

## Agriculture Production Pattern, Disposal of Products and Ethnology: An Empirical Study in a Village of Himachal Pradesh

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### Abstract

The study conducted in a rural area of Himachal Pradesh state in India to measure the development aspect along with consumption pattern and socio-economic concern. The study provides the exhaustive data of rural labor, which proves the Malthusian Theory of population: "population increases geometrically and the resources increases arithmetically." It is a difficult task to compare a socio economic study to the core economic theories. In this study it is clear that the resources are very few and the demand of the population increases rapidly likewise education consumption occupation employment.

**Keywords:** Bigha; Farm yard manure; Mahatma Gandhi National Rural Employment Guarantee Act; High yield variety; Temporary academic block

### Introduction

Family Profiles of the sample households through door to door interaction with the heads of households were completed in Bajrer village of Prei Panchayat in Block Rait which lies between 31°21' to 32°59' N latitude and 75°47' 55" to 77°45' E longitude. It is situated on the southern escarpment of the Himalayas. The entire area is traversed by the varying altitude of the Shivaliks, Dhauladhar and the Himalayas from north-west to south-east. The altitude varies from 500 meters above mean sea level (amsl) to around 5000 meters amsl. Majority of the people depend on land-based activities for their livelihood as almost every family has a piece of land whatever be its size and type. In many pockets, problem of wild animals and monkeys damaging crops and lack of irrigation facilities have made life of the people a little difficult. Lack of awareness of some developmental programmes particularly relating to social assistance and social security programmes was observed while conducting the study. For dissemination of information of various rural poverty alleviation and social security schemes, village information boards containing details of each scheme in local language are required to be put up in each Panchayat Ghar.

A brief report on the study of a number of household is compiled after surveyed the above mentioned area pertaining to the average household size of 5-6 members consisted of 27.77% of male and 62.33% of female counterparts. Further the report comprises their literacy rate, occupational structure, income from both main and subsidiary occupation, land inventory, cropping pattern, input in crop production, labor input in crop production, consumption pattern (consumption durables and consumption cereals), public distribution system, information regarding environmental issues, reading habits, women empowerment and education.

### Preface

A Community lab was conducted by the central university of Himachal Pradesh for the study of the demographic and ethnology of the nearby community. A field survey was conducted by the students with an efficient set of questionnaires which pertains the following contents i.e. a brief family introduction, demography of the family with land inventory, farm buildings and implements, cropping pattern, input and labor use, consumer durables, consumption of cereals, borrowing and repayment, problem and sources of information, rural development programmed, reading habits, information on social issues, environment, health, women empowerment, education, information on entrepreneur.

The survey was conducted by keeping in view about the main objective to assess the primary data on Living standard of the rural people, problem of poverty in villages especially in context to Himachal Pradesh, in this survey an observation of a number of household in the Prei Panchayat of district Kangra. In order to ensure the effectiveness and adequacy of the designed questionnaire forms, pilot survey also conducted. The main objectives of conducting this pilot surveys is to fine tune the questionnaires and to attain their objectives most effectively. The main concentration of the, pre questionnaires pared questionnaires in different portion, addressing the issues of related problem of cropping, land, labor input, consumption cereals and public distribution system. Basically, the underlying propose of this manual is to provide conceptual and practical guidelines on how to find a reliable assessment of the socioeconomic condition. It should be noted that socioeconomic environment refers to a wide range of interrelated and diverse aspects and variables relating to or involving a combination of social and economic factors, these factors can be categories including housing, requirement for public services such as water, electricity, sanitation, communication.

