VIABLE ENTREPRENEURIAL TRADES OF WOMEN IN AGRICULTURE

M.L. Sharma
N.K. Sharma
K.R. Sharma
C.S. Vaidya

AGRO-ECONOMIC RESEARCH CENTRE HIMACHAL PRADESH UNIVERSITY SHIMLA-171005(INDIA)

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EXECUTIVE SUMMARY

Abstract

Women constitute nearly half of India's population and the contribution of this segment of population in the socio-economic development particularly in the rural areas has been vital. In fact from first to 5th plan, development of women has been treated as a subject of welfare and clubbed together with the welfare of other disadvantaged sections of the society. From 6th plan onward there has been shift in approach from welfare to development. Under this approach several efforts were initiated for reducing gender disparities and for improving socio-economic status of rural women. In this concern the year 2001 was declared as the women's empowerment year. Empowerment of women in agriculture may be envisaged in terms of up-gradation of awareness, knowledge, and skill based on local needs and resources. For this reduction of drudgery and entrepreneurial development must be conceived as integrated components. There are numerous entrepreneurial activities for such women in agriculture but the women hardly have knowledge of them and don't have requisite know-how required. Moreover, farm women, besides their usual chores of cooking and cleaning, fetching water and fuel wood, tending animals, spend considerable times on labour intensive, repetitive and drudgery prone manual farm work leaving them mentally and physically fatigued and no leisure. Keeping the need in view the Ministry of Agriculture Govt. of India assigned a study to Agro-Economic Research Centre, Shimla to conduct a study in Himachal Pradesh on viable entrepreneurial enterprises for women in agriculture under the guidelines of the institute of economic growth Delhi. In India this study was proposed by ICAR as ICAR has started women based participatory research and extension work through Krishi Vigyan Kendras (KVKs) functioning under Agricultural Universities and Himachal Pradesh is one among the selected States. The study is based on the primary data collected from 180 beneficiary and 180 non-beneficiaries women entrepreneurs from Bilaspur and Kangra districts of Himachal Pradesh. Dairy, beekeeping, vermi-composed, chips potato, diversification and fishery enterprises have been selected for the detailed study . The analysis revealed that in dairy the annual net returns were recorded Rs.7301 per cow and 8109 per buff aloe in the state. Similarly the net returns were rupees 98 (per colony) in beekeeping, rupees 2271 (per pit) in vermi-composed, rupees 20699 (per hectare) in chips potato, rupees 31834 (per hectare) in diversification and rupees 665 in fishery. Study reveals that standard deviation for total profits input-output actual cost in traditional enterprises is higher than the new enterprises which indicates profits in new enterprise are more uniformly distributed than the traditional enterprises like dairy, chips potato and diversification.

Objectives

i) To identify the viable entrepreneur trades for women in agriculture.

ii) To study the impact of these trades on the women beneficiaries in terms of income and their socio-economic conditions.

(iii) To asses the role of participation in activities.

(iv)` To understand the constraints faced and study the linkages and support system needed for enhancing the viability and feasibility of the trades.

Methodology

The study is based on the primary data collected from 180 trainees y and 180 non-trainees women entrepreneurs from Bilaspur and Kangra districts of Himachal Pradesh. Dairy, beekeeping, vermi-composed, chips potato, diversification and fishery enterprises have been selected for the detailed study. Multistage stratified random sampling technique was used in the selection of sample. The data was collected in well-designed pre-tested schedule through personal interview method. Reference period for the study is 2004-2005.

MAIN FINDINGS OF THE STUDY

Allocation of Time

In this study average time spent on various activities indicates that on an average entrepreneur remained busy in work for 11.60 hours in a day. Out of total work in a day the highest (2.36 hours) used to be spent on cooking followed by farm work (2.31 hours) ,enterprise work (1.39 hours) and family care (1.28 hours) . Rest of the work of the day allocated to fuel collection (0.60 hours) water carriage (0.37 hours), other household work (0.84hours) and income earning activity (0.15 hours) . Time

devoted for enterprise's work was highest in dairy 2.40 hours and lowest in fishery 0.52 hours in a day. In case of time spent on farm work it was highest (3.40 hours) in bee-keeping. The time devoted for family care varies between 0.98 hours to 1.48 hours among different enterprises. Except, dairy time spent on livestock was almost equal and vary between 1.40 to1.69 hours in a day. Time devoted for fuel collection was recorded highest in the enterprise of Chips- Potatoes 0.74 hours due to lack of forest area and comparatively higher population growth.

Contribution of Women in Household Income

The income generated by women is not restricted only to the enterprises they have adopted but have been instrumental in generating substantial income from farming and other activities. In this table it may be observed that out of total income of rupees 798227 the income earned by male accounted about 61 percent followed by farm income 34 percent , enterprise income 2.85 percent and female income of about one percent . The highest income of male may be due to the reason of employment in service sector especially in government jobs. Further study shows that diversification and beekeeping has shown high level of viability as compared to other enterprises this may be due to the reason of higher demand of the produce in the market. The reason behind low level of returns in chips potato was due to the reason of more requirement of family labour in different operations of cultivation.

Impact of Trade on Women Empowerment

Viable Enterprises

The study, on the basis of cost and return structure of different enterprises under consideration indicates that dairy, chips potato and diversification were the highly viable enterprises whereas, beekeeping, vermi-compost and fishery have not yet become more viable, may be due to the fact that these enterprises have been of recent origin and may take some more time to attain the status of high level of viability.

Compatible of Women's Aspiration

It has been observed that prior to their involvement in the enterprises; they were dependent on men folk for their financial and emotional requirements. In fact, women were deprived from their independence in carrying out various activities of daily life especially production activities. The intervention made by HPKVV, Palampur through Directorate of Extension has shown positive results and has met the women's aspirations. During the course of study it was observed that women have started feeling independent especially after receiving training either at KVKs or in village level training programmes. The women of trainees groups were of the opinion that by attending training on various aspects also helped them in getting the status in the society where they are able to interact on equal footing which has been the result of positive change in their mental attitude. This ultimately positively changed their family atmosphere.

Required Public Support to Women

Among major supports like finance, market, quality transport, space and material etc. it was demanded by the entrepreneurs that marketing especially in old enterprises i.e. dairy, chips potato and diversification required public support for ensuring remunerative prices to the producers and steps be taken so that higher level of market margin among traders are reduced. On the other hand the entrepreneurs of vermi-compost were demanding premium pricing for organic products for which no special arrangement for certification and hence higher prices has been made. The entrepreneurs of fishery and beekeeping needed support for ensuring the easy and cheap availability of credit as these enterprises required higher level of initial investment for starting these enterprises. The produce of all the studied enterprises has established its quality in various markets of northern India. There has been observed no need for public support in case of transport and material etc.

Need For Training Programmes

Though number of training programmes has been introduced by KVKs but still there are certain enterprise like floriculture and cultivation of medicinal herbs and aromatic plants which required immediate attention for developing its cultivation. These enterprises proved very beneficial in hill farming therefore, training programme for these enterprises should be arranged as their cultivation can be profitably taken up even on small and marginal holdings. Some of the studies have indicated that these crops are comparatively more profitable as compared with traditional cereal crops. These products have better demand in India and abroad in pharmaceutical and cosmetic industry and study area is the suitable region for the production of said crops. The training process adopted for enterprises under study are also required to be conducted in future with regularity so that the knowledge of respondents is refreshed and they are kept abreast with the latest production and marketing techniques. In case of non-trainees all were in view that they should not be deprived from the facility of training.

