cases Oujjars depend on Gaddi families for their financial needs. Borrowing from cornercial banks was however not liked by the people for reasons of too many formalities, banks being located at far off place Chamba, lack of education and knowledge about the procedure, etc. etc. Only one person

Tablo 5.5: Amount borround from various sources by Gujjars for different purposes during 1984.

			Purchase of animal		Lilipation
1. Friends/Rolatives			•		
→ No. of households	2 ·	1.1		1	1
- Amount of debt Rs.	1250	80 0 0		2000	1500
→ Rate of interest %	_	15	-	- .	16
- Amount paid Rs.	650	2000	_	2000	100
- in cash	650 .	2000	÷ .	2000	180
- in kind	-	. ·		- .	5
Amount outstanding	600	7000	-	.	1600
2. Local Monay lender		•		,	
- No. of households	5	_	1		-
- Amount of debt Rs.	7100	_	1500		-
→ Rate of interest %	70	-	72	•	-
- Amount paid Rs.	840	-	1000	-	- ·
→ in cash	720	-	500 '	_	-
- in kind	120	-	500	-	-
Amount outstanding	6570	-	1500	•	6
3. Banks					
- No. of household		1:-	·· •	•	-
- Amount of debt Ps.	-	7000	•••	n-	-
- Rate of interest %	_	14	•		_
- Amount paid Rs.	• -	,	•	·	
− in cash	<u></u>	5000	111	•	-
- in kind	-	- ,	-	-	-
- Amount outstanding	_	4000	~		. -

was reported to have taken loan from bank for purchasing land. It was observed that borrowing has become a habit with them and they easily fall pray to the money lenders who reap double benefits on their investment by way of higher rate of interest and other methods stated earlier.

Chapter-VI

AGRICULTURE

Agriculture is not as much paying in Maingal as it is elsewhere in low lying areas. This is because of the high altitude of the place. The farmers have to fight against very heavy odds. The low temperature of winters permits the production only during Kharif season. Then lack of irrigation, poor fertility of soil, small size of holdings, negligible use of modern inputs are the contributing factors keeping the agricultural productivity low. As may well be expected in a mountainous tract like that of this village, the proportion of the area under the plough is also low.

Land Utilization Pattern of the Village:

according to village papers, the total area of Maingal is 823 factore of which about 52 per cent is under forests (Table 6.1). Permanent pasture and grazing land is the second important land use constituting about 36 per cent of the total land in the village. Proportionately larger area under this class indicates that livestock husbandry is practised on an extensive scale. Land put to non-agricultural uses is only 0.36 per cent of the total.

It would be worthwhile to get an idea of the trend in the land use pattern over the last two decades(Table 6.1). There has been an increase in the net area sown and area under current fellows. This led to a decline in the barren and uncultivated land, culturable waste and permanent pasture

Table 6.1: Land utilization pattern in Mairgal

	-,	. (in hectare)
Land Utilization	2.₩	1978-83	1958-63
1. Total Area		823.00 (100.00)	823.00 (100.00)
2. Forests		429.00	429.00
3. Land not available for cultivation		(52.13)	(52.13)
(a) Barren and uncultivated land		3,00	18.21
(b) Land put to non-agril. uses	•	(0.36)	(2.21)
Total		3,00 (0,36)	18.21 (2.21)
4. Other uncultivated land excluding current fallows			
(a) Culturable waste(b) Parmanent pasture and other grazin	g land	1.00 (0.12) 296.00	2.59 (0.31) 332.57
(c) Land under miscellaneous trees		(35.97)	(40.41)
Total 5. Fallow land		297.00 (36.09)	335.16 (40.72)
(a) Current Fallow (b) Other Fallow		40.00 (4.86) 2.20 (0.27)	4.86 (0.59) 0.16 (0.02)
Total		42.20 (5.13)	5.02 (0.61)
6. Net area sown		51.80 (6.29)	35.61 (4.33)
7. Area sown more than once (Ha.)		11.80	5.18
- percentage of net area sown		22.78	14.55
8. Cropping intensity	e e e e e e e e e e e e e e e e e e e	122.78	114.55

Note: Figures in parenthases are the percentage to total area of the village.

and other grazing land. These shifts in the land use pattern were mainly in response to the increasing demand for food grains. The demand was partly met through the extension of the trea under cultivation and partly through intensive cultivation. During this pariod there was no change in the area under forest. The percentage area under barren land and culturable waste to the total area of the village showed marginal declines. On the other hand, the area under permanent pasture and other grazing land decreased by about 4 per cent during the period 1958-63 to 1978-83. The whole of the cultivated area is sown generally once during the year and only about 22.8 per cent of it was cropped more than once during 1978-83. This figure stood at 14.6 per cent during 1978-83.

Land Utilization by the Villagers

Per household land use pattern by size of operational holding in the village is shown in Table (6.2). It may be seen that the system of leasing in or leasing out land is not practised in the village. This is mainly due to the non-remunerative nature of agriculture for reasons already stated. As far as holding size is concerned it was observed that the average land per household is lesser among Gujjar

^{*} This has been done only because the entire area of Maingal is not cultivated by the residents of this village only and, similarly, farmers of Maingal also cultivate lands in the neighbouring villages. Thus the figures for land utilization pattern of Maingal as reported by the village Fatwari are different from those obtained by the present survey.

Tabla 6.2: Land utilization by villager in Maingal during 1982-83.

(in Bioha) No. of Total owned Net operated Chasni Farm size area houseland holds Gujjars 24 - Small 115.04 90.04 13.00 12.00 (100.00)(78.27) (11.30)(10.43)- Medium .y 84.00 66.00 10.00 8.00 (100.00)(78.57)(11.91)(9.52)Large 113.00 91.00 15.00 7.00 (100.00)(80.53)(13.29)(6.19) Sub-total 312.04 247.04 38.00 27.00 (100.00) (79.17)(12.18)(8.65)Gaddis - 0 7.00 - Small 1 7.00 (100.00) (100.00)- Medium 1 10.00 10.00 (100.00)(100.00) - Large 223.00 8 . 177.00 39.00 (100.00)(79.37)(17.49)(3.14)Sub total 10 240.003 194.00 39.80 (100.00)(80.83)(16.25)(2.92)Total 51 552.04 441.04 77.80 34.00 (100.00) (79.89)(13.95)(6.16)

Note: Figures in parenthesis are the percentage to total land.

One hectare = 12.50 Bighas approximately.

families than Gaddis in the village. Overall average size of operational holding was 7.12 Bighas among Gujjars and 24 Bighas among Gaddis. Utilization of land shows that about 20 per cent of total area is under Ghasni and barren in the village. The proportion of land under Ghasni was less in case of Gujjars than Gaddis. The reason is that Gujjars possess small size of land holdings in the village. Out of 41 Gujjar households eight households owned 36 per cent of the total land. About 59 per cent of the total households of the Gujjars community have only 40 per cent of the total land. By any account this represents a highly uneven distribution of the land resources among them.

From the over all position of land holding it may be seen that there is no class of landless in the village. But actually their produce from the land is at subsistance level and is hardly sufficient for even home consumption. Because of high altitude they cannot produce two crops in a year and hence low returns from the land.

Gropping Pattern:

Generally, farmers of any area allocate their land mong different crops in accordance with the local climate, soil, knowledge and the availability of other resources. The inceme as well as employment of the cultivators largely depends upon the type of crops grown. Farmers having same area under cultivation, may have varying income and employment depending upon their cropping pattern. In fact all the cultivators do not grow various crops in the same proportion in their fields but different crops in varying

In Maingal, most of the area is under foodgrains accounting for about 86 per cent of the gross cropped area. Out of this, about 84 per cent is under cereals. The area and proportionate share of different crops in the village is summarized in table 6.3 which shows 5 year averages at two point of time i.e. 1958-63 and 1978-83. During these two decades the area under Kharif crops increased by about 2.5 per cent. During 1958-63 maize, Bathu, Ogla and potato, were the main Kharif crops grown in Maingal whereas during 1978-83, maize and Mash(black gram) were reported to be the only crops of the season. During Rabi season wheat, barley and mustard continue to be grown in the village. During the last two decades coarse millets et. Bathu and Ogla are being gradually replaced by maize. Also bilseeds and pulses are becaming more popular. Thus the breatunder maize and mustard has been increasing. Maize is the major crop of the village and it alone accounted for more than 73 per cent of the total cropped area. The only other crop of Kharif is Mash, but the area under this crop is not significant. As regards the cropping pattern in Rabi(Table 6.4) the Gaddi households, in general, have more area under wheat (about 29 per cent of the total cropped area) as compared to that of Gujjars(only 3 per cent of the total cropped area). Another interesting feature is the large proportion of land lying fallow during habi then in Kharif; during the winter crop season it was three times that of the rainy season. The other crop of. Rabi season is mustard. What is rather surprising is the fact that despite the large number of domestic animals, no fodder crop is grown in the village. It was however learnt

Table 6.3: Cropping pattern in the village

	1978-7	⁷ 9 – 1 9 62 – 83	1958-5	9 - 1962-63
Crops/season	Area in ha	. %age to tota	l Area in ha	. %age to total
KHARIE		. :		
— Мэ i z в	46.9	73.7	27.9	68.4
- Mash	1.3	2.1		
- Sathu	-	444	0.7	1.7
- Ogla	-		1.1	2.7
- Potato	-	94	0.2	0.5
Sub Tetal ·	49.2	75.8	29.9	73.3
828 I				
- Wheat	5.2	-8.2	6.8	16•7
- Barlay	1.4	2.2	2.2	5.4
→ Mustard	8.8	13.8	1.9	4,6
Sub Total	15.4	24.2	10.9	26.7
Total cropped area	£3 . 6	100.0	40.8	100.0

It was also learnt that preference is given to maize crop because this happens to be the staple diet of the people. Therefore, wheat and mustard during Rabi are grown only on that land which is not intended to be put under maize during Kharif. Thus, it is only the large holder who can afford to have wheat and mustard on some of his land and still grow maize sufficient for his needs.