### Background

Understanding Agricultural Rural Living standard and problem of poverty are very important components of Rural Development and plays a very key role in promoting access to economic and social services, thereby generating increased incomes and productive employment opportunities in the country, thus becoming key ingredients of any sustainable poverty reduction program me. However, in spite of the efforts made over the years at the Central and State levels through different programs for the poor's, about 40% of the households in the country are still not getting by all weather programs. The study of Rural Living standard and problem of poverty reviewing the productivity is by selection of 45 representative where a detailed review and study has been carried out of the prevailing situation, the work done by these

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household over the last one year and their labor employed in carrying out the maintenance activities. In addition, a detailed inventory of the number of household is being prepared which would give their category, place of work, gender, skills and qualifications. This report covers the labor productivity and the causes for poor productivity. The list of 45 representatives to be surveyed and studied was finalized in door to door visit. Its details were provided in the inception report. A timetable for surveys was drawn up. Using the above experience and understanding a questionnaire was developed which would be used for the survey of 45 representatives and from which the conclusions could be drawn on the productivity levels and the causes if any, of the poor productivity. Similarly a simple one page form was developed for preparing a detailed inventory of the labour force. This report will be followed by a 'Labour Reforms Option' paper, where the various options emerging from the Productivity Audit will be examined and recommendations made [1-4].

### Research issues

The main objective of the Study was to assess the primary data of the Living standard of the rural people and the disadvantaged groups in the society through the feedback on various socio-economic programme implemented in the Kangra district.

#### Economic issues:

- How such an economic structure does may affect and affected by the environmental quality of the study site?
- How will local business be affected by rapid growth resulting from the development of the study sites?

#### Community structure, institutions, and infrastructural issues:

- How the affecting communities are organized, both formally and informally?
- What are the employment and economic dimensions of each group?
- What are the existing economic, social, or cultural inequities among groups, if any, and what are their causes?
- What experience do various groups have with induced change?
- What changes in these variables may be caused by alternative scenarios for study site development?
- What factors influence the daily lives of potentially affected members of the community?
- How stable is the pattern of residence?
- Do people in different groups feel that they currently have a satisfying way of life?
- What attitudes do people have toward risk, health, safety, and toward alternative scenarios for study site development?
- How available are community services and infrastructure? And how will their provision and availability be affected?

#### Demography issues:

- What are the demographic characteristics of the community? And to what extent they are affected by the prevailing environmental conditions?
- What is the current structure and organization of the potentially affected population? Is it stable or changing?

- Are there ethnic, economic, or social group distinctions within this population?
- What are the patterns of poverty and wealth, and income distribution among the population?

#### Employment issues:

- What is the existing employment composition?
- What is the magnitude and composition of the unemployed?
- What are the types and characteristics of primary and secondary job opportunities that are expected to be created?
- Are there seasonal changes, or other kinds of influx and outflow?

#### Gender issues:

- What is the existing gender distribution of the population?
- What is the existing gender structure of employment and unemployment?
- What are the social and economic roles played by women in the community?
- What is the role of women, if any, in the existing decision making system?
- How are power and authority distributed in the community, both formally and informally?
- Who are the relevant stakeholders? What are their interests?
- How do they organize and exercise power within the community and at the regional and national levels?

#### Community resources issues:

- How do people use the land, whether urban or rural? Are there conflicts between these different land uses?
- How do they use the natural environment?
- Are there culturally valued neighborhoods, shopping areas, recreational areas, or gathering places?
- Are there culturally valued patterns of social formal and/or informal groups?

### Methodology

The study is based mainly on primary data collected through census socioeconomic survey schedule (the census questionnaire and socio-economic survey questionnaire was integrated in to one) and qualitative inputs through consultations and discussions with head of the family, local villagers and other stakeholders. A detailed verification was carried out within the proposed area to identify the particular family and their land distribution pattern. The verification included collection of details in respect of the owner or occupant of the structure, its type and usage coming within area on either side of the existing centerline. To collect this information a well-designed and pre-tested schedule was used in the survey. However, during the course of the survey, it was found out that a number of absentee land lords were not available and in such cases detailed socio-economic information could not be captured for such households. Besides, quantitative data collection method, a number of tools was also used for eliciting information. Some of the important tools used for the study are Focused Group Discussion (FGD) and face to face interaction, Community meetings and Key Informants Interview.