Need for General Education

General education is the necessary element for generating better understanding of the development programmes. In case of vermi-compost it became very tough initially to make understand and convince the women farmers about the need and importance of organic means of cultivation. The farmers in general and women in particular were not in favors of vermi-compost due to the fear of decrease in production which they thought would persist for 4 to 5 years.

It is due to general education provided by progressive farmer as well as scientists of KVK Kangra which convinced and motivated the female farmers for adoption of organic means of production for sustainable agriculture in the form of application of worms. It required a long period of 4 to 5 years for rejuvenating and regenerating the soil as a result of application of fertilizer and pesticides over a long period of time. Similarly general education in bee-keeping and fishery had also played a very important role in running these enterprises on the modern scientific

lines for ensuring the sustainable production and profits which is a primary motivating force. This clearly indicated the importance of formal and informal education aimed at women associated with these enterprises. Since, vermi-compost, beekeeping and fishery were the new enterprises hence, such efforts had to be intensified for realizing the desired results.

Role of Institutions

The structure of institution has been classified into government, banks, training agencies, panchayat, women organization and family it self which have different important roles to play. Prior to these training programmes, the women had to rely on information provided by organizations like Mahila Mandals, assisted and supported by State government through panchayats. This organization encourages women to sit together in the village and frame various plans for the welfare of the whole society. Such institutions have solved number of problems of different training institutions like KVKs and other State government institutions those are concerned with empowerment of women.

Household Income and Standard of Living

The old entrepreneurs under diversification, chips potato and dairy, enterprises, had significantly improved their standard of living. Many have constructed brick and cement houses and have been providing better education to their children. Further training in such old enterprises to women proved very effective in the sense that women started thinking about their deprived status and ways to improve it. Introduction of feed mixture to the milch animal and technological guidance for tending these animals have proved to be important aspects under training on various aspect concerning milch. Similarly, under diversification and chips potato, women have been able to operationalise their ideas of developing viable units which ultimately has positively affected their income and standard of living. There is another section of the society of women which has not been able to generate sufficient income from their new enterprises i.e. fishery, beekeeping and vermi-compost but they are sure that in coming time these

enterprises will definitely prove to be viable enterprises for which they have been putting their best efforts and also generating resources from non-farm sector.

Impact on Women Position

The introduction of training and subsequent involvement in carrying out the enterprise encouraged the women in such way that they started feeling boldness and activeness in daily life. This also helped in culculating the quality of leadership in them. The change helped in development of coordination among men and women. This synergic relationship helped in relaxing the burden and drudgery of both. The sense of co-operation has become a dominating force. The uplifting women from drudgery proved highly successful. There has been increase in their knowledge and they are ready and better equipped to face any challenge in professional and personal life. During the course of study majority of the women revealed that they keep each discussion during training in mind while performing any activity of their enterprises.

Non Farm Employment and Agriculture

Among women there was hardly any trend to generate non-farm income in the absence of industry and other avenues like construction activities. However, men have earning from service, pension and labour and assisting women for participation in their selected enterprises.

Conclusion

The system adopted by scientists of HPKVV, Palampur for introduction of enterprises as means of empowering women has clearly shown efficacy of training. The participation of scientist and women either at KVKs or in the farms was the practical approach involving lot of hard work for both the parties. The role of hard work in newly introduced enterprise especially of fishery has been recommended by the beneficiaries in all respect and was the example of proper co-ordination among scientists and respondents. Similarly, efforts of Mr. Amar Singh (representative farmer of KVK Kangra) for introducing vermi-compost is another example of hard

work and mutual understanding and trust. It would have been very difficult to introduce the enterprise of vermi-compost without the help of this farmer who has excellent knowledge of enterprise and local conditions. At present respondents enjoy desired co-operation from their family members. During the course of study it was observed that enterprise of fishery felt that government support for providing subsidy for construction of tanks and other development efforts, irrespective of castes, are not keeping pace with the efforts of institution and villagers. This mismatch in the efforts is proving to be a decelerating force for the development of the enterprise in the area. If such type of government support could be available then time will come, respondents felt, that there will be a good market for fish in study district which will be ably matched by the production. This is because of the fact that Himachal Pradesh is a hilly State and availability of water for fishing at different altitude/zones is very suitable for developing enterprise of various varieties in different agro-climatic zones of the State. In case of old units i.e. dairy, Chips potato and diversification, the respondents were putting very hard work may be due to the reason of higher returns as well as regular contact with respective KVKs. Government support in the field of marketing under provision of remunerative prices of their produce by breaking the monopoly of traders may prove very helpful in advancement of enterprises. In case of bee keeping lack of infrastructure in KVK has become the main hindrance in participation of scientists in the field which is directly affecting the fallow up as well as efficiency of scientists.

EXECUTIVE TABLE OF MAIN FINDINGS

Annual Production, Costs and Profits Associated with Different Enterprises for Women Entrepreneurs (2004-05)

Categories	Dairy	Bee Keeping	Vermi Compost	Chips-Potato	Diversifications	Fishery
1. Average scale of production (Kg.)	4225	25	1500	13900	10600	53.5
2. Total Costs involved (Rs.)						
i) Total cost actual (A)	4340	1119	189	47861	19164	1490
ii) Total cost imputed material and labour (B)	9510	242	876	9426	3315	105
iii) Total cost actual material and imputed labour (C)	8572	1361	1065	57287	22479	1595
iv) Total cost without resource overhead (D)	11534	759	2040	63842	36514	1125
3. Gross Returns (Rs.) (E)	20427	1459	4500	72975	69147	2570
4. Total profits gained (Rs.)						
i) Total profits imputed output actual cost (E-A)	16087	340	4311	25114	49983	1185
ii) Total profits imputed output imputed material labour cost (E-B)	10917	1217	3624	63549	65832	2675
iii) Total profits imputed output imputed labour cost (E-C)	11855	98	3435	15688	46668	1080
iv) Total profits imputed output resource overhead cost (E-D)	8893	700	2440	9133	32633	1550
Sample Size	60	60	60	60	60	60

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

CHAPTER 1

INTRODUCTION

Social welfare, social security and social justice for the weaker sections of society, is one of the hallmarks of the modern welfare State. In fact, the true nature of welfare democratic society is tested by the treatment meted out to the unfortunate sections of the community. In India, the need for providing adequate safeguards and social welfare services for the underprivileged and weaker sections such as scheduled castes and scheduled tribes, physically handicapped, old age men, women and economically weaker communities was felt, strongly, 1947. The decades, after Independence, have seen tremendous and historical changes in the status and the position of women in Indian society. In fact, in no period of history such revolutionary changes took place, as taking place today. But the change from a position of utter degradation of women in the nineteenth century to position of equality in the middle of the twentieth century is not a simple case of progress of women in the modern era. The women, however, in the pre Vedic age appear to have enjoyed a comparatively higher status than enjoyed by her sisters in the post-Vedic age.