Cron Rotation:

Without any pretention to the knowledge of the scientific theory, the farmers are well alive to the practical benefits of the rotation of crops. The area of land is left fallow deliberately to give it rest and to preserve and restore fertility of the soil.

Due to higher altitude, lack of irrigation facilities and poor fertility of soil, the land cannot yield two crops in a year in Maingal. Moreover, wheat and barley take more time for ripening and they cannot utilize the field for maize in which wheat is sown. Generally the farmers of Maingal practise following rotations of crops.

- (i) Fallow-Maize (one year)
- (ii) Wheat Fallow (one year)
- (iii) Barley Fallow (one year)
- (iv) Fallow Maize Wheat Fallow (two years)
- (v) Mash Wheat (one year)

among the above five crop rotations first one is most popular in the village. A very small area is utilized for growing wheat, barley and mustard.

Cropping Intensity:

Intensity of cropping is a measure by which it is possible to know the extent of land use in a particular area. Luring 1958-63, the cropping intensity was about 114 per cent which increased to about 123 per cent during 1978-83 in the village. This low intensity of cropping in the village may be due to lack of irrigation facilities, higher altitude of the place and poor fertility of the soil found in the village etc. But most important reason is that the villagers being basically shephered and cattle breeders do not attach much significance to crop husbandry. Hence crops have been neglected, the result being poor returns.

Household data collected personally for the year 1982-83, also brings out a low figure of 110 per cent as the intensity of cropping. Reasons for such a situation are the same as stated above. It is however revealed from table 6.4 that the cropping intensity on the farms of Gaddis was higher (about 117.24 per cent) then that of the farms of Gujjars (about 103.68 per cent). Similarly, it was observed that, on all sizes of farms of Gaddis, the cropping intensity was higher than those of the corresponding farms sizes of Gujjars This goes to support the view that Gaddis being more dependent on land, give more attention also to crops. Moreover, Gaddis are traditionally land tillers while the Gujjars acquired lands only recently and the lands with the later are of inferior quality.

143 205006

67

Table 6.4: Cropping pattern by villager in Maingal during 1982-83.

		C	2						(in Bighas)
Crops/Season	Small	Gujj . Madium	large	Sub- Total	Small	Medium Medium	ddis Large	Sub Total	Total
KHARIF									
Malze									
-Local	86.00	58.00	77.00	221.00	7.00	10.00	81.00	98.00	319.00
-HYVs	-	1.10	2.00	3,12	-	•	9.00	9.00	12.10
Total	86.00	59.10	79.00	224.10	7.00	10.00	90.00	107.00	331.10
RABI				1			?		
Whoat	2.04	4.00	2.60	8.24	-	-	56.00	56.00	64.04
Mustard	2.00	2.10	4.10	9.00	0.10	2.00	26.00	28.10	37.10
Total	4.04	6.10	6.10	17.04	- ;	2.00	82.00	84.00	101.04
Total cropped area	90.04	66.00	85.10	241.14	7.10	12.00	172.00	191.10	433.04
Net area sown	88.04	63.10	81.00	232.14	7.00	10.00	146.00	163.00	395.14
Cropping intensity	102.27	105.00	105.06	103.88	107.14	120.00	117.81	117.29	109.59

Wield Rates:

Average yield of crops grown in the village on different size of farms is presented in table 6.5 wherein it may be seen that the yield rates of all crops on the farms of Gujjars are higher than those of Gaddis. This is explained by larger use of Farm Yard Manure (FYM) which is more with Gujjars for reasons of their having larger number of buffaloes and cows.

Thus, on the whole it is rather difficult to conclusively suggest as to which community is better in crop husbandry. On the one hand, the intensity of cropping is somewhat higher on the farms of Gaddis but, on the other hand, the yield rates are reported to be higher on the farms of Gujjars.

Production Pattern of Different Crops in the Village:

Extent and pattern of different crops grown in the village are given in table 6.6 which shows that maize and wheat are the only food crops grown in the village. Maize contribute major part of the total production of the grains (96 per cant) in the village. The per capita annual production of grains among Gaddis is about 1.65 Qtl. which is larger than the Gujjars households(1.05 Qtl.). This is so only because of larger size of holdings of Gaddis. By products of the crops are fed to animals. In maize the yield of by-product is about three time that of grains and straw in Wheat is about 2.77 time the grains. The only crop of silseed grown in the village is mustard but the production was found to be insignificant. The oil from

Table 6.5: Productivity of different crops in the village during 1982-83.

<u> </u>		- Gu j j	ars			. (Gaddis		Overall	_ _
Crops	Small	Medium	Large	Average	Small	Medium	Large	Average	Average	
. Maize		.•					٠.			
- Local	1574.75	1864.12	1509.62	1628.00	535.62	1375.00	756.12	803.50	1374.75	
⊷ HYVs	-	3750.00	3125.00	3392.75	-	_	2500.00	25.00.00	2750.00	
Average	1574.75	1911.75	1550.62	1543.00	535.62	1375.00	930.50	946.25	1426.62	
2. Wheat	1102.87	250.00	937 •50	637.37	_	-	250.00	250.0€	≈ 306 .3 7	
. Mustard	200.00	297.50	259.12	231.87	-	187.50	175.37	176.25	189.75	

mustard is used for home consumption whereas the by-product i.e. mustard cake is fed to the milch animals.

The prevailing prices of main product and by-product of various crops in the village were also gathered and present in table 6.5. The average price of maize in the village was about 8. 124 per quintal whereas the price of Wheat was about 142 per quintal. The average prices of By-products of maize and straw of wheat were about 8. 29 and 8. 43 per quintal respectively. There were however no marketable surplus with any of the households and the production falling short of their demand was met from purchases from Shilaghrat or Chamba.

Use of Improved Inputs:

out of total cropped area of the village about 2.8 per cent was reported under the high yielding varieties (HYVs). Not only the area under HYVs is insignificant but the fact that its adoption is, by and large, limited to a particular crop. Maize is only crop in which HYVs seed is used. Pesticides, insecticides, etc. were almost unknown. in the village. Use of fortilizer is negligible (Table 6.7) but FM is used in planty.

Several reasons emplained the low level of agricultural technology in this village. Inadequate attention of the State Departments to this remote village which, in turn, is due to lack of transport and communication facilities, poviously leaves much to be done in all directions. Maingal falls within Shilaghrat VLW circle but the office

.

Table 6.6: Production of different crops in the village during 1982-83.

		Gujj	CIT.				ddis	·	Total
Crop products	Small	Medium	Large	Sub Total	Small	Medium	Large	Sub total	
laizo									
-Main product	•								
Quantity(Qtls) Value(Rs.)	108.35 13599.75	91.00 11260.00	98.00 12045.00	297.35 36904.75	3.00 375.00	11.00 1320.00	67.00 8225.00	81.00 9920.00	3 78 .3 5
-By product.					•				
Quantity(Qtls) - Value(Rs.)	296.50 11420.00	271.00 1021.00	274.00 10960.00	841.50 23401.00	10.00 400.00	40.00 1600.00	175.00 6045.00	225.00 8045.00	1066.50 31 446.00
<u>heat</u>		• .	٠.						
-Main product					4			•	*
Quantity(Qtls) Valua(Rs.)	1.80 261.00	0.80 116.00	1.50 217.50	4.10 594.50	-	. -	11.20 1605.00	11.20 1605.00	15.50 2199.50
-By product			•			1	to the second		
Quantity Valuo(Rs.)	4.00 180.00	2.50 112.50	3.50 157.50	10.00 450.00		-	33.00 1420.00	33.00 1420.00	43 : 20 1870.00
ustard	•								
Main product									
Quantity(Qtls. Value(Rs.)) 0.32 192.00	0.50 300.00	0.85 510.00	1.67 1002.00	·	0.30 180.00	3.65 2190. 3 0	3.95 2 37 0.00	5.62 3372.00
etal production		r							
in value(Rs.)	25652.75	12809.50	23890.00	62352.25	775.00	3100.00	19485.00	23360.00	85712.25

Table 6.7: Use of fertilizer by villagers in Maingal during 1982-83.

C - /5		Guj	ars				addis		Total	
Crops/Fertilizer	Small	Medium	Large	Average	Small	Madium	Largé	Average	average	
Maize										
CAN			•							
-Quantity(Kg)	4.17	2.22		2.93	**	-	18.75	15.00	5.29	
_Value(Fr)	4.75	1.95	-	3.34	-	-	21.38	17.10	6.03	72
Urea										•
-Quantity(Kg)	4.17	.	-	1 2.44	•	-	- ;;	-	1.96	
_Valuo(Rs.)	5.42		•••	3.17		~	-	-	2.55	

of the VLW for this circle is at Chamba. Such is the official treatment given to this area and therefore the condition of the area should not cause any surprise.

Agricultural Implements:

The list of agricultural implements used in Maingal is very small(Table 6.8) and are made locally. implements are made only locally. Iron is purchased from market which is shaped properly by blacksmith. Wood is taken from local trees and given suitable shape by the farmer himself. Although some of these implements can be replaced by improved ones but due to lack of repairing facilities, the same have not become popular. The local wooden plough is of very primitive type. Its working capacity and durability is very low. The efficiency of other local tools and implements too is no better. Because these are locally made and easily available, farmers are not willing to replace them. These implements are made by blacksmith who is paid kind wages at the time of harvest. Bosides making new implements repairs are also undertaken by him.