The questionnaires are designed to collect information at an individual scale. For surveys belonging to the second category (face-to-face interviews), the questionnaire was introduced with a short presentation:

- First, introduced who you are (the organization belong to - gave the name of CUHP, for instance, then the name of department...)
- Explained the reason for the survey: involved in a research project concerning the cropping pattern and their life style etc. Actually, the simplest way of presenting the project helped much in getting information at least once in this foreword could be a way to see if the person in front aware of the concept or if had to explain it.
- Précised that using a questionnaire specifically targeting skippers or of this type of person was highly important for the project.
- Gave an approximate duration of the interview.
- Précised that the confidentiality of all information and data will be strictly respected, and that only aggregated data will be used and published.
- Explained them that he / she will get the results of the survey (dissemination of synthesis).

The main instrument for collection of data was a set of structured questionnaires; all household level questionnaires were bilingual with questions in regional and English languages. For individual household member information on age, sex, marital status, education and relationship to the head of the household were collected. Marriages and deaths of members of household were also recorded. This questionnaire was designed to collect information on availability and accessibility of education, health, transport and communication facilities at village level. Functioning of village health committees and utilization of untied funds were additionally collected from the sampled area.

## Results

From Table 1 and Figure 1 it is clear that majority of studied population comprises of females (62.22%) where population of males is (37.77%). Figure 1 shows the percentage of male and female lying in different age groups, where the study found the majority of females (39.29%) is between in the age group of 15-25 years and majority of male counterparts found (17.65%) is between in the age group of 40-50 years. In demographic study the level of education was found that 40% of the total studied household got education up to secondary level which is the highest ever the majority of population got and from Figure 2 we found that there was 0% of the population got technical education. The study shows again a pathetic situation regarding the percentage of illiterate population between both genders which is found 5.88% of male and 16% of female counterparts.

The occupational pattern reveal that the majority of population 41% depends on agricultural activity for their livelyhood and same 41% depends on other activities, where the 12% of the population depends on government services and 6% held operating their own entrepreneurial activities like shops etc. (Figure 3). In the study the annual income of the population is calculated on the basis of two scale one is the annual income from the main occupation and the other is annual income from subsidiary occupation and took the measurement of income in 10 groups as mentioned in Figure 4, where the annual income from subsidiary occupation lies in the income group of less than Rs. 50000. The annual income from the main occupation is the highest in the group of 3-3.5 lakhs which is found 48.18%. There is population survive with an annual income under the group of less than Rs. 50000.

Age Groups (years)	Total % of male	Total % of female
0-15	23.53	10.71
15-25	11.76	39.29
25-30	11.76	3.57
30-40	11.76	14.29
40-50	17.65	17.86
50-60	17.65	0
60-70	0	7.14
>70	5.88	0
Total	100 (17)	100 (28)

Source of information: field survey 2012.

Table 1: Age profile of the studied population.

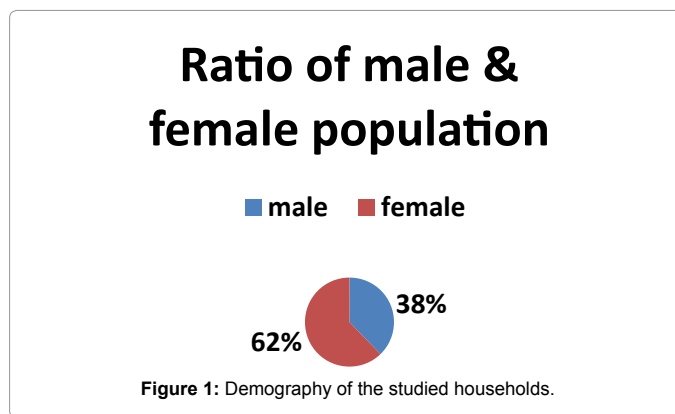


Figure 1: Demography of the studied households.

## Land inventories

Surveyed household having a total land of 23 bigha in which 22.5 bigha as an operational holding, where the study found that the whole land is irrigated through KUHL (Table 2).