On the whole, Hindu women held an honoured place during the early Vedic times. There was great respect and regard for women. However, in the Manusmriti we also find certain insertions that restrict her status. Women were considered to be carefully guarded objects. Manu wanted women to be under the surveillance of her father in her childhood, her husband in her youth and her sons on the death of her husband. He writes “A women should never think of independence from the father, the husband or the sons because by doing so she will make both the families contemptible”. As a wife, she was also supposed to worship her husband. Women does not appear to have exercised a controlling voice in the household matters,

which is what generally assumed to be her sphere of influence. Prabhu writes. "She is queen of her house, but does not deserve freedom and independence even in the family affairs. Although women took share in sacrifices, religious duties, as well as they attended great assemblies and State occasions, yet their role in socio-economic and political sphere was negligible.

Importance of the Study

India is mainly an agricultural country. The majority of the Indian workers are the agricultural labourers who constitute the major segment of the rural work force. Though a large number of women are found among these agricultural labourers contributing significantly to the rural economy but they have attracted the attention of the researchers only recently. Women constitute nearly half of India's population and the contribution of this segment of population in the socio-economic development particularly in the rural areas has been vital. There is no chance for the welfare of the world unless the condition of women is improved. According to FAO, in general, women are responsible for 50 per cent of all food production. Women are by and large involved in agricultural operations and in animal husbandry related tasks and can be seen working with men in scorching heat and chilled winter. Apart from these they work for household activities, which is exclusively the work of women and men rarely help, even when they are free from work. But this Statement has inverse relationship if both husband and wife are employed and drawing salary income. In such cases the household chores are shared by men, but to a limited extent. There is clear cut indication that financial independence is a major factor for improving social status of women not only in her own family but in society at large. This formed the basis for initiation of special programmes aimed at.

In Himachal Pradesh during the decade of 1991-2001, the population of the State has increased by 906,371 persons, accounting 6077248 persons and thus yielding a growth rate of 17.53 per cent as against 20.79 per cent of India's

population and ranks 21st position amongst all States. According to 2001 census sex wise distribution of population indicates that at overall level there are 50.81 per cent of male and 49.19 of per cent females in the State. From total of the State 90.20 per cent belongs to rural area and rest to urban areas. In total rural population, 50.27 per cent are males and 49.73 per cent females. However, in urban area the percentage ratio of male is higher when compared to rural areas. The higher gap of males as compared to female in urban area may be due to the reason of migration of male from rural to urban areas for seeking employment where scope for employment remains higher.

The data generated by population census of 2001 has been used to analyze the work force under different heads. The work has been defined as participation in any economically productive activity. Such participation may be physical or mental in nature. In 2001 census main workers comprise of cultivators, agricultural laborers, those involved in household industries and other workers such as factory workers, plantation workers, those in trade and commerce, business, transport, mining, construction and all government servants, municipal employees etc. such type of workers accounts 32 per cent of the total population out of which 22 per cent are males and 10 per cent are females. To facilitate the estimation of under employed persons, other category of workers viz. marginal workers have also been introduced. This category consists persons who have worked in any of the above occupation for less than 183 days or six months. This section of workers accounts 17 per cent of the total population. This percentage further divided into male and female workers which accounts 6 and 16 per cent respectively and remaining 23 percent of male and 28 per cent of female are non-workers i.e. students, dependents retired persons, beggars, those involved in household duties, etc.

In case of size of holdings the distribution of number and area of holdings in different classes indicates that 63.8 per cent of the holdings are marginal and 20 per cent are small in the State. This decline in the size of holdings is due to the fact that

individual farming or the system of peasant proprietorship connotes a system of farming in which the tiller of the soil is the owner of the land under cultivation and the different activities of agriculture are undertaken with the participation and cooperation of the members of the household. Under this system the cultivator has direct relationship with the State and he himself pays the land revenue. He undertakes the production, sale etc. independently. Consequently, with tiny and uneconomic holdings mechanization is not possible and furthers the sub-division and fragmentation of holdings leads to waste of land, labour and capital resources of the mass of tillers of the soil (Grovil and Tripathi 1996). Hence, suitable planning specially based on new technology is the need of the time. It is believed that knowledge brings desirable changes in human behaviour. This behaviour change may be in people's attitude, belief, skill, understanding and perception, but the transfer of technology is the most important need for any type of change to be brought about in individual's mind. For the farmer, agricultural knowledge transfer which is influenced by so many factors is important for his understanding and behaviour in various farming practices. Technology has no use unless it is accepted and adopted by the people. In any programme of rural development, the strategy should not only strive to transfer technology to increase agricultural production, but also ensure the all round development with proper planning (Gill, Dhaliwal and Hansra 1993).

In fact from first to 5th plan, development of women has been treated as a subject of welfare and clubbed together with the welfare of other disadvantaged sections of the society. From 6th plan onward there has been shift in approach from welfare to development.

The difference between welfare and development has shown in self-explanatory Table 1.1. Reflection of the table indicates that development aims at building up the capacity and potential of the people concern. This involves participatory ways based on realities, resources, local needs, culture, inherent skills and looks at long term effects of its intervention.

Table1.1: Difference between Welfare and Development

Factors/issues	**Welfare**	**Development**
General Effect	More obvious, hence better known and understood	Subtle & hence less known & understood
Beneficiaries	• Passive receivers • Remain dependent • Do not influence programme decision and design • Do not own the programmes	Active participants Grow to be independent & self-reliant Continuously influence programme decision & design with interaction and feed back Develop sense of ownership over a period
Activity with beneficiary	Often one time	Persistent and continuous
Nature	Static Rigid Isolated programme	Dynamic & Vibrant Flexible Usually integrated & holistic programme
Initially	Easy	Difficult
Later	Remains one sided	Becomes easier with people's involvement
Orientation	Result orientated	Process oriented
Involvement of beneficiaries in the process of activity	Nil	Each step with beneficiaries is important Result is in the serial growth of process
Capacity building	Nil	As per need & potential of beneficiaries
Time	- Short term objectives - Usually only immediate help is provided	Long term goals & impact Slow & steady facilitation provided at the pace of beneficiary
Influence and spread by beneficiaries	None	Beneficiaries as they change became partners in development and often change agents.
Sustainability	Remains dependent	Sustainable as people grow & develop their capacity & unfold potential

Source: Chinmaya rural Primary Health & Care and Training Centre Sidhbari, Dharmasala, Kangra, H.P.

Need of the Study

Under the new approach several efforts were initiated for reducing gender disparities and for improving socio-economic status of rural women. Among other things, these involved encouraging and helping rural women to take up viable vocation, which would elevate their economic status leading to improved recognition of women in the society. The development programmes started in the sixth plan and

continued in the 7th plan. A significant step in this direction has been to identify and promote "various schemes" which extends direct benefits to women. Henceforth the thrust of plans has been on generation of skilled employment through proper education and vocational training. In this concern the year 2001 was declared as the women's empowerment year and India has already adopted National Policy for empowerment of women. During 9th five year plan a special women component element was introduced under which more than 30 per cent of the funds in women related sectors were specifically earmarked for women's programmes. All these provisions for the development of women society became the need of the time because of the reasons that women's role in agriculture and food security confirms that they need to be empowered. Empowerment of women in agriculture may be envisaged in terms of up-gradation of awareness, knowledge, and skill based on local needs and resources. For this reduction of drudgery and entrepreneurial development must be conceived as integrated components. There are numerous entrepreneurial activities for such women in agriculture but the women hardly have knowledge of them and don't have requisite know-how required. Moreover, farm women, besides their usual chores of cooking and cleaning, fetching water and fuel wood, tending animals, spend considerable times on labour intensive, repetitive and drudgery prone manual farm work leaving them mentally and physically fatigued and no leisure. Yet Agri.-based entrepreneurial activities could make substantial contribution in enhancing family incomes and their own socio-economic position. In this concern number of institutions in the country are working in the field of women oriented trades and providing adequate training which is absolutely necessary to impart knowledge of the possibilities and skills for pursuing viable entrepreneurial enterprise.