Colendar of Agricultural Operation:

Agriculture calendar too of the crops grown in Maingal is also simple and brief(Table 6.9). For any crop, a minimum of operations are done. As stated earlier, maize, blackgram are the Kharif crops and wheat, barley and mustard are grown during Rabi season. For all the crops F.Y.M. is spread in the fields before preparing it for sowing. Sowing is done after one or two ploughings. In every case, seed

- 74 Table 6.8: Agricultural implements in village during 1984

		· · · · · · · · · · · · · · · · · · ·	0	5
Name of English	implement Hindi	Use		Expected life (Years)
Flough	Hal .	Ploughing :	50.00	5
Yoka	Jung la	-do-	25.00	10
Leveller	Da	For levelling	15.00	15
		' #	en la La la	
Hae	Nadani	Interculture (Hoeing & weeding)	16-08	7
Sickle(81g)) Drafi	Cutting fael wood	30.nn	25
Sickla(Sma	ll) Drati	Harvesting & cutting grass	7.00	15
Axa	Kulahari (Jhountu)	To cut trees.	15.88	30

is broadcasted. Hoeing and weeding, once on twice at the most, is done only in maize. Also, wheatever fertilizer is used, that too is for this crop only. Thus maize happens to be the only crop which receive some attention; all other are sown and harvested. Maize is their staple diet as well as it is given importance on the field. It is however not known as to which factor is the cause and which one is the result.

Maize is sown in April depending on the rain conditions. If there are no rains in April, the scwing may be " delayed till the beginning of May. The best time for sowing maize in Maingal is Mid-April. The maize sown during this period gives better yield and farmers need not work very hard to weed out large quantity of grass which springs up with maize plants. If there are late rains there is invariably the trouble but in the case of timely rains the grass grows in lesser quantity. Interculture is under taken by the end of May when the maize plants are about 20 cms. above the ground. The interculture is done with the help of a small hand hoe called Nadani locally. When the crop is knee-high some sort of earthing is done to provide support to the plants and for this operation plough is used. This operation has to be done very carefully so that the crop is not uprooted. This ploughing (called Halod locally) helps in healthy growth of the erop. The crop is ready for harvesting by the end of Movember. It is resped with siekle. The cobs are removed after about a week. After removing the cobs maize is

Table 6.5: Calendar of Agricultural eperations.

Operation	Maize	Mash(Black gram)	Wheat	Harley	Mugtar≓	_
1. Preparatory tillage	March-April	Mid May	Mid October	Mid October	Mid October	
Manuring(F.Y.M)						
- Time - Quantity	March-April 15-25 Qtls/Bigha	No manuring	Mid October 10-15 Qtls/Bigha	Mid October 8-10 Otls/Bigha	Mid October 8-10 Otls/Bigha	
Sowing						
→ Time	April end-May start	May end	First week of November	Oct. last week	Oct. last week	
QuantityMethod	3-5 Kg∕Bigha Broadcasting	6-8 kg/Bigha Broadcasting	5-7 kg/Bigha Broadcasting	6-8 Kg/Bigha Broadcasting	1-15 Kg/Bigha Broadcasting	•
2. Fertilizer application			••			
Urea - Quantity	15-2 ■ kg/B igha	-	10 – 15 kg/B i gha	-	-	
TimeMethod	June-July Broadcasting	<u>-</u>	FebMarch Broadcasting	-	- -	•
CAN - Quantity	15 - 20 kg/ B i gha	_	-	-	-	
_Time _Method	July Base application	-		••	-	
Interculture					•	
⊷Hoe i ng	May end.	_	-	_	-	
-E⊲rthing (Halod)	Jure first week	-	-		-	
Harvesting	October first we	ek Mid October	April end-May first week	April end	April end	
Threshing	November	November	May	May	May	

spread over house tops for drying for about 25 days and then beaten on the threshing floors to separate grains. The grains are then stored in 'dhandus' - grain stores.

storage:

Wheat weavil(ghun), rice weavil(pathari) and grain moth(lada) are the main pests of stored grains in the village. No local or other method of saving the grain in storage from the insect damage is known to the farmers.

Marketing of Produce:

Gujjars in Maingal are not self-sufficient in foodgrains. They buy maize from the local shopkeepers in Shilaghrat or Chamba. Rice and other cereals are bought occasionally. Thus, the Gujjars are not self-sufficient in grains and hence there is no question of marketing the measur quantity of grains grown in their fields. They, however, do sell milk and milk products which have been dealt with elsewhere.

Chapter-VII

ANIMAL HUSBANDRY

Maingal is predominantly inhabited by Gujjars whose main occupation is cattle rearing. Livestock is of paramount importance to them. Small land holdings no facilities for irrigation, poor soil etc. together render crop husbandry uneconomic in the village. Therefore, the villagers supplement their income from animal husbandry. In fact, particularly for Gujjars, animal husbandry has been primary source of their income, whereas the crop husbandry has been pushed back to the secondry place. The people keep milch animals, goats, sheep and poultry for meeting their own demand as well as for commercial purposes

Cows, buffaloes, oxen, goats and sheep constitute the livestock population of the village. Bullocks are used for ploughing and carriage at the time of migration. Male tuffaloes are used only for breeding. Sheep and goat provide meat, manure, wool, hair and skin, all of which being needed in every household. Goats are considered useful for their milk as well. All the animals contribute to the farm yard manure pit of the farmers.

Cormosition of Livestocks:

The number of various type of livestock possessed by Guj ars and Gaddis in Maingal in 1961 and at present are presented in Table 7.1 wherein it is noted that buffaloes and sheep have been the most important animals for Gujjars.

Table 7.1: Composition of livestock population in Maintal (1961 and 1984)

	Gujjare	G	addis		Totai
1961	1934	1961	1964	1951	1984
217 (45.5)	271 (41.2)	5 (1.7)	21 (٤.٥)	227 (28.3)	292 (27.0)
24 (5.0)	15 (2.3)	29 (9.8)	27 (6.4)	53 (c.9)	42 (3.9)
28 (5.9)	49 (7.4)	24 (8.1)	18 (4.3)	52 (6.7)	(u.2)
139 (29.2)	157 (25.9)	120 (40,7)	(54, 8)	.250 (33.4)	(%8 .0)
36 (7.5)	109 (16.5)	140 (37,4)	113 (26.7)	166 (1871)	222 (20.5)
3 3 (6.9)	57 (8.7)	(2.4)	12 (2.3)	(5. j)	(6.4)
477 (163.7)	658 (100.0)	295 (103.0)	423 (100.0)	772 (↑¹0↓0)	1081 (100.0)
N.A.	19	N.A.	15	N.A.	34
	1961 217 (45.5) 24 (5.0) 28 (5.9) 139 (29.2) 36 (7.5) 33 (6.9) 477 (10.1.7)	217	1961 1934 1961 217 271 5 (45.5) (41.2) (1.7) 24 15 29 (5.0) (2.3) (9.8) 28 49 24 (5.9) (7.4) (8.1) 139 157 150 (29.2) (25.9) (40.7) 36 109 110 (7.5) (16.5) (37.0) 33 57 7 (6.9) (8.7) (2.4) 477 658 295 (100.0) (103.0)	1961 1934 1961 1964 217 271 5 21 (45.5) (41.2) (1.7) (5.0) 24 15 29 27 (5.0) (2.3) (9.8) (6.4) 28 49 24 18 (5.9) (7.6) (8.1) (4.5) 139 157 120 22 (29.2) (25.9) (40.7) (54.8) 36 109 110 115 (54.8) 36 (7.5) (16.5) (37.0) (26.7) 33 57 7 12 (2.4) (2.9) 477 658 295 423 (100.0)	1961 1934 1961 1984 1961 217 271 5 21 22? (45.5) (41.2) (1.7) (5.0) (28.3) 24 15 29 27 53 (5.0) (2.3) (9.8) (6.4) (7.9) 28 49 24 18 52 (5.9) (7.4) (8.1) (4.3) (6.7) 139 157 120 25.2 25.3 (29.2) (23.9) (40.7) (54.8) (55.4) 36 109 11.3 11.5 14.6 (7.5) (16.5) (37.4) (26.7) (18.4) 33 57 7 12 4.9 (6.9) (8.7) (2.4) (2.8) (5.1) 477 658 295 423 772 (10.1.7) (100.0) (100.0) (100.0) (100.0)

N.A. = Not available

Note: Figures in parenthesis are percentage to total number of livestock.

Also, the number and proportion of goats kept by Gujjars has increased since 1961. The Gaddis, on the other hand, seem to be having a liking for sheep and goats. Further, since 1961 with Gujjar hauseholds the proportion of goats increased and that of sheep decreased. But reverse trend is noted among Gaddis. It may also be observed that since 1961, the number as well as the proportion of every type of livestock except cows increased with the Gujjars. It was learnt during the field work that the acceptance of buffaloes as against cows increased further with Gujjars as well as Gaddis. This was reported to be so because people feel convinced that keeping buffaloes is a better proposition economically; cows are maintained mainly to have male colves to be reared as bullocks.

In order to have a better picture of the livestock, the different types have been converted to 'cow units' (Table 7.2). Here the importance of buffaloes with Gujjars increases further and sheep remain to be in the second place. The situation remains unchanged among Gadais as well.

Pressure of Livestocks:

Address to the people as well as exerts pressure both on land and men. In Maingal the pressure of livestock (Table 7.3) on land is observed to be more among Gujjars than Gadlis. This difference is much loss in terms of actual number, but increases significantly when calculated in standard cow units. This is so because the Gujjars have more buffaloes and lesser sheep and goats.