## Farm building and implement

The study shows that every household has its own house or farm building which comprises a total present value of 8 household is Rs. 3392000, and have their own cattle shade worth Rs. 30500 with the minor tools and implements of Rs. 9950 (Tables 3-5).

## Cropping pattern

The pattern of cropping highlights the nature of agriculture in an agrarian economy. Agriculture in village and nearby area is gradually picking up momentum in favor of high value crops to augment income and employment. The Table 4 revealed that wheat and paddy are the main cereal crops grown in the village, accounting for 30.5 quintals of paddy and wheat in 22.5 bigha of land respectively. Generally the household kept the varieties of seed from their own production. From the total production 80.33% kept for home consumption, 5.87% of wheat and 5.43% of the paddy of the total production kept for the seed of next cropping, 16.39% of wheat kept for sale at a price of Rs. 1100/ quintal. From the survey we found 1.36 quintals of the productivity per bigha.

## Input use

The cropping pattern yield that paddy (HVY) and wheat (HYV) are the two major crops in that area which requires the following input in crop production (Table 6):

<b>For crop 1 (paddy)</b>	<b>For crop 2 (wheat)</b>
1.74 quintals of seeds	2.19 quintals of seeds

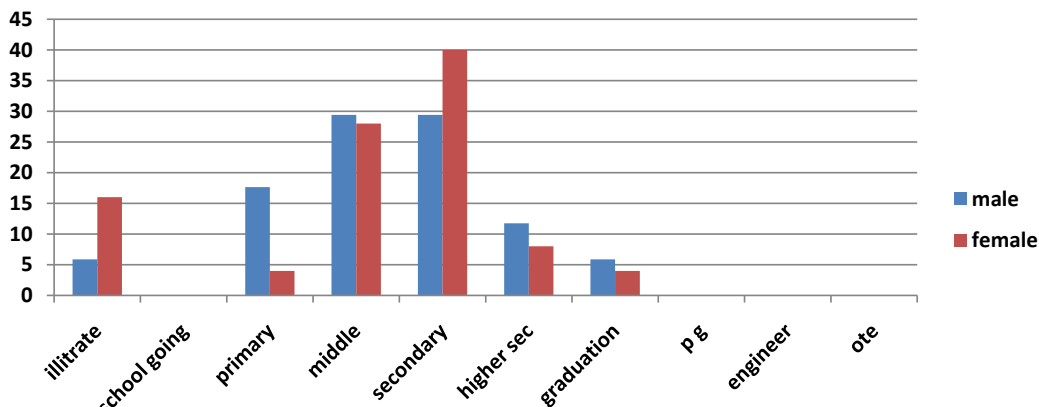


Figure 2: Distribution of population on the basis of education.

## Occupational Pattern



Figure 3: Studied Population engaged in different occupation.