Keeping the need in view the Ministry of Agriculture Govt. of India assigned a study to Agro-Economic Research Centre, Shimla to work out the viable entrepreneurial enterprises for women in agriculture under the guidelines of the institute of economic growth Delhi. In fact, this study was proposed by ICAR and ICAR has already started women based participatory research and extension work

through Krishi Vigyan Kendras (KVKs) functioning under Agricultural University Palampur, Himachal Pradesh.

Though several institutions have been involved in imparting training and in helping women to take up viable trades, ICAR is one of leading institutions in this respect. Therefore, for working out impact of the programme the study under take the following objectives.

Objectives

i) To identify the viable entrepreneur trades for women in agriculture.

ii) To study the impact of these trades on the women beneficiaries in terms of income and their socio-economic conditions.

(iii) To asses the role of participation in activities.

(iv) To understand the constraints faced and study the linkages and support system needed for enhancing the viability and feasibility of the trades.

CHAPTER 2

GENERAL OVERVIEW OF THE AREA SURVEYED

About the State

Himachal Pradesh was born in April 1948 as a part C State of the Indian Union with the merger of 30 Punjab and Shimla Hill States into the Union. The then Himachal Pradesh covered an area of 2,117 thousand hectares divided into four districts, namely, Chamba, Mahasu, Mandi and Sirmour. After about 6 years, the State of Bilaspur was also integrated and that formed the 5th district of the State. For administrative reasons, Kinnaur was carved out of the Mahasu district as a separate district in 1960. The reorganization of Punjab in 1966 doubled the area of Himachal Pradesh by the transfer of the districts of Kangra, Kullu, Lahaul-Spiti and Shimla along with a few more areas. Full Statehood was granted to Himachal Pradesh on 25.1.1971. Thereafter, in 1972, Hamirpur and Una were formed separate districts; Solan was also named as a separate district while the name of Mahasu district was dropped. Presently, the State comprises of 12 districts. The State forms part of western Himalayan region flanked by Jammu Kashmir on its northwest and Uttaranchal districts on its east.

Himachal Pradesh, spread over 65,673 square kilometers and with a population of 60.78 lakh (2001 census), is situated in the Western Himalayan region in northwest India. The State is bordered by Jammu-Kashmir in the North, Punjab in the west and southwest, Haryana in the south, Uttranchal in the southeast and Tibet (China) in the east. It is situated between 30 ^{0} 12' 40" to 33 ^{0} 12' 20" north latitude and 75^{0} 45' 55" to 79^{0} 04' 20" east longitude.

Directorate of Agriculture has divided the State into the following four agro-climatic zones on the basis of altitude, temperature, topography, rainfall and humidity: (a) Sub-mountain

Agro-Climatic Features & Agriculture in Himachal Pradesh

The Himachal Pradesh and Low Hills sub-Tropical Zone, (b) Mid hills Sub-Humid Zone, (c) High Hills Temperate Wet Zone, and (d) High Hills Temperate Dry Zone

Sub-Mountain and Low Hills Sub-Tropical Zone: The area in this zone is situated up to 650 meters above mean sea level with an average rainfall of 1000 mm. This zone is located in the Shiwalik belts of Himachal Pradesh and occupies approximately 25 per cent of the geographical area and 38 per cent of the cultivated area of the State. The population pressure is the highest in this zone. The main crops cultivated in this zone are wheat, paddy, maize, sugarcane, soyabean, pulses, oilseeds and barley. Citrus, mango and litchi are important fruit crops.

Mid Hills Sub-Humid Zone: The elevation of this zone varies from 651 meters to 1800 meters above mean sea level. The annual precipitation in this area varies from 1500 mm to 3000 mm, 70 per cent of which is received during monsoon season. This zone comprises 41 per cent of the total cultivated area. The texture of soils of this zone varies from loam to clay loam. These are deficient in nitrogen and phosphorus with poor water and nutrient holding capacity. Soils are acidic in reaction and respond to liming. Soil conservation and water management are the main problems in this zone. Although this zone receives the maximum rainfall, the agriculture still suffers from losses every now and then due to low water holding capacity of the soils and erratic distribution of rainfall. The main crops cultivated in this zone are wheat, paddy, maize, seed potato, pulses and oilseeds. Stone and citrus fruits also occupy considerable area. Forestry and pastures constitute an important component in this zone.

High Hills Temperate Wet Zone: The altitude of this zone ranges from 1801 meters to 2200 meters above mean sea level and covers 18.4 per cent of the total cropped area of the State. The soils are shallow in depth, acidic in reaction and silt

loam to loam in texture. The soils are deficient in nitrogen and phosphorus. Terraced farming is practiced in this zone. The main crops are wheat, maize, paddy, barley, pulses and oilseeds. Mostly rainfed farming is practiced. Soil erosion, low fertility and inadequate water management are the main problems. The average rainfall is about 1000 mm, which is mainly received during monsoon months. This zone is suitable for raising off-season vegetables and seed production of temperate vegetables.

High Hills Temperate Dry Zone: The area in this zone is situated above 2201 meters above mean sea level. This zone remains covered with snow for nearly 5-6 months a year i.e. from December to April. The rainfall is very low (about 25 cm) and the temperature remains low throughout the year. The soils are sandy loam in texture and neutral to alkaline in reaction and low in fertility. Practically no crop can be raised without irrigation. Gravitational channels (*kuhls*) are the only source of irrigation in this zone. The soil erosion and water management are the main problems in this zone. Potato, barley, wheat, buckwheat, peas, minor millets, temperate vegetables and dry fruits are the main crops.

Agriculture is by far the major occupation of the people of Himachal Pradesh as it provides direct employment to about three fourths of the total working population. The valley areas of the State are most suited for growing food-grains. Elsewhere, due to climatic conditions varying from sub-tropical to temperate, the agro-climatic conditions are suitable for growing a wide variety of cash crops such as temperate fruits, potatoes, vegetables, ginger, etc. Since the scope for extension of cultivation is limited, emphasis has to be laid on increased production by maximizing output per unit area available for cultivation.

Among the 12 districts of the Himachal State, Bilaspur and Kangra districts have been selected for the presented study. This chapter will be devoted for to study the demographic, agricultural and infrastructural growth in these two districts vis-à-vis State of Himachal Pradesh.