Table 7.2: Proportion of different livestock(in standard cow unit) to total livestock in Maingal

	G	ujjars		Gaddis		Total
Livestock	1961	1084	1961	1984	1961	1984
1. Buffaloes	434	542	10	42	444	584
	(75.6)	(73.3)	(5.6)	(16.2)	(59,0)	(58.4)
2. Cows	24	15	29	27	53	42
	(4.2)	(2.0)	(16.3)	(10.4)	(7 . 1)	(4.2)
3. Bullocks	28	49	24	18	52	67
	(4.9)	(6.6)	(13.5)	(6.9)	(6 . 9)	(6.7)
4. Sheep	70	79	60	116	130	195
	(12.2)	(10.7)	(33.7)	(44.6)	(17 .3)	(19.5)
5. Goats	18	55	55	57	73	112
	(3.1)	(7.4)	(30.9)	(21.9)	(9.7)	(11.2)
Total	574	740	178	260	752	1000
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note: Figures in parenthesis are the percentage to total - Equivalent to cow units have been assumed as: Buffaloes = 2, Sheep/goats = $\frac{1}{2}$, other animals = 1 as suggested by National Commission on Agriculture (New Delhi), Part IX, Chapter 42, section 11, P. 137. Moreover the cultivated land with Gujjars is relatively lesser. In the case of number of livestock per capita it may be observed that the figure for Gujjars in terms of actual number is almost half of that of Gaddis. But the situation change when calculated in terms of standard cow units. This byiously is because of the fact that while Gujjars lay great emphasis on buffaloes, Gaddis preferred to maintain more of sheep and goats.

The pressure of domesticated animal on the village resources deserves to be reduced but without reducing the income of the people. For this the only alternative is to improve the quality of the animals by whatever way if the considered feasibly, technically and acceptable to the people.

From the above it emerges that buffalo is the most important animal wealth among Gujjars. No Gujjar house-hold in Maingal was reported to be without a buffalo or landless. All the 41 households together kept 271 buffaloes, the minimum and maximum number with one household being 1 and 20 respectively (Table 7.4). It may also be observed that size of holding and the number of buffaloes maintained are positively correlated despite the fact that no fedder crops are grown on the holdings.

Breeding of Onttle and Buffaloes:

Maingal is predominantly inhabited by Gujjars whose main occupation is rearing of buffaloes and cows for milk. While the above given statistics of such animals is impressive but that changes as soon as one knows about

Table 7.3: Livestock Pressure in Maingal

	No. of 1	ivestock	/Bioha	No. of li	vestock/per	snn -
Livestock	Gujjars			Gujjars	Gaddis	Total
1.Buf€aloes	0.87	0.09	0.53	1.27	0.27	1.00
2.Cows	0.05	0.11	0.08	0.07	0.35	0.14
3.8ullocks	0.16	0.08	0.12	0.23	0.23	0.23
4.Sheep	0.50.	0 . 97	0.70	0.73	2.97	1.33
5.Goats	0.35	0.47	0.40	0.51	1.45	0.76
Total(in actual Nos∙)	1.93	1.72	1.83	2.81	5.27	3.46
Total(in standard cow units)	2.37	1.08	1.81	3.46	3.33	3,43

Table 7.4: Number of Gujjar, households according to land holding and Buffalnes possessed.

•	*			*	
Land Area O- No. of Tuffilous	5 Bigha	6 - 10 8 i ğhas	11-15. Bighas	.16-20 Bighas	Total
. 1	2				2
2	2	-	1	-	3
3	·· 3	1	-		4
4	4	2 ,	2		. 8
5	1	1	-	-	2
6	2	2		. <u>.</u> .	4
7	1	2		· -	3
8	2	4	1	-	7
9	1	· 1	. -	•	2
13	-	. 1	~1		2
15	-	-	1	Net	1
16	-	, 1	, 		1
19	-	_	1	-	1
20	-	-	: · · <u>-</u>	.1	1
ot3l Households	18	15	7	1	41
ot⊃l Buffalces	80	109	62	20	271
hveraga No. ⇒f Suffaloes/H.H.	4.4	7	8.9	20.0	€.6

the quality of those animals. One of the chief reasons for the poor quality of animals in the area is the system of breeding. Local tulls of poor quality are used for the purpos. The services of a buffalo bull used to be available earlier at Shilaghrat Veterinary Centre but that was not popular. People are more familiar about artificial insemination but the facility is not available at any place nearer than Chamba which is 24 kilometers away. It was also learnt that some of the people did take advantage of the facility provided by State government and purchased buffaloes on 50 per cent subsidy. But those animals too were no better in quality. The whole situation in the matter suggests that there is an urgent need for introducing animals, particularly buffaloes of superior quality suitable to the agroclimatic conditions of the area.

Feeding:

Feed accounts for 60 to 70 per cent of the expenses incurred in maintaining animals for milk, meat or egg production, and form the most important part of livestock farming. All the animals of the village derive all their food supply from plants. Because of the pressure on land, crops are grown mainly for grains, the fodder being only a by-product. The plants are hence allowed to grow to maturity, with the result that almost all the nutrients pass from leaves and stem to the grain, and the material left over for use as fodder is poor in nutritive value.

The feed/fodder given to the animals to a great extent, depend on seasonal variation. Hilly grass and maize stems are stocked just after the rainy season and are used as dry fodder during winters. As an opology to green fodder, leaves of some trees are fed. It was however gathered that most of the Cujjar households use unripe wheat plants as green fodder to buffaloes in milk. During summer and rainy season, the animals depend entirely on grazing while in winter all amimals are stall fed. Feeding of any concentrate and hay are limited mostly to animals in milk. Gujjars are also known to be feeding mustard cake (one kg. per day) to each buffalo in milk. Salt is also given to each of the animals twice a month.

Alongwith poor breeds, another important reason for low milk yield of animals in Maingal is the extremely poor feed fed to them. In this regard it was observed that Oujjars take a very short term view of investment in milch animal feed. Proper feed, which is no doubt costly, cannot lead a corresponding increase in milk yield immediately. But because of some weak financial position, the Gujjars find it difficult to make investment in giving good feed to milch animal which does not yield immediate returns. One way of breaking this low equilibrium position would be subsidization of cattle feed by the government during the intial stages. The subsidy may be reduced gradually and climinated ultimately. Over a period of time, the Gujjars would realise the benefits of giving good feed to animals and would gradually start doing that even without subsidy.

A considerable quantity of fooder is wasted in the case of maize stems due to thinkness and hardness. Every effort has to be made to utilize the fooder to the fullest extent by chaffing. Rotary chaff-cutters in all such areas should be popularised by demonstrating the use of this machinery and providing subsidies.

Housing:

Animals too have to be provided protection from rain, excessive heat or cold and dampness etc. Facilities for resting are as necessary as those for feeding, watering, etc. If animal houses are not hygienically maintained, may become a source of danger to the health of the animals as well as to that of persons living around them.

The conditions of cattle house in the village are found to be very poor. Gujjars do not have separate cattle sheds. Their Kothas are divided internally into two parts. One parts is used for animals and the other for living. The arimals are tethered with wooden pegs in the house. The construction of house is of mud and stone. The roof of house is of mud and stone. The roof of house is of mud and stone are used for the roof. In winter the snow is cleared on the same day. Gaddis households have separate cattle sheds from the main residential houses. Courtyard is used for tethering cattle. Buffaloes and other cattle are lot losse during the day time to the pasture ground. Member of each family is required to attend to the cattle lest they should go astray or damage the crops. There is no provision of

ventilation in the dujjars houses. Dung of animals and waste fooder are cleared daily. The cattle sheds are dried by spreading tree leaves and crop by-products so that they do not feel cold.

Veterinary Treatment:

The people in Maingal depend almost wholly on their own knowledge and experience for treating their animals for all types of diseases. The common disease in the village are indigestion, bronchities, foot and mouth, wounds, general decility, Minder pest, maggets, etc. But there has been no cut break of these within a decade. For medical treatment a veterinary dispensary was established at Shilaghrat in 1962 but the people utilize this only when the case becomes hopeless.

Their own treatment includes the use of local harbs and common condiments and spices. In simple cases, it helps. In case the condition is serious they take the animal to the votorinary dispensary. The votorinary dispensary being at a long distance, it is not convenient to take the sick enimal to the dispensary. In such cases, the dependance is more an prayers to God but in most such cases the result is the loss of the animal. It was however observed that the faith in modern necical and votorinary treatment is gaining ground gradually. It was also noted that if they want to make use of the veterinary facilities available at Shilashrot, it is really not possible for them to do so for reasons of long distance to the place and high cost involved.

Subsidy on Livestock:

Under especial programme subsidy is provided to Gujjars on purchase of buffaloes, cows and bullocks by the State Government. The rate of subsidy is 50 per cent of the total amount involved and the remaining 50 per cent is given as loan. This is available only to Gujjars and not to persons of other communities in the area. Out of 41 Gujjar households in the village 22 households made use of this (Table 7.5) for the purchase of buffaloes, and only one person purchased a fair of bullocks under the scheme. The loan is provided up to %. 6,000 to intentified families for purchase of up to two buffaloes. The benefits were reaped most by small land holders.

Milk Yield:

As already stated, the quality of the milch and other animals is poor and the same is reflected in the milk produced. An average buffalo gives a total of about 1000 kgs. of milk in a full lactation spread over a period of about 8 months. This quantity is half in the case of an average cow, the lactation period being about 200 days. The milk of goats and sheep is also used and the milk yield in their case was reported to be about 100 kgs. and 50 kgs. respectively in a full lactation period of about 180 days. It was also gathered that the best buffalo in Maingal was yielding 8 kgs. milk per day and the total yield during the lactation might touch the figure of 2000 kgs.