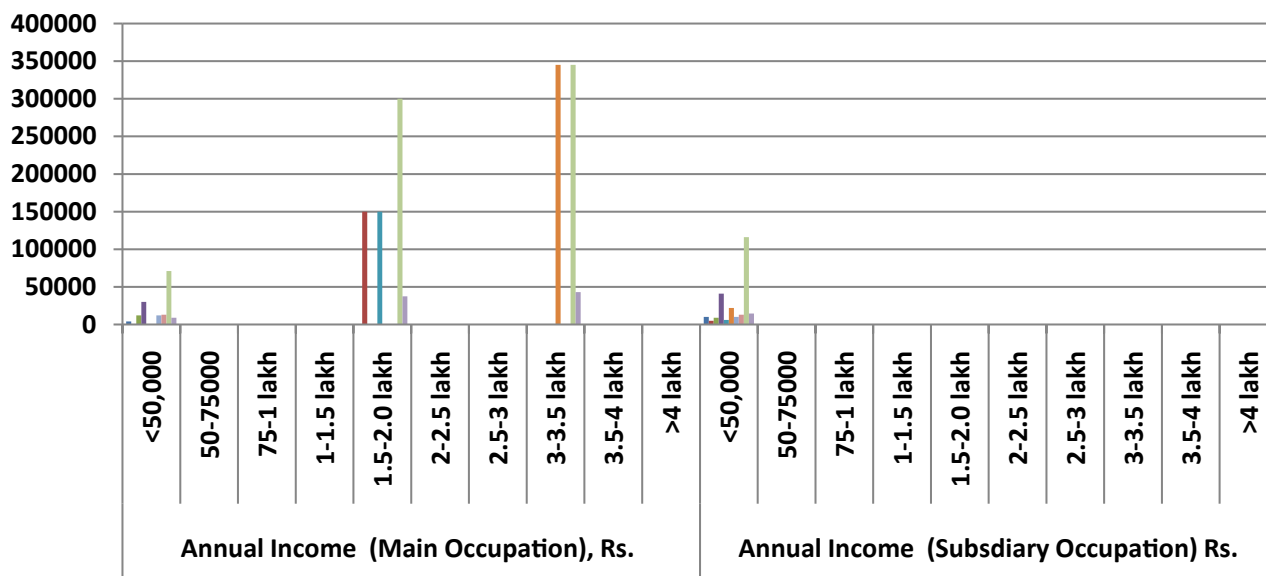


Figure 4: Income distribution pattern with main and subsidiary occupation.

Land(bigha)	Irrigated	Unirrigated	Total land	Average land	% of land
Total land	23	0	23	2.875	100
Operational holdings	22.5	0	22.5	2.8125	97.83
Leased in land	0	0	0	0	0
Leased out land	0	0	0	0	0
Total cultivated land	22.5	0	22.5	2.8125	97.83
Orchards	0	0	0	0	0
Pastures	0	0	0	0	0
Forests	0	0	0	0	0
Cultivable wasteland	0.5	0	0.5	0.0625	2.17
Uncultivable wasteland	0	0	0	0	0
Current fallows	0	0	0	0	0
Other fallows	0	0	0	0	0

Source of information: field survey 2012.

Table 2: Land distribution pattern.

Cost (Rs)	Total present cost	% of present cost
Farm building	3392000	98.82
Cattle Shed	30500	0.89
Store	0	0
Other	0	0
Minor implements	9950	0.29
Total	3432450	100

Sources of information: field survey 2012

Table 3: Cost of farm building and implement of the household.

Crop	Total land Bigha (irrigated)	Total land Bigha (unirrigated)	Total land Bigha
Paddy (HYV)	22.5	0.5	23
Wheat (HYV)	22.5	0.5	23

Table 4: Cropping pattern and productivity of the studied farmer.

Crop	Productivity (quintals)
Paddy (HYV)	1.36
Wheat (HYV)	1.36

Sources of information: field survey 2012

Table 5: Product and productivity.

90 quintals of FYM                      90 quintals of FYM  
 4.25 quintals of fertilizer (Urea) 3.65 quintals of fertilizer (Urea)

### Labor input

For crop 1 (paddy) 62.51% of the total labor input performed by the males of family, 9.53% of total labor performed by females of the family, 0.64% of family child labor used in human labor whereas 27.33% of total labor performed by the animal labor both hired and family animals. For crop 2 (wheat) 63.16% of the total labor performed by males of the family, 7.48% labor performed by females of the family, 0.44% of labor performed by the children of the families and 28.92% of the total labor performed by the animal labor (both hired and family). Note here we took 1 labor day equals to 8 man hours of work and consider the wage rate at Rs. 120/day and animal wage rate calculated at the rate of Rs. 150/days.

In the studied household we differentiate the consumption pattern in two broader ways (1) consumption of durables or perishable goods (2) consumption of non-durable or non-perishable goods. In consumption of durable goods motorcycle is found the highest expensive commodity which the household use with a percentage of 44.28%, whereas in the perishable goods milk ghee butter (15.57%)

and meat (10.64%) is found expensive comparatively other goods and services (Table 7, Figures 5 and 6).