Population

According to 2001 census, the population of Himachal Pradesh was more than sixty lacs, which constitutes about 0.59 per cent of the total population of India (Table 2.1). Kangra is the most populated district of the State, comprising of about 22 per cent of the total population of the State whereas, it is only about 6 per cent in district Bilaspur. About 90 per cent of the population of the State resides in villages. Himachal Pradesh is dominated by Hindu community accounting 95.43 per cent followed by Muslims (1.97%), Budhists (1.25%), Sikhs (1.19%), Christians (0.13%),Jain (0.02) and others (0.02%). The concentration of Budhists is highest in district Kangra due to settlement of Tibtian refugees in Western Himalayan, region and district Kangra is closely attached to the foot hill boundary of Himalaya where colonies have been constructed to these refugees. The populations of these tribals constitute 3.51 per cent of the State population. As per categorization of castes nearly 15.42 per cent of the State population belonged to schedule caste (Table 2.1). The sex ratio may be observed highest 1025 in Kangra district as compared to Bilaspur and State as a whole. Further table reveals that about 12.22 lacs of the households in Himachal Pradesh are living in 111 tehsils and sub-tehsils scattered into 69 blocks of the State.

Table 2.1: Population in the selected districts in Himachal Pradesh

(Percentages)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Total Population (No.)	340885 (5.61)	1339030 (22.03)	6077900 (100.00)
Rural	93.56	94.60	90.20
Urban	6.44	5.40	9.80
Hindu	97.33	97.20	95.43
Sikh	0.79	0.64	1.19
Muslims	1.74	1.19	1.97
Christians	0.02	0.16	0.13
Budhist	0.06	0.79	1.25
Jain	-	0.01	0.02
Others	0.03	-	0.01
Religion not Stated	0.03	0.01	0.01
Schedule Tribe	2.29	0.11	3.51
Scheduled Caste	21.38	17.91	15.42
Sex-ratio	990	1025	968
Population density per sq. km.	292	233	109
No. of households (lakh)	65750	272487	1221589
No. of Tehsils	3	14	75
No. of Sub-Tehsils	1	5	36
No. of Blocks	3	12	69

Source: Statistical outline of Himachal Pradesh 2003-04

Net Irrigated Area

In Himachal Pradesh irrigation conditions are very poor due to topography of the State which divided into low, mid and high hills where scope to harvest water required huge investment. In the table 2.2 it may be observed that out of total net irrigated area (2263 thousand hectare) about 84.38 per cent use to be irrigated

though *kuhls*. In foot hills there are scope to make use of the source of tube wells. At present majority of the *kuhls* of Himachal Pradesh are not in working position due to huge investment required far maintenance of the channels.

Table 2:2: Net Irrigated Area in the Selected Districts in Himachal Pradesh

(000' hectares)

Source	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Kuhls	2291 (72.4)	52160 (94.52)	105898 (84.38)
Tube wells & Wells	-	-	13674 (10.89)
Lift Irrigation	759 (23.99)	-	5672 (4.52)
Tank	-	-	262 (0.21)
Wells	114 (3.60)	3023 (5.48)	-
Others	-	-	-
Total	3164 (100.00)	55183 (100.00)	125506 (100.00)
Net Area Irrigated By (in ha.)	10.47	46.75	2263

Source: Directorate of Land Records, Annual Season and Crop Report, H.P. 2000-01.

Rainfall

Monthly average rainfall presented in table 2.3 reveals that October to February are the dry months when rainfall vary between 0 to 4.8 millimeters. Rainfall started increasing from March and remained stagnant or below 20 millimeters up to May. June, July, August are the only months when rainfall vary between 181 to 285.5 millimeters.

Table2.3: Monthly Average Rainfall (in MM) in the Selected Districts of Himachal Pradesh during 2001

Months	Districts		Himachal Pradesh
	Bilaspur	Kangra	
January	12.0	15.3	4.1
February	4.0	12.7	4.8
March	66.4	34.1	19.6
April	52.9	53.5	14.8
May	55.8	47.0	17.2
June	150.3	232.0	227.4
July	278.8	362.5	285.5
August	178.0	373.0	181.0
September	56.9	79.2	54.4
October	-	-	-
November	-	5.6	1.1
December	-	0.4	1.0
Total	855.1	1215.3	810.9

Source: Directorate of Land Records, Annual Season & Crop Report 2000-01.

Land Use Pattern

In table 2.4 it may be observed that out of 4542.8 thousand hectare of total area of the State only 12.20 per cent is net area sown and 24.05 per cent area was under forest. Due to hill topography there is very little scope to put more area under cultivation and it is because of this reason that percentage area under cultivation is low. Since both the study districts situated at foothills of the State hence, scope of cultivation are comparatively more hence, net area sown is comparatively higher when compared to State. Similar trend may be observed in cropping intensity.

Table 2 .4: Land Use Pattern in the Selected District in Himachal Pradesh

('000Hect.)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Total area (By village papers)	111.8 (100.0)	578.0 (100.0)	4542.8 (100.0)
Forests	12.9 (11.54)	232.1 (40.13)	1098.7 (24.17)
Net area sown	30.4 (27.19)	116.6 (20.17)	549.6 (12.10)
Cropping intensity (%)	192.05	184.15	170.84

Source: Directorate of Land Records, Annual Season & Crop Report 2000-01.

Category of Workers

In Table 2.5 the distribution of main and marginal of workers has been classified into cultivators, agricultural labourers and workers in household industry. In this table it may be observed that out of total main and marginal workers (2992461), 65 per cent have been categorized into cultivators, 3 percent agricultural labourers, 1.75 per cent workers in household industry and remaining 30 per cent as other workers. Among cultivators presence of female is comparatively higher (57.32%) in the State and similar pattern may be observed in both study districts (Table 3.6). However, in all other categories i.e. agricultural labourers, workers in household industry and other workers the presence of male remained higher in the State as well as in the study districts.

Regarding female work participation rate it is 49.20 per cent in the State which is slightly less 46.00 and 44 per cent in district Bilaspur and kangra respectively.

Table 2.5: Category of Workers in the Selected Districts in Himachal Pradesh

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Cultivators			
Male	44068 (38.57)	134574 (40.13)	834312 (42.68)
Female	70176 (61.43)	200783 (59.87)	1120558 (57.32)
Total	114244 (100.00)	335357 (100.00)	1954870 (100.00)
Agriculture labour			
Male	1792 (61.31)	23801 (60.20)	55658 (59.10)
Female	1131 (38.69)	15733 (39.80)	38513 (40.90)
Total	2923 (100.00)	39534 (100.00)	94171 (100.00)
Workers in household industry			
Male	2172 (79.65)	11538 (59.64)	34034 (64.80)
Female	555 (20.35)	7807 (40.36)	18185 (35.20)
Total	2727 (100.00)	19345 (100.00)	52519 (100.00)
Other workers			
Male	41393 (88.42)	165534 (84.99)	762654 (85.60)
Female	5421 (11.58)	29224 (15.01)	128247 (14.40)
Total	46814 (100.00)	194758 (100.00)	890901 (100.000
Total main workers & marginal workers			
Male	89425 (53.64)	335447 (56.95)	1686658 (56.36)
Female	77283 (46.38)	253547 (43.05)	1305803 (43.64)
Total	166708 (100.00)	588994 (100.00)	2992461 (100.00)
Female Work Participation Rate (%)	46.00	43.70	49.20

Note: Figures in parenthesis denote percentages to total.
Source: Census of India 2001, Himachal Pradesh.