Table 7.5: Subsidy availed by Gujjars on purchases of livestock.

Farm size			Subsidy o			 						ullocks		
	Duri	ng last 2		Mor		n 2 yea	rs		During	of avail		osidy an 2 year:	<u> </u>	
	No. of No house - pur holds che avail- ing subsi- dy	- inves- - ted		No. of house—holds avai—ling sub—sidy	pur- cha-	Amount invested (Rs)	-		last 2 years	No. of house- hold availing subsidy	No. pyr– cha-		%age of	
Small	4 5	15000	50	14	25 .	75000	50		-	<u>-</u>	••	-		
ledium	2 2	6000	50	1 1	1	3000	50	,	<u>-</u>	· · · · · · · · · · · · · · · · · · ·	_: -:	- - -	-	
Large		· · · · · · · · · · · · · · · · · · ·	- -	1	2	6000	50			1	2	1200	50	
⊽otal	6 7	21 000	50	16	28	84000	50		· -	1	2	1200	50	

Production and Utilization of Milk and Milk Products:

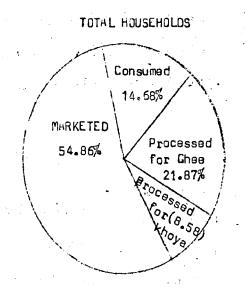
Milk production is the main consideration with the people for keeping milch animals in this village as elsewhere. Sale of milk is the main source of income of Gujjar households. Poor quality of animals coupled with the poor quality of feed results in the production of milk which is low in quantity and poor in quality. Gaddi households in general do not depend on the sale of milk, they are also reported to be not converting milk into khoya. The production and utilization of milk in the village is given in table 7.6 which shows that average production of milk per household among Gujjars is twice to that of Gaddi households in this village but the consumption is lower. This is explained by the fact that Gujjars maintain milch animals mainly for commercial purpose, which is not the case with Gaddis.

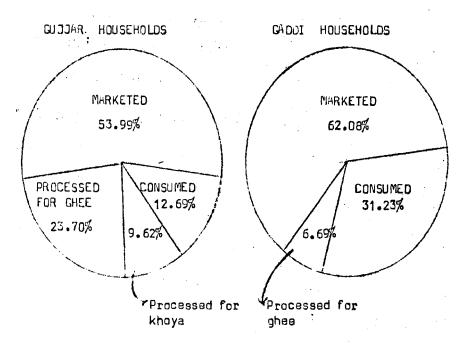
Milk produced by households are retained by them for home consumption and the balance of milk is marketed as fluid milk as far as possible. During the period when Oujjars migrate to the higher hills, the milk produced has no market. The milk produced during this period cannot be stored for later use or sale. Therefore, the only alternative is to convert the milk into various other product like ghee and knoya which have longer life and hence can be marketed later. During winters when stay at their parmanent residence in the village, milk is sold in fluid form. Sale of milk is more profitable than that of ghee or knoya. Table 7.6 gives the details of the quantity of

Table 7.6: Fraduction and Utilization od milk and milk products in Maingal during 1982—83.

Ltiliz≘tion	Guijars		Gaddis		<u>in kilogrammes</u> Total		
	Tot-1	- Laboration - Company of the Compan		Per hou— sehold	Total	Per house- hold	
1.Total milk . produced	87195	2126.71	10470	1047.3	97.665	1915.00	
- Consumed	11052	269.81	3270	327.0	14332	281.02	
- Processed	29053	708.61	700	70.0	29753	583.39	
_ Marksted	47030	1148.29	65.00	650.0	53580	1050.59	
2. Total Shea produced	1523	37.14	27	2.7	1550	30.39	
- Consumad	€5	2.07	9	0.9	94	1.84	
- ™rketed	1439	35.07	18	1.8	1456	28.55	
3. Tatal khoya produced	2096	51-12	Pile		2096	41.10	
⇔ Consumed	76	1.95	. •••	-	76	1.49	
# Narkatad	2020	49.27	_	-	2020	30.61	

Fig. 3; UTILIZATION PATTERN OF MILK IN THE VILLACE





milk produced and the quantity of ghee and knoya produced, consumed and sold by Gujjar and Gaddi households in the village. With regard to the consumption within the family, it is found that in terms of milk, Gujjar households consume about 14 per cent of their production while it comes to about 32 per cent in the case of Gaddis.

It may be observed further that about 94 per cent of the milk produced was marketed as such by Gujjars. This figure stands at 62 per cent in the case of Gaddi households. The quantity of milk processed for ghee and khoya was more in Gujjars than Gaddi households. About 23.7 per cent of milk is processed for ghee and 9.6 per cent for khoya by Gujjar households. It was noticed that Gaddi households do not convert milk into khoya. None of the Gujjars was found to be consuming all the milk produced (Table 7.7) while half of the Gaddi households were reported to be doing so. Two of the Gujjar households and one that of Gaddis did not produce any milk at the time of the present survey.

Marketing of Milk:

Main consuming market of milk produced in Maingal is Chamba. A very little quantity of milk is consumed within the village. Rehru at a distance of nearly 11 kilometers is the collection centre for milk of the Maingal and neighbouring villages. Gujjars bring their milk to Rehru, from where it is transported to Chamba. The only means of transportation available is the public bus. The other means eg. jeep

Table 7.7: Distribution of household according to utilization pattern of milk and milk products

Utilization pattern of	Gujjars		Gaddis		Total	
milk and milk products	No. 01 H.H.	%age to total	No. o H.H.	f %age to total	No. of H.H.	%age to total
1. Households consumed total milk production at home	- -	-	5	50.0	5	9.8
2. Who consumed milk in household, marketed and processed Thee & khoya	18	43.9	-	lane .	18	35.3
3. Consumed milk in house— hold, processed ghee	. 3	7.3	2	20.0	5	9.8
4. Consumed milk in house— hold and processed khoya	1	2.4	***		1	2.0
5. Consumed milk in house— hold and processed ghee and khoye	3	7.3	-	 4	3	5.9
 Consumed milk in house- hold, marketed milk and processed ghee 	8 .	19.5	- , .	•••	8	15.6
7. Consumed milk in house— hold, marketed milk and processed khoya	1	2.5	•••	- : .	1	2.0
8. Consumed in household and marketed milk	5	12.2	2	20.0	7	13.7
9. No milk production	2	4.9	1	10.0	3	5.9
Tot≃l No. of household	41	100.00	10 1	00.00	51	100.00

etc. were tried but had to be abandoned on economic grounds. The carriage of milk from Maingal is on human back in brass puts locally called 'Gagars'. At Rehru the whole of milk is callected in big containers of 40 Mgs. capacity.

At Rehru producers sell milk through traders or Comperative society. Majority of the producers from Maingal sell their milk to the traders at Rehru. Though a milk marketing Cooperative Society is also functioning at Rehru, the producers prefere the traders to it. This may be because the traders are always ready to help the producers financially whenever they are in need of it. It is rather uncommon that they are obliged to sell their milk through traders because of outstanding loans. Sometimes a few villagers purchase the milk produced by other farmers in the village itself and then carry it to Rehru for sale.

The traders were found to be purchasing milk at the rate of R. 2.40 per liter whereas Cooperative Society pays Rs. 2.50 per liter to its member producers. The prevailing price of milk in the village was however Rs. 2.25 per liter.

Milk Products

Ghe e

Chee is essentially butter-fat prepared by heating and drying butter so that the moisture is completely driven off. Butter has low keeping quality and poor texture at ordinary temperature. It is, therefore, generally converted into ghee, which is sterlized in the process of preparation which resists spoilage through

contamination by micro-organisms or chemical action. Ghee produced by Gujjars is derived from buffalo milk. Cow milk is utilized for making ghee to a lesser extent.

The ghee is prepared by traditional method in the village. In this method, curd is prepared by seeding milk with previous day's dahi or lassi. The dahi is then churned in brass vessels(Gagar) by wooden churners for 30 to 40 minutes, the butter is formed which is taken out by hand and is later converted into ghee. The skimmed milk(lassi) is consumed by Gujjars in the household. This reduces their expenditure on food grains. The butter thus obtained is then heated over a medium and steady fire till the moisture evaporates completely. The product being allowed to settle for 2 to 5 hours after removing the seum formed at the top and then stored in gagar in a cool place for two days for proper crystallization or grain formation. The recovery of the fat is about 70 to 80 per cent of the total fat content in butter.

About 23.7 per cent(Table 7.6) of the total milk produced by the Gujjar households is converted into ghee. When the Gujjars move to higher hills, they mostly convert the milk into ghee. This is due to the reason that the from towns are far away/their pasture and hence they are unable to carry milk for a long distance. But sale of milk is more profitable than that of ghee, particularly because of lower fat contents in the milk produced.

Gaddis also process milk for ghee mainly for home consumption. Gujjars on the other hand, sell about 94 per cent of the total ghee produced by them.

Khoya:

Khoya is a partially desiccated milk product prepared by rapid evaporation of moisture, until the total solid contents of the product is 70 to 75 per cent. Khoya is generally prepared by boiling milk in an open pan. During boiling the milk is continuously stirred by using a broad netal spatula, at the same time stirring milk solids which adhere to the pan. Vigorours agitation causes a certain degree of emulsification of the fat resulting in uniform distribution throughout the milk. Heating and stirring are continued until the resulting mass is dough-like, and represents 1/4th to 1/6th volume of the milk used. In the final stages, the pan is removed from the fire and the heat of the contents is sufficient to complete the process. Khoya is used as a base in the preparation of sweets. Out of total households of Gujjars 20 household (Table 7.7) were found to be engaged in preparation of khoya in which one household converted total milk into khoya. Generally Gujjai converted about 10 per cent of total milk produced into khoya.