The study shows that the public distribution system and implementation of developmental programme performing at the village level efficiently. The total income generated through this government implemented programmes is calculated INR 186000 annually by summing up the daily paid wagers. 75% of the studied population is satisfied by the implementation of these programmes and 25%

INPUT USE	Crop 1 (Paddy HYV)			Crop 2 (Wheat HYV)		
	Total value (Rs)	Average value (Rs)	% of input value	Total value (Rs)	Average value (Rs)	% of input value
Seed	1849	231.125	2.64	2195	274.375	3.36
FYM	2799	349.875	3.10	2799	349.875	4.29
Fertilizer	2545	318.125	3.64	2210	276.25	3.39
Irrigation	0	0	0	0	0	0
stacking	0	0	0	0	0	0
Minor repair	0	0	0	0	0	0
Male Days	36750	4594	52.50	34200	4275	52.40
Female Days	5604	700	8.0	4050	505	6.21
Children Days	375	47	0.54	240	30	0.37
Animal Days	20081	2510	28.69	19575	2446	30
Total	70003	8750.125	100	65269	8156.5	100

Table 6: Input cost of the two major crops.

Development programmes being implemented	Total no number of family
MNREGA	100
Watershed	0
Others	0
<b>Activities undertaken in these programmes</b>	
Footpaths	100
Irrigation Channels	100
<b>Benefits of these activities</b>	
Income (AVERAGE)	Rs.23250
Employment (DAYS)	560 Days
Job training	0
<b>Are you satisfied with the implementation of these programmes</b>	
Yes	75
No	25
If no, reasons	25
The quality of works is not good	25
The selection of beneficiaries is not fair	25
The sanction amount is not available in time	25
Have to visit concerned officials many times	25
Have to bribe the officials	0
Others (specify)	0
<b>Public distribution system</b>	
If yes, what commodities you buy	100
Rice	87.5
Wheat	87.5
Pulses	87.5
Edible oil	87.5
Kerosene	75
Salt	0
Salt	37.5
<b>Regularly availability</b>	
Yes	100
No	0
<b>Are you Satisfied</b>	
Yes	100
No	0

Table 7: Public distribution system.

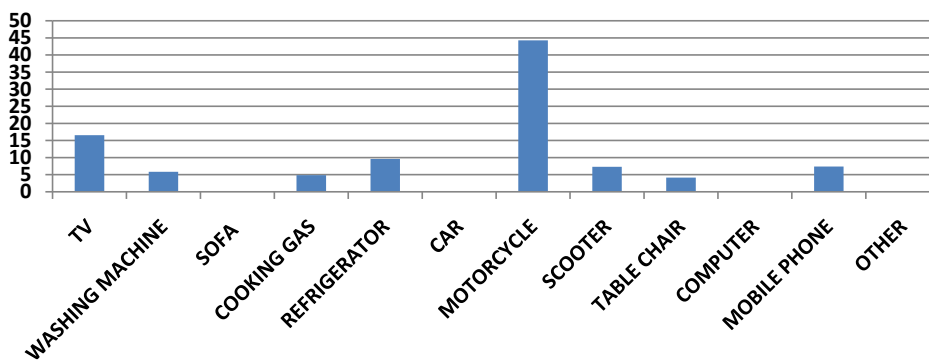


Figure 5: Consumption pattern of consumer durables of the studied household.