Type of workers

Total workers have been classified into main and marginal workers in Table 2.6, which reveals that out of total workers 66 percent are the main and remaining 34 per cent belong to marginal workers. Among main workers 68 per cent are male and 32 to per cent are female but in case of marginal workers inverse relationship may be observed. About 50 per cent of the population has been categorized into non-workers. Among non-workers 55 per cent are female and 45 per cent are male. Similarly percentage of female is higher in study districts.

Table 2.6: Type of Workers in the Selected Districts in Himachal Pradesh

(Number)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Main Workers			
Male	69356 (62.68)	242236 (71.96)	1333361 (67.89)
Female	41296 (37.32)	94413 (28.04)	630521 (32.11)
Total	110652 (100.00)	336649 (100.00)	1963882 (100.00)
Marginal Workers			
Male	20069 (35.80)	93211 (36.94)	353297 (34.35)
Female	35987 (64.20)	159134 (63.06)	675282 (65.65)
Total	56056 (100.00)	252345 (100.00)	1028579 (100.00)
Non Workers			
Male	81838 (47.00)	325807 (43.44)	1401282 (45.42)
Female	92339 (53.00)	424229 (56.56)	1684157 (54.58)
Total	174177 (100.00)	750036 (100.00)	3085439 (100.00)
Main workers %age to total workers	34.3	25.1	32.3

Note: Figures in parenthesis denote percentage to total.
Source: Census of India 2001, Himachal Pradesh

Cropping Pattern

Cropping pattern of the districts under study is presented in Table 2.7. The table indicates that in Himachal Pradesh 851434 thousand hectares is the gross cropped area and it is about 56909 and 197492 thousand hectares in district Bilaspur and Kangra respectively. Further table reveals that out of total gross cropped area 92 per cent belong to cereal crops i.e. maize wheat and rice. The share of pulses and vegetables in cross cropped area is very low i.e. 3.66 and 3.98 percent respectively.

Table 2.7: Cropping Pattern in the Selected Districts in Himachal Pradesh

(Percent to GCA)

Crops	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Maize	46.69	29.27	35.00
Wheat	48.47	46.14	37.90
Rice	3.26	19.41	9.57
Others	0.11	1.70	9.56
Total Cereals	98.53	96.52	92.03
Total Pulses	0.66	2.16	3.66
Sugar Cane	0.08	0.21	0.33
Total Vegetable	0.73	1.11	3.98
Gross cropped area (thousand ha.)	56909 (100.00)	197492 (100.00)	851434 (100.00)

Source: Directorate of Land Records, Annual Season & Crop Report 2000-01.

Literacy Rate

The literacy rate by sex in selected districts presented in table 3.9.reveals that in Himachal Pradesh 76.5 per cent of the population is literate among which male and female constitutes 85 and 67 per cent respectively (Table2.8). This indicates that female is also competing well with male for achieving education in the society.

This gap may be observed more close in Kangra district as compared to Bilaspur and Himachal Pradesh.

Table 2.8: Literacy Rate by Sex in the Selected Districts in Himachal Pradesh

(Per cent)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Male	86.0	87.5	85.3
Female	69.5	73.0	67.4
Total	77.8	80.1	76.5

Source: Census of India, 2001.

Road Length

In hilly State of Himachal Pradesh the construction of roads is difficult task and costly but even then availability of roads have shown better response. At overall level the total length of road is 27805 km. in the State. About 76 per cent of these roads categorized into provincial highways whereas, share of national highway is 2336 km in the State. In study region the total length of road is 1264 and 4612 kms. in Bilaspur and Kangra district respectively (Table2.9)

Table 2.9: Road Length (in Kms) Maintained by PWD in the Selected Districts in Himachal Pradesh

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
National highways	124 (9.81)	468 (10.15)	2336 (8.40)
Provincial highways	1087 (86.00)	3958 (85.82)	21100 (75.89)
Zeepable	-	22 (0.47)	598 (2.15)
Less than zeepable	53 (4.19)	164 (3.56)	3771 (13.56)
Total Roads	1264 (100.00)	4612 (100.00)	27805 (100.00)

Note: Figures in parenthesis are the percentage to total.
Source: Public Works Department, H.P.

Post Office & Telephone Facility

The infrastructure related with communication is presented in Table 2.10. In this table it may be observed that there are 57.07 telephone connections in per thousand of population in the State, which has shown positive sign of prosperity. In case of post offices these are 0.46 per thousand in the State whereas, the number of telegraph offices are 0.24 only. Almost similar range of telephone connections, post offices and telegraph offices may be seen in the study districts.

Table 2.10: Number of Post Offices and Telephone Exchange in the Selected Districts in Himachal Pradesh

(Per 000' population)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
No. of telephone exchanges	40 (0.12)	109 (0.08)	777 (0.13)
No. of telephone connections	16081 (47.17)	66355 (47.74)	346891 (57.07)
No. of post offices	145 (0.43)	651 (0.49)	2777 (0.46)
No. of telegraph offices	107 (0.31)	326 (0.24)	1440 (0.24)

Source: I. Chief General Manager Telecommunications Shimla.
II. Post Master General H.P. Circle Shimla.

Education

The number of recognized schools is presented in Table 2.11 which indicates that there are 1.75 primary school for one thousand of population followed by senior secondary 0.32, middle school 0.29 and high schools 0.01 in the State. The distribution of these institutions in study districts has shown almost similar trend in study districts.

Table 2.11: Number of Recognized Schools in the Selected Districts in Himachal Pradesh

(Per 000' population)

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Primary Basic Schools	1.73	1.34	1.75
Middle/Senior Basic Schools	0.26	0.24	0.29
High/Post Basic Schools	0.01	0.01	0.01
Senior Secondary Schools	0.31	0.34	0.32

Source: Directorate of Primary & Secondary Education, H.P.

Enrollment of women

Enrollment of women in various institutions indicates in Table 2.12 that at overall level 710.4 thousand women enrolled in the various standards of education and out of these 46.12, 26.96, 22.19 and 4.73 per cent are studying in primary, middle, high/higher secondary and higher education respectively. Further table reflects that district Kangra has shown higher progress in education where enrollment percentage of Sr. Sec. School is 25.83 percent.

Table 2.12: Enrollment of Women for Higher Education in the Selected Districts in Himachal Pradesh

(Percent to total enrollment)

Programme	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Primary ('000 Nos)	17.20 (43.24)	63.88 (41.18)	327.67 (46.12)
Middle ('000 Nos)	11.60 (29.16)	43.63 (28.12)	191.54 (26.96)
High/ Sr. Sec. School ('000 Nos)	9.22 (23.18)	40.07 (25.83)	157.68 (22.19)
Higher Education	1.76 (4.42)	7.55 (4.87)	33.56 (4.73)
Total	39.78	155.13	710.45

Source: Directorate of Primary & Secondary Education, H.P.