The ghee and khoya produced are accumulated in sufficient quantities and taken to Chamba for sale at their two convenience. The sale price of ghee and khoya at Chamba were reported to be around &s. 35 and &s. 12 per &s. respectively.

Sheen Rearing

sheep are unique among domestic livestock, for they are reared for a variety of purposes and can be maintained under diverse environmental conditions. Utilizing the uncultivable waste land and weeds from the fields, they contribute to the sustenance of man by supplying food and raw material for clothing. There is as yet no substitute for wool as a durable, warm and health promoting raw product for clothing. Sheep are reared for wool, meat, milk and skin, but seldom for all at the same time. Sheep rearing is a relatively safe occupation as compared to poultry keeping and dairying. Besides it is not land based as much as dairying is, and is most suitable for the small land holders.

Maingal falls under "Temperate Himalayan Region" and has a characteristic postoral aspect. The steep gorgeous hills rising from the plains, afford grazing facilities at different heights during the year. The Gaddis who are engaged more in theep rearing take their sheep to the lower plains and move to higher elevations when required under certain conditions of grazing and rainfall.

Sheep rearing is the main source of income for Gaddi households in the village. Sale of progeny and sheep penning are two activities that also contribute to income from sheep rearing. Tending of animals is done by members of the household. They are generally maintained on grazing only, therefore other costs involved are insignificant. Sheep are generally taken to warmer places during

winters. The income from sheep milk is very nominal as the milk is generally left for the off-springs. Whatever little amount of milk is produced by them, is consumed in the household.

The normal life-span of sheep is about 12 years, but local people prefer to limit it to about 8 years. On enquiry it was noticed that it is not economical to maintain the animal later as the marginal increase in its body weight is not economical after attaining this age. After this age the animal is culled out and sold or slaughtered for family consumption. The majority of the progny, excepting the few suitable for breeding, are sold out for their mutton. Although sheep, irrespective of breed to which they belong are often reared under diverse climatic and agricultural conditions, the transfer of a particular bread from one locality to another involves considerable Sheep are accustomed to living on grass and forage of a particular locality and are resistant to certain Parasites and diseases found there. When transfered to new areas with changed conditions of food and climate, they are unable to withstand the metabolic imbalance and the ill effects of new parasites and diseases. raised in areas with comparatively heavy rainfall are not adversely affected when transfered to drier regions, but vice-versa could be disastrous.

Feeding of Sheen:

Sheep possess a special ability to survive on natural grasses, shurbs and farm wastes. While cattle have often to be stall fed with fodder and concentrates, sheep can thrive on waste land and residues of the fields. With their small muzzals and split upper lips, they can nibble tiny blades of vegetation which cannot be taken by bigger animals. They do not compete with other farm livestocks unless maintained in large number. They chew the food more throughly than cattle. Sheep generally prefer tender green material with a small proportion of moisture. Maintaining sheep on concentrates is not the natural method. Excessive feeding may result in lack of tone in the digestive system.

Shearing of Wool:

The fleece protects sheep from cold and serves as an insulation against heat. The shearing should not therefore be carried out at a time when the weather is hot or very cold. Chilly winds accompanied by driving rains and/or burning heat of the sun will ruin the health of newly shorn sheep. There is a considerable stress on the vitality of sheep after shearing, and unless they can obtain nutritious grazing, the growth of wool may be seriously retarded and a set-back may occur in the health of the flock. It is a good practice to shear the sheep immediately after winter, when sufficient grazing is available in the fields.

sheep is sheared twice a year-september and February months are most favourable for it. The wool is cut with scissors made by local blacksmith. Before shearing of wool the thesp is bathed with cold water for removing/cleaning dust etc. With tied less, the sheep is made to lie on ground and then wool is cut. Generally a sheep can yield about 200 gms. of wool in one cutting. The first wool of a lamb is considered to be of fine quality than the later enes.

Wool:

Unlike other ruminants which have a static hairy coat sheep continuously grow wool-used for the production of coarse or fine cloth. The wool can be clipped once or twice in a year; in some areas this is done thrice. But in Haingal sheep is sheared only twice a year. On an average a sheep can yield about 200 grams wool in a shearing. A large part of wool is consumed locally. The Gaddi households of this village do not sell wool(Table 7.8) at all and use it for yeaving blankets and cloth for their dress. On the other hand, though Gujjars have lesser number of sheep, but still have some marketable surplus of wool. This is so because Gujjars do not depend wholly an world clothings like the Gaddis.

Table shows that about one-fifth of the total wool production is marketed by Gujjars. The surplus wool is sold in the village or in Chamba market. The carding and spirming of wool is done by the household ladies while working is done by the male members.

Table 7.8: Utilization pattern of wool and eggs in village during 1982-83.

Utilization	Gujjars		Gaddis		Total	
	Total	Per hou- sehold	Total	Par hou h o ld	J-ee Total	Per house hold
Total wool production(‱.)	84.80	2.07	120.00	12.00	204,80	4.02
- Consumed	67.80	1.65	120.00	12.00	187.80	3.68
- Marketed	17.00	0.42	_	-	17.00	0.34
Total egg production(Nos.)	5040	122.93	600	60.00	5640	110.59
- Consumed	1230	30.00	300	30.00	1530	30,00
- Marketod	3810	92.93	300	30.00	4110	80.59

Skins:

The skins of shoop are generally used for storing fold grains, flour etc. after stitching into bags. This was the only use of this by product till recently.

Considerable care is required to be taken when skin is removed from the carcase after sloughter or death. The proparation and drying of skin is an art by itself and call for certain amount of skill. Though sheep are not reared for fur top in the village, certain lamb skins fetch better prices than the others.

Mutton:

Whereas the production of wool of good quality is paying it is the nutton that bring the maximum returns. To the itinerating shepherd ran lamb and the discarded cwes are his walking bank. During the discussion with the villagers it was learnt that the consumption of meat is restricted to special occasions like festival, marriage, birth atc. In Maingal it was observed that the Gujjars being Muslims follow the Helel method of slaughtering maile the Galais balieve in Smatks. The essential difference between the two methods of sloughter is that in the Halal method the large blood vessels of the head are severed with me or two strokes of a knife leaving the corvical partian of the spin 1 card intact till the blood has flam but. In the justke method, the head is severed from the body by a single stade for which the Goodis use their 'Drat', the told which is normally used for lopping trous. Both the examinities however shin meat of dead chingls.

Best ment is obtained from 6-12 months old lamb. The quantity and quality of ment is judged by feeling the rump, loins, less and shoulder, these being the main areas for the growth of muscles of the body, and there are seen better in a castrated rap lamb.

Broadins:

No special care is taken in the selection of a male for breeding and therefore the method followed for breeding cannot be defined. Now at the initiative of State government, cross breeding of Marino ram and local eve is gaining ground gradually. For this Marino rams are introduced on 50 per cent subsidy by the H.P. Department of Animal Husbandry to improve the local breed. But the rate of adoption of cross-breed Marino in the village was very low.

Gants

The goat is a versatile minal. It is known as the 'poor man's cow'. Goat can be kept with little expense. Marginal or undulating lands, unsuitable for other types of livestock, may be used and any inexpensive shelter will be sufficient to this animal. Goat milk is cheap, wholesome, easily digestible and nutritious. It is recommended for use in peptic ulcer and is preferred to cow milk in liver disfunction, joundice, inscaimia, etc. Goat is reared by both the communities/the village but the average number of goats possessed by Gaddi households was more as compared too dajjar newschold. On an average a goat yields 0.500 kgs.

milk per day. Villagers do not sell milk of goat. Whatever little amount of milk is produced by them, is consumed in the household.

improves the flesh of adult buck.

Pultry Keeping

Poultry keeping in the village is an old enterprise and is nostly followed by both Gujjar and Gaddi households. The proportion of households keeping birds was higher among Gujjars than Gaddis in the village. Poultry faming is also a source of income and the villagers have been keeping birds mainly with commercial motive(Table 7.8). About 73 per cent of the total eggs produced are marketed. The eggs marketed by Gujjars households is here than the Gaddi. The villagers sell eggs at Spilaghrat and purchase tobacce and Biddis from there. The rearing of birds is not on scientific lines and practically nothing is spent on their maintainance except during the winter when some cereals are fed to that. The Gujjars emsume their meat on special occasion such as marriage or festivals.

Chapter-VIII

MIGRATION

Introduction:

In preindustrial societies, sedentry postoralism or ranching was rather rare. Land that is rich enough to support herds indefinitely will yield far more output if given to crops. However, using the mobility of herd animals, pastoralists can adapt to narginal areas by moving as conditions dictate. That is why the pastoralists are also often nonadic. Another reason responsible for their nigratory habit is that by moving they can maintain their political autonomy even within the boundaries of highly organised state becurrocratic system. Farming using domesticated plants and animals proceeded that specialised pastoralism. Mixed farming was a multifaceted strategy that is a hedge against droughts, crop failures, diseases and other natural calanities. If the herds died of an epidemic, the crops were there; if crops feiled, the animals could provide the food. In other words, the diversification provided the reserves necessary to face fluctuations of food supply in any area. Such a strategy is still common in many parts of Africa, as well as in Europe and Middle East, particularly in nountain villages.

Variation in individual household economic and social strategies are sketched very clearly in ever changing composition of comp group and in individual pattern of migration.

Same individuals - as among Mavajo and Kosimojong for example may move frequently one year and be largely sedentry the next. Often there are systematic regulation underlying this variability. Households with many animals, eg. among Maruks of Turkey - may move early in the springs to pastures in mountains, risking cold weather to get the first spring grasses. Others with smaller flocks may feel, they cannot afford the risk. They move later on.