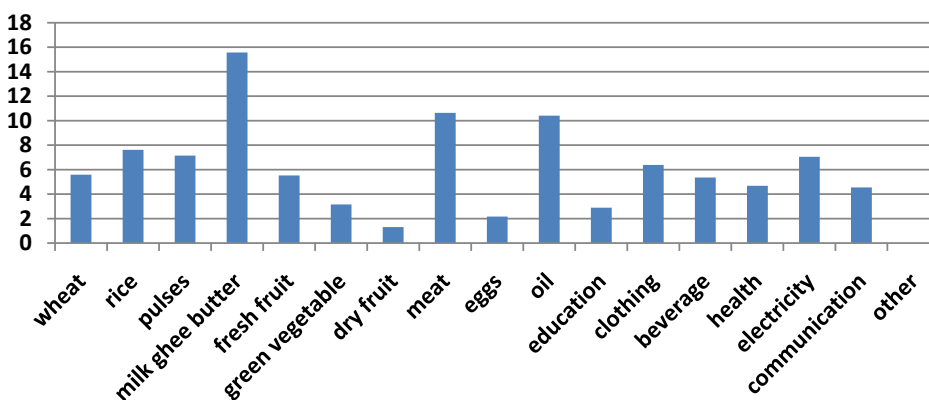


Figure 6: Consumption pattern of non durables (food and clothing items).

population is not satisfied at all because of the following reasons: i. The quality of works is not good (25%). ii. The selection of beneficiaries is not fair (25%). iii. The sanction amount is not available in time (25%). iv. 100% of the studied household is satisfied with the PDS, from which they used to buy rice, wheat, pulses, edible oil, kerosene, salt, sugar and other commodities. Household purchases these quantities in Table 6.

### Environment

According to the study 8 people out of 8 thought that there is environment degradation in the following ways i.e decrease in fertility (62.5%), lowering of water level (12.5%), weeds infestation (0%), increase in air pollution (0%), increase in water pollution (12.5%), deforestation (12.5%), increasing frequency of landslides (0%), other (0%). Due to the following reasons increase in population (12.5%), excessive use of fertilizer (50%), excessive use of spray/insecticides (0%), growing of commercial crop (12.5%), increase in income of people (0%), increase in the number of vehicles (0%), other (50%).

### Education

If literacy rates are indicators of human development, then Himachal Pradesh ranks fifth among the States of India. Both the private and public sectors are present in the field of education in the State - though the presence of the private sector is largely confined to the urban areas. Two reasons that seem responsible for the low concentration of private sector education services in rural areas can be (i) low affordability of rural population in providing expensive education through private institutions to their wards, and (ii) the high cost involved in providing educational services in the rural areas of Himachal Pradesh may not

suit private players, who are normally profit-driven. The very fact that the availability of private services in the education sector in rural areas are low, leads to an increased responsibility of the State Government in taking education to the door steps of the people living in remote areas. The 'Universalization of Education' campaign of the State Government is an indication of the extent of State intervention in providing basic education to all children of school going age. Literacy figures of the State as a whole and also of the individual districts stand testimony to the Government's efforts in eliminating illiteracy.

### Conclusion

Out of the studied household the total population consisted of 45 persons in which 37.77% is male and 62.22% female. Further the age profile of the studied household shows that majority of females (39.22%) lies between the age group of 15 to 25 years and majority of male counterparts which is 17.65% lies between the age group of 40-50 years. The education pattern revealed that 40% of the household got education up to the secondary level, where 0% of total studied household have the technical knowledge.

The selected household about 42% of total population engaged in agriculture, occupation like govt. services and private services covered only 11.75% and 5.88% respectively. The studied population revealed that 9.92% of the total income is lying in the category of less than Rs. 50000. About 41.90% of the total income falls in the category of 1.5-2 lakhs with an average income of Rs. 37500 and 48.18% of the total income lie in the category of 3-3.5 lakhs with an average income of Rs. 43125.

The land inventory records of the study shows that the farmer of studied population having 2.875 bigha of an average land which further stated that the majority of farmers are marginal category. The major source of irrigation found kuhl. The cropping patters of studied area shows that wheat and rice are the two major crops which is generally adopted by the farmers for the production in a year. From analyzing the cropping pattern and its data we found 1.36 quintals is the productivity.

The input used in Table 6 for the crop paddy and crop wheat shows the average cost of different input variables (consumer durables, non-consumer durables) like seed, farm yard manure, fertilizer, male labor, female labor, children.

The expenditure pattern of the household shows that the major proportion of the income spent on food items like ghee, milk and

butter (15.57%), meat (10.64%), and oils (10.41%). All the households are fully satisfied with the functioning of the public distribution system as they are getting all the commodities regularly.

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