Electricity

Generation, sale and purchase of electricity has been presented in Table 2.13, wherein it may be seen that installed capacity of electricity increased from 299.3 MW to 326.3 MW from 1997-98 to 2002-03. During 2002-2003 out of total electricity (4144.1 million units) the State could be able to generate 38.82 per cent whereas 69.18 per cent purchased from out side. In this table it may be observed that generation has shown decreasing trend even in the face of increasing installed capacity. This may be due to the reason of low availability of water in hydel projects of the State and other unfavorable circumstances like floods in rivers which create silt problems in the plants of the state

Table 2. 13: Generation, Sale and Purchase of Electricity in Himachal Pradesh

(In million units)

Year	Installed Capacity (MW)	Total generation in State	Outside Purchase	Total Electricity	Sale out side the State
1997-98	299.3	1306.0 (40.15)	1946.5 (59.85)	3252.5 (100.0)	954.2 (73.06)
1998-99	299.3	1484.5 (40.92)	2143.0 (59.08)	3627.5 (100.0)	713.3 (48.05)
1999-00	301.3	1201.3 (32.28)	2520.1 (67.72)	3721.4 (100.0)	682.0 (56.77)
2000-01	326.3	1153.3 (31.23)	2539.3 (68.77)	3692.6 (100.0)	615.6 (53.38)
2001-02	326.3	1149.5 (30.24)	2651.5 (69.76)	3801.0 (100.0)	548.8 (47.74)
2002-03	326.3	1277.3 (38.82)	2866.8 (69.18)	4144.1 (100.0)	688.0 (53.86)

Note: Figures in parenthesis are the percentages to respective totals.
Source: State Electricity Board, H.P.

Consumption of Electricity

In case of consumption of electricity the detail of consumption on domestic, commercial, industry, street light, agriculture and irrigation and other purpose has been presented in Table 2.14. In this table it may be seen that the overall consumption has increased from 1946-5 million kwh in 1997-98 to 2516-5 kwh in 2002-2003. The domestic consumption increased from 474.4 million kwh in 1997-98 to 712.9 million kwh in 2002-2003. Further table shows that consumption of electricity in agriculture and irrigation along with domestic consumption has shown highest increase. The percentage villages electrified presented in Table 2.15 reveals that at overall level 99.32 per cent of the villages are electrified in the State and this percentage increases to 100 per cent in the study districts.

Table 2.14: Consumption of Electricity in Himachal Pradesh

(In million kWh)

Year	Domestic	Commercial	Industrial	Street Light	Agriculture & Irrigation	Others	Total
1997-98	474.4	134.9	1182.5	6.0	10.5	138.2	1946.5
	(24.37)	(6.93)	(60.75)	(0.31)	(0.54)	(7.10)	(100.0)
1998-99	537.7	139.8	1249.3	6.7	12.0	137.9	2083.4
	(25.81)	(6.71)	(59.96)	(0.32)	(0.58)	(6.62)	(100.0)
1999-00	594.5	148.9	1295.4	7.9	16.5	118.5	2181.7
	(27.25)	(6.82)	(59.38)	(0.36)	(0.76)	(5.43)	(100.0)
2000-01	636.5	161.6	1277.2	8.4	19.2	102.9	2205.8
	(28.86)	(7.33)	(57.90)	(0.38)	(0.87)	(4.66)	(100.0)
2001-02	664.4	175.0	1324.8	9.1	18.0	140.5	2331.8
	(28.49)	(7.50)	(56.81)	(0.39)	(0.77)	(6.04)	(100.0)
2002-03	712.9	187.7	1452.6	9.6	20.4	133.3	2516.5
	(28.33)	(7.46)	(57.72)	(0.38)	(0.81)	(5.30)	(100.0)

Source: State Electricity Board, H.P.

Table 2.15: Number of Electrified Villages

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Total No. of Villages	950	3620	16997
Per cent of Villages Electrified	99.89	99.97	99.32

Source: Statistical Abstract of Himachal Pradesh, 2002-03.

Banking

The number of banks per thousand of population has been presented in Table 2.16. In this table it may be seen that in Himachal Pradesh there are 0.17 banks for per thousand of population out which 0.13 are commercial banks. Similar trend may also be observed in study districts.

Table 2.16: Number of Banks in the Selected Districts in Himachal Pradesh

(Per thousand populations)

Banks	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Commercial Banks	43 (0.13)	152 (0.11)	786 (0.13)
Cooperative Banks	23 (0.06)	77 (0.06)	235 (0.04)
Total	66 (0.19)	229 (0.17)	1021 (0.17)

Source: R.B.I. Handout December1998 to December 2002.

Panchayats

The number of panchayats and women participation as members in these panchayats has been presented in Table 3.18. The table reveals that 19411 members of panchayats were elected in 3243 panchayat and out of these 38.47 percent belong to women candidates (2.17). In case of percentage of women elected for *surpanches* accounted 34.20 per cent in the State. Percentage of

women elected as *surpanches* and women elected as panchayat members in district Kangra has shown high percentage as compared to Bilaspur.

Table 2.17: Number of Panchayats and Women Participation in the Selected Districts in Himachal Pradesh

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
No, of Panchayats	151	760	3243
Per cent women Sarpanches elected	33.77	35.39	34.20
Total No. of member elected	1011	4554	19411
Per cent women member elected	33.92	40.07	38.47

Source: Rural Development and Panchayati Raj, H.P.

Livestock

Livestock play an important role in sustaining agricultural production and providing organic manure for agricultural production. At the same time livestock provide self-employment both for men and woman in the family. Availability of cash income from the sale of milk and other livestock products not only helps in improving animal based productions through purchase of required feed and other inputs but also help in improving crop production through purchase of inputs like fertilizer and seed etc. At present about 90 per cent households maintain livestock to meet their domestic as well as commercial needs.

The number of livestock classified into cattle, buffaloes, sheep, goats and other livestock. Livestock profile in Himachal Pradesh indicates in Table 3.18 that there are 5262704 animals out of which 41 per cent are cattle, 13 per cent buffaloes, 20 per cent sheep and 21 per cent are goats. The remaining 5 per cent are other animals like horse, ponies, mules, donkeys, camels, pigs, yak and dogs. In case of poultry it is given separately in the table and total number is 721849 in the State. Further Table 3.18 reveals that above discussed livestock is also available in the study districts.

Table 2.18: Number of Livestock and Poultry

District	Cattle					Buffaloes			Sheep	Goats	Horse & Ponies
	Cross Bred		Indigenous		Total Cattle	Male	Female	Total			
	Bulls	Cows	Bulls	Cows							
Bilaspur	3972	4255	44413	8319	60959	3186	84167	87353	24640	63071	166
Kangra	18202	44977	198036	138183	399398	10033	137825	147858	154590	206039	4956
H. P.	84819	195574	991224	893417	2165034	33250	670299	703549	1078940	1118094	14055

Contd…

Table 2.18: Number of Livestock and Poultry

Districts	Other Livestock								Poultry
	Mules	Donkeys	Camels	Pigs	Yaks	Dogs	Others	Total Livestock	
Bilaspur	491	320	41	297	0	8832	0	246170	59174
Kangra	3684	314	86	1543	0	32466	0	950934	281585
H.P.	16390	7447	442	7286	5690	145771	6	5262704	721849

Source: Directorate of Land Records, H.P.

Medical

Number of allopathic medical institutions and patient treated has been discussed in Table 2.19 in which it may be seen that 635 medical institutions are in operation in the State. Among these institutions 70 per cent are the Primary Health Centre followed by hospitals including private (14%), community health centers (10 per cent), and dispensaries (6%) in the State. In these institutions the provision of beds available for treatment accounted 10087 in the State. The number of these beds was 385 in district Bilaspur and 1753 in Kangra.