Couses and Places Visited:

The economy of Gujjars is predominently pastoral and thus damads extensive utilisation of pastures. The village and surrounding localities have limited pastures and hance limited supply of fodder. This non-availability of fodder is the major cause of this migration to higher hills, called 'Dhars'. The inhabitants start migrating to Dhars in April and or May start. Different families Ligrate to different Dhars. The various Dhars which are conmenty visited are Sakri, Malwhar, Godehan, Chola, Chandi, Sarmi, Nadin and Krotla. Enroute to these places, people have to cross various streams/nullahas which are Saloon khad, Kendoh khad, Julah khad, Med khad and Chanju khad. The last one is sufficiently deep to deserve a bridge which is there whereas all others can be crossed without the help of bridge. All the femily members except me or two old persons or children or invalids or prognant women are left behind in the village. Some way all animals are taken along except one or two so that the needs of the

family numbers who are left behind may be fulfilled. The route to the Dhars is kutcha and remains without any sort of maintenance. They pass through the village Ainpukhar at a distance of about 20 Kms. and other small villages enroute to Dhars in Churah tehsil.

Articles Token Along:

The Gujjars stay for about 4-5 months at Dhars during their migration. This is quite a long period and needs all household goods for sustainence. The necessary household utensils along with big 'gagers' and 'karahis' are taken along. The later articles are used for making and storage of ghee. As there is no market for milk in the un-inhabited Dhars and they seldom consume it themselves, all nilk produced is converted into ghee and later on sold at Chamba. Gujjars also take their beddings alsong and necessary provisions as well. All this perophermelia is loaded on bullocks' backs and transported. It is almost unlikely that provisions brought in the beginning would last their entire stay. Hence one person has to be sent back to shilaghrat to purchase and replanish the required provisions. The visit is also utilized for selling the ghee and khoya produced at the Dhars.

Difficulties:

During the long journey on foot to Dhars, which include continuous and steep ascends and unmanageable paths, sometimes persons fall ill. Though a few Gujjars keep certain basic medicines with them it is not always possible

jumey is continued but if ailment advances or is of serious nature, the patient has to be returned back to Maingal where he/she can rest properly. Sometimes the problem of illness also crops up in case of livestock. Generally, the problems are of consuming poisonous weeds or of tiredness. The consumption of poisonous weeds and certain other ailments are treated by them by feeding the ailing minals certain local herbs, their knowledge about which is traditional. Tiredness is treated allowing needed rest to the animals. There are also other problems faced by them during migration. Certain respondents said that they are harrased by forest officials during their transit and stay. But they don't face any difficulties from health and other civil authorities.

Sale and Purchase of Livestock:

Quijars also engage themselves in the sale and purchase of animals during migrations. But this is rather rare. Sale is generally resorted under distress, and purchase only when a person has enough cash with him and the bargain is at throw-away prices. They return back to their native place enytine curing September.

Chapter -IX

SUMM ARY

Gujjars, believed to have originated from Gujarat, form one of the important tribes of Himachal Pradesh. They are found in six districts of the State, Chamba having the largest. Gujjars belong both to Muslim as well as Himdu religions, the former being dominating in number. They are mostly nomadic, and at certain places semi-nomadic too. They migrate during summers to higher hills in search of fodder, which is abundent there during the season. This study envisages to study the socio-economic conditions of semi-settled Gujjars, who migrate seasonally. District Chamba was selected for the study on the basis of its having largest percentage of Muslim Gujjars. Village Maingal was selected purposely because it is predominently inhabited by Muslim Gujjars. Moreover this village had been studied by 1961 census and the report could help in comparing certain aspects.

Maingal, situated at a height of about 7500 ft. above MSL, has a cool wheather throughout the year. It is very poorly linked with other parts of the area. It can hardly boast of any basic amenities except a primary school and recent electrification. A few facilities like post office, civil and veterinary dispensary etc. are located in Shilaghrat, about 3 Kms. down hill from Maingal.

The population of village is distributed among 13 hamlets naving 41 households of Gujjars and 10 that of Gaddis. The population of village which was 244 in 1961 increased to 344 during 1984. The Gujjars dwell in very filthy houses whereas twellings of Gaddis are comparativelly cleaner. The members of both these communities can be differentiated from their dress as well as physique and complexion. Their standard of living 1s quite low and as such they possess very few modern durables.

Large variations exist in the family composition of Gujjars and Gaddis. The former generally have nuclear families with larger average family size whereas joint families with smaller family size is the general rule among Gaddis. Sex ratio is also higher among Gujjars. They also have higher birth rates. Literacy amongst Gujjars is low. It is only recently that they have started sending their children to school.

Though the Gujjars are engaged in agriculture, animal husbandry, weaving and wage earning in non-agricultural activities but animal husbandry is their main occupation. Gujjars being traditionally cattle reares, lay more importance to this vocation. The proportion of workers engaged in multiple occupation is more among Gujjar households as compared to those of Gaddis. This may be due to higher productivity of individual occupation among Gaddis.

Economy of the Gujjars depends largely on buffalo rearing The Gaddi households earned more income from agriculture (45.3% of the total income) than those of Gujjars (21.2% of the total income). Disparity in income distribution was found to be higher among Gujjars than Gaddis. This is mainly due to differential level of production resources and their productivity.

The study revealed that indebtedness is very high among Gujjar households. During 1961 every Gujjar household was under debt whereas only three household of Gaddis in the village were in debt at that time. On the other hand, out of 41 Gujjar households, only 11 were reported to be so during the present survey. Gujjars borrowed money from money lenders for the purchase of ration, animals, etc. They also borrows money from friends and relatives. Finance from banks is not popular among villagers due to their ignorance about the procedure and situation of the Banks at Chamba which is far off. Interest as high as 72 percent per annum was reported to be paid to the money lenders.

The productivity of agricultural crops is low and therefore agriculture is not economic in the village. Higher altitude of the place, lack of irrigation facilities, small size of holding, poor fertility of soil, negligible use of modern inputs are the main factors for such a situation. sown in the village increased from 4.33 percent during 1958-63 to 6.29 percent of the total area during 1978-83; the remaining being under forests, and pastures and grazing. of leasing land is not practised in the village due to nonremunerative nature of agriculture. It was also observed that the average land per household is lesser among Gujjar families than Gaddis and there is no class of landless in the village. Because of high altitude more than one crop in a year is not possible. Maize is the major crop of the village accounting for more than 73 per cent of the total cropped area. other crop of Kharif is mash. During Rabi season, wheat, barley and mustard are grown. There is no fodder crops grown in the village. Generally maize is grown during Kharif and the field is left fallow during Rabi. Intensity of cropping on the farms of Gaddis was reported to be somewhat higher than that of the farms of Gujjars. This is due to the reason that Gaddis are traditionally land tillers while the Gujjars acquired lands only recently and the lands with the later are of inferior quality. However the yield rates of all crops on the farms of Gujjars are higher than those of Gaddis. This is explained by larger use of F. Y.M. the availability of which is more with Gujjars. The per capita annual production of grains among Gaddis is about 1.65 Qtl. which is larger than Gujjar households (1.05 Qtls.). By-products of the crops are fed to the animals. There were no marketable surplus with any of the households i. the village. Villagers use only traditional methods for storage of grain. Wheat weavil (ghun) rice weavil (pathari) and grain moth (lada) are the main pests of the stored grain in the village.

Use of modern inputs like HYVs seed and fertilizer is insignificant in the village. But F.Y.M. is used in plenty. Agricultural implements used in Maingal are made by local blacksmith who is traditionally paid kind wages at the time of harvest.

Animal husbandry is the main source of income of the villagers. The people keep milch animals, goats, sheep and: poultry for meeting their own demand as well as for commercial purpose. Cows, buffaloes, oxen, goats and sheep constitute the livestock population of the village. Buffalo is the most important animal for Gujjars. Whereas Gaddis keep more number of sheep. The study reveals that the number as well as the proportion of every type of livestock except cows increased with the Gujjars during 1961-84. Cows are maintained mainly to have male calves to be reared as bullocks and to be used for ploughing and carriage at the time of migration. In Maingal the pressure of livestock on land is observed to be more among Gujjars than This is so because the Gujjars have lesser cultivated land than Gaddis. The breed of milch and other animals is indigenous. One of the chief reasons for the poor quality animals in the village is the prevalent system of breeding. Local bulls of poor quality are used for the purpose. The people are aware about the artificial insemination but the facility is not available nearby.

During summer and rainy season, the animals depend entirely on grazing while in winters they are stall fed. Winter feed
is of dry grass and as an apology to green fodder, leaves of
some trees are fed. It was gathered that most of the Gujjar
households use unripe wheat plants as green fodder to buffaloes
in milk. Feeding concentrate are limited mostly to animals in
milk. Low milk yield of milch cattle is mainly due to poor
feed. In average buffalo gives a total of about 1000 Kgs. of
milk in a full loctation of about 8 months. This quantity is

half in the case of an average cow with loctation period of nearly 200 days. Local herbs, and spices are administered to ailing animals and Gujjars select visit veterilary dispensary due to long distance and difficult termain. Low income was also a factor not to visit a dispensary. Out of 41 households 22 households made use of subsidy for the purchase of buffaloes. The benefit were respect most by small land holders.

Sale of milk is the main source of income of Gujjar households. Poor breed of milch animals coupled with the poor feed results in the production of milk which is low in quantity and poor in quality. Milk produced by households are retained by them for home consumption and the balance is marketed as fluid milk, as far as possible. At higher ranges, making ghee/ khoya from milk is the common practices. But sale of milk is more profitable which is not possible due to non-availability of a ready mark t for fresh milk at high altitudes. not depend on the sale of milk, they are also reported to be not converting milk into khoya. Ghee and khoya are prepared by traditional methods. These products are accumulated in sufficent quantities and taken to Chamba for sale at their conveniance. Main consuming market of milk and its products is Chamba. Rehru, located 11 las. away from Meinga. is the main collection centre for milk of Maingal. At Rehru producers sell milk through trader or cooperative society, preference being to the trader. because the traders are always ready to help them financially, whenever they are in need. It was observed that about 54 per cent of the milk produced was marketed as such by Gujjars, nearly 24 per cent of it is processed for ghee and 10 per cent for khoya by Gujjar households; the remaining 12 percent accounts for home consumption,

Sheep rearing is the main source of income for Gaddis. Sheep rearing is considered to be a relatively safe occupation as compared to poultry keeping or dairying. The Gaddis who are

engaged more in shoep rearing take their sheep to lower plains and move to higher elevations when required under certain conditions of grazing and rainfall. Sale of progany and sheep penning are the two activities that contribute to income from sheep rearing. Sheet is sheared twice a year, in September and retruiry and only traditional method is used for this. On an average a sheep yields about 200 grams of wool in one cutting. A large part of this wool is consumed locally. The Gaddi households of this village do not sell wool at all and use it for weaving blankets and cloths for their own dress. Though Gujjars have lesser number of sheep but as they do not depend wholly on woollen clothing, have some marketable surplus of wool. skins of shoep are used for storing food grains, flour etc.. The study reveals that consumption of meat is restricted only to special occasions like festival, marriage, birth etc.. Maingal the Gujjars being Muslims follow the Halal method of slaugtering while the Gaddis belive in Jhatka. Traditional method is used for breeding of sheep in the village. of adoption of cross-brad Marino in the village was very low,

Goat is also reared by both the communties in the village but the average number of goats possessed by Gaddis was more than by Jujjars. On an average a goat yield 0.500 Kgs, milk per day and it is not sold. Note goats are raised mainly for mutton.

The economy of Gujjars is predominently pastoral and thus dammeds extensive utilization of pastures. The village and surrounding localities have limited pasture and hence limited supply of fodders, This non-availability of fodder is the major cause of their migration to higher hills, called Dhars beginning April and or hay start. Different families migrate to different Dhars. All the family mambers except one or two old persons or children or invalid or program water are left behind in the village. The necessary household utensils alongwith big, gagars' and 'anadid' are taken along, all this peraphermelia is loaded on tulloaks' coals and transported. Gujjars also engage them-

selves in the sale and purchase of animals during migration. They return back to their native village any time during September.

Suggestions:

It may be concluded that during the last two decades there has not been any significant improvement in the basic amenities in the village except recent electrification. Literacy among Gujjars was found to be very low. The reason for non-enrolment of the children in school is that the inhabitants are semi-settled migrating during summers. This can be remedied somewhat by improving the facilities of mobile school for Gujjars. The higher birth rate among Gujjars by educating them about the benew fits of family planning.

Indebtedness was found to be higher among Gujjars. They borrow money from money lender at higher rates of interest. It is suggested that a bank branch should be established in the vicinity of the village so that they too can take the advantage of Bank loans.

Agricultural productivity is very low in the village due to higher altituds, poor fertility of soil, and almost no use of modern inputs like HYVs seeds, fertilizer ecc. Therefore, the people should be educated about improved methods of cultivation and allied pursuits.

Animal husbandry is the main source of income of the villagers. But the yield rates of these domestic animals are very low. Indigeneous breed of livestock and poor feed are the reasons for low yield. Effort by the Animal Husbandry Department in the form of extension activities should help the villagers to change their opinion in favour of the improved breeds of livestock. The facility of artificial insemination should be provided in the vicinity of the village. Improved breeds require proper feed, which Gujjars cannot afford. Therefore

breed improvement has to be intigrated with feed improvement.

Wastage of fodders like maize stems can be reduced by the use of chaff-nutters, which need to be introduced urgently in the area. Other improved methods like silage need to be adopted. A subsidy to the farmers to adopt these methods will make new fodder programme a success. More availability of veterinary services will wean Gujjars from following indigenous medicines and methods of treating sick animals.

Gujjars are often blamed for adulteration in milk by town authorities but the quality of milk produced by their animals is generally poor. It is therefore, suggested that there should be a separate wilk rating for their milk and they should not be unnecessarily suspected of adulteration.

At higher ranges, making Ghee/Khoya out of surplus milk is a common practice. But sale of milk is more profitable which is not possible due to non-availability of rady market for fresh milk at high altitudes. Possibilities of organising milk collection centres in such areas should be explored.

Contd. from back page

- 22. Estimation of Culled Apples and Their Utilization in H. P., 1980.
- 23. Processing Costs of Fruits, Marketing and Storage of Products: Case Study of hpmc Plant at Jarol, 1981.
- *24. Marketing of Seed Potato in Himachal Pradesh, 1981.
- *25. Market Intelligence: A Study of Himachal's Apple Growers & Traders, 1982.
- **26. Agricultural Development in Himachal Pradesh : A Districtwise Study, 1982.
 - 27. Economics of Production & Marketing of Ginger in Himachal Pradesh, 1982.
 - 28. Farming systems in Himachal Pradesh: An Economic Study, 1983.
 - 29. Repayment Capacity of Farmers Based on Increamental Income Assumed for Term Investment of Loans of H. P. Land Development Bank for Raising Apples, 1983.
 - 30. Management of Social Forestry in Himachal Pradesh, 1983.
 - 31. Impact of Lime Stone Quarrying on Village Economy : An Agro-Economic Survey of a Village in U. P. Hills, 1983.
 - 32. Appraisal of a Successful Marketing Co-operative in Himachal Pradesh, 1984.
 - 33. Socio-Economic Study of Chamba Gujjars, 1984.

Occasional Papers:

- *1. Project Appraisal: A Simplified Approach for Appraising Minor Irrigation Works for Use by Commercial Banks, 1974.
- *2. Marketing of Himachal's Seed Potato: A Study in Minimising Transportation Cost and in Augmenting Farmer's Share 1974.
- *3 Fruit Industry of Himachal Pradesh in Retrospect and Prospec*, 1976.
- 4. An Agro-Economic Survey of Pacnta Valley in H. P., 1976.
- 5. Adoption of Improved Technology and Levels of Input in Hill Agriculture, 1977.
- 6. Price Behaviour of Important Pulses in India, 1977.
- *7. Trends in Acreage, Production, Productivity and Prices of Major Field Crops in H. P., 1978,
- 8. Agricultural Development in Erstwhile Kangra District of Himachal Pradesh, 1979.
- 9. Marketing and Demand for Eggs in Simla City: An Econometric Study, 1979.
- *10. Community Forestry in Himachal Pradesh: A Case Study in Gamrola Catchment Area, 1979.
 - 11. Resource Use Efficiency in Wheat and Maize: A Comparative Study of HYV's and Local Varieties in District Bilaspur, 1980.
 - 12. Agricultural Efficiency in Himachal Pradesh: A Districtwise Study, 1966-67 to 1979-80.

^{*}Out of print

^{**}Published by and avilable with "Agricole Publishing Academy" D-76 Fanchsheel Enclave, New Delhi-110024.

Studies Conducted

Reports:

- *1. The Economy of Small and Marginal Farmers of District Sirmour, H.P.: A Bench Mark Survey, 1975.
- *2. A Study of Incomes, Savings and Investments Pattern in an Agriculturally Progressive Area of Himachal Pradesh, 1976.
- *3. Economics of Cultivation and Marketing of Ginger in Sirmour District, Himachal Pradesh, 1976.
- 4. A Study of Simla Milk Supply Schema: An Economic Appraisal, 1977.
- 5. A Comprehensive Study on the Marketing of Apples of Himachal Pradesh.
 - Vol 1 : Orchardist Survey, 1577.
 - Vol. II A: Analysis of Prices (Delhi Market), 1977.
 - *Vol. II B: Analysis of Consumer Behaviour (De!hi), 1978.
 - *Vol. III : Calcutta Market, 1979.
 - *Vol. IV : Bombay Mark at, 1 179.
 - Vol. V: Madras Market, 1979.
 - Vol. VI: Kanpur Market, 1979.
 - *Vol. VII : Spatial Market Analysis, 1979.
- *6. Marketing of Himschal Fruits at Jullundur, Ludhiana, Delhi, Ambala, Pathankof, Amritsar, Lucknow, Chandigarh, Agra and Jaipur, 1977-82.
- *7. Area Development Planning in the Villages of Hilly Regions: A Case Study of Paonta Valley, H.P., 1978.
- *8 Performance of High Yielding Varieties of Wheat and Maize in Himachal Pradesh, 1978.
- Marketing and Forwarding of Himachal Apples by hpmc: Delhi and Bombay, 1978.
- *10. Pricing Pattern of Himachal's Apple in India, 1979.
- *11. Studies in Locational Feasibility of Apple Grading and Packing Houses in Himachal Pradesh, 1979.
- *12. Operational Efficiency of hpmc: Users' Opinion, 1979.
- *13. Agricultural Development in Himachal Pradesh, 1980.
- 14. Quiet Crisis in the Hima avas, 1980.
- 15. Causes of Low Consumption of Fertilizers in Himachal Pradesh, 1980.
- *16. A Tribal Village of Himachal: Socio-Economic Study of Kothi, 1980.
- 17. Statistical Profile of Western Himalayan Region, 1980.
- 18. Agricultural Development in Bilaspur District, 1980.
- 19. Marketing Channels Used by Himachal Apple Growers, 1980.
- 23. Pattern of Apple Exports from Himachal, 1980.
- 21. Transportation and Storage Losses of Himachal Apples, 1980.

(Contd. on inside Cover)