Table 2.19: Number of Medical Institutions

Medical Institutions	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Hospitals*	2	11	89
Dispensaries*	1	3	39
CHC/RH	5	13	66
PHC s	28	78	441
Total	36	105	635
Beds Available	385	1753	10087

Source: Directorate of Health Services, H.P.
**Including Private Hospitals, Cantonment Board Voluntary organizations, Mission Hospitals*

Ayurvedic Institutions

The number of Ayurvedic Hospitals and beds available mentioned in Table 2.20 reveals that out of total (1135) Ayurvedic medical institution in the State 98 per cent are the dispensaries and 2 per cent hospital. Ayurvedic dispensaries in villages are operating in large scale in the State as well as study districts

Table 2.20: Number of Ayurvedic Hospitals, Beds Available & Patients Treated

Particulars	Districts		Himachal Pradesh
	Bilaspur	Kangra	
Hospitals	2	4	23
Dispensaries	64	224	1112
Doctors	63	24	995
Nurses	3	17	51
Beds Available	61	168	724
Patients Treated (Nos)	411459	1039530	4526237

Source: Directorate of Ayurvedic, H.P.
**Including Private Hospitals, Cantonment Board Voluntary organizations, Mission Hospitals*

Agents of Development

Role of NGO

District Kangra of Himachal Pradesh also famous in the name of Kangra valley situated in low hill zone of the State. Due to marginalization of farms, higher pressure of population and low level of diversification towards cash crops as compared to other districts of the State, this valley remained economically unviable as compared to mid and high hill zone of the State (Vaidya 1991, Sharma 1998)). In such a scenario the demand for emergency credit is regularly increasing. Perhaps, entrance of NGO in the field of welfare to development of rural poor has shown a change from traditional financing system to new generation financial institution system through micro-financing to SHGs. The process of formation of these groups further linked with formal institutions like rural and other banks to whom NABARD is regularly providing financial assistance.

In fact, the status of women in the district is confined only up to household work as well as crop cultivation at their tiny and unviable holdings. Whereas, women have to face maximum liabilities of household and due to lack of

minimum required income this section of the society remained isolated from the household development which resulted into poor health and discontentment among females. It is in the context the Director of the NGO (Dr. Kashma Matre) Cinmaya Rural Primary Health Care and training center Sidhbari Dharamsala HP. formed Mahila Mandals which later culminated into self-help groups. The meetings of Mahila Mandals were utilized as the platform for explaining the concept of SHGs. At present this institution has become the mother NGO of Himachal Pradesh under the guidelines of Chinmayes tapovan Trust Sidhwari at Dharamsala in district Kangra. Along with this other State department and Block Development Office is also operating and providing various development schemes to the Panchayats. At the same time department of IRDP is also providing regular assistance to small and marginal farmers of the study area. In case of Bilaspur district almost similar approach for rural development is in progress. In case of progress in workings of NGO it is not possible for them to establish without seeking help from Govt. Institutions.

Approach of Agriculture University and ICAR

Himachal Pradesh Krishi Vishvavidyalaya, Palampur (H.P.) came into existence on November 1, 1978. Before this, it has been a college of agriculture of Himachal Pradesh University since 1970 and earlier to this it was the hill campus of Punjab Agriculture University, Ludhiana since 1966. The Indian council of Agricultural Research during 1995 launched a project on Technology Assessment and refinement through institution Village Linkage Programme at 42 centres in the country and HPKVV, Palampur is one of them. It has three Regional Research Stations and 14 research sub-station. The Directorate of extension education of the university is directly involved in various extension programmes for transferring the agro-technologies in the field through Krishi Vigyan Kendras (KVKs). The university is running four colleges viz. college of Agriculture, collage of veterinary and animal sciences, college of home science

and college of basic sciences. The main thrust of the university is to generate technologies for hill agriculture.

India, although enjoyed green revolution yet it was mainly confined to irrigated tracks only without affecting the crop productivity and production in rainfed areas having complex, diverse and risk prone agriculture. This small production system needs to be exploited with respect to technology development as per the needs of the system for increased productivity and its sustainability.

This participatory research extension approach has proved very effective when tested under a project sponsored by ICAR, named Technology Assessment and Refinement Through Institution Village Linkage programme (IVLP). This project carried out a detailed investigation of major farm problems on participatory mode through problem – cause analysis their participation with respect is economic gains loss under existing micro-farming situations. This approach helped not only in refining the technology but also in building enthusiasm, confidence and research aptitude amongst the participating farming communities. Beside this ensured that scientists received a strong feed back which helped the researchers to modify their research programmes accordingly for better field response.

The greater diversity in hill farming makes it difficult for the participating farmers in general and for the involved scientists in particular to augment the proposed research extension programmes. However, a little effort can turn it into a success if the said approach is holistic in nature and fulfils the requirements of participating group for achieving the objectives and goals of the programme.

Himachal Pradesh Krishi Vishvavidyalya, Palampur is one of the 42 centres selected by the Indian Council of Agricultural Research, New Delhi for operating this project on technology assessment and refinement through institution village linkage programme (IVLP) in hill and mountainous agro-eco region of Himachal Pradesh with the following objectives:

1. To generate technology options with emphasis on stability and sustainability along with productivity in complex diverse risk prone small production system.

2. To generate technologies for maintaining high productivity with profitability and ecological sustainability of production system in well endowed and commercial farm production systems.

3. To facilitate adoption of appropriate post-harvest technologies for conservation and on farm value addition of agricultural products, by product and waste for great economic dividend and national priorities.

4. To facilitate adoption of appropriate gender sensitive technologies for removal of drudgery, increased efficiency and higher in one.

5. To monitor socio-economic impact of the technological interventions in different farming conditions.

6. To identify extrapolation domains for new technologies/technology modules based on environmental characterization at meso and mega levels.

CHAPTER 3

METHODOLOGY AND PROFILE OF HOUSEHOLDS OF WOMEN ENTREPRENEURS

The heterogeneous character of Indian economy and the uneven rates of development have had varying degrees of impact on the different segments of the labour force. Therefore. the situation in general. Would not justify aggregation into a single dimensional magnitude. The different segments need to be estimated separately. Taking into account such important characteristics as region (state), sex, age, rural or urban residence, status or class of workers and educational attainments. If any evaluation of women economic role is to be meaningful, it has to take into account the socio-economic status of different women entrepreneurs engaged in different enterprises. The present chapter highlights the main enterprises for farm women in the region, sample design used for selection of women entrepreneurs. This chapter will also include the basic characteristics of the sample household i.e. social class, religion, crop activity and income etc.

Main Enterprises in the Area

During seventies Block Development Officers, along-with Agricultural and Horticultural Development Officers of the State Government were responsible institutions for Agricultural development in Himachal Pradesh. It was the period when Green Revolution was in operation and for putting the revolution in sound footing Directorates of Agriculture and Horticulture of the State had taken over the charge to introduce green revolution at grass root level among rural villagers. During nineties the private agencies entered the scene and started providing

HYV seeds and marketing facilities to the growers, on the other hand declining financial allocations in State Govt. institutions forced diluted role of scientists

In the era of 21st century scientists, planners and other institutions like ICAR started thinking for employment generation within the villages through introduction of viable enterprise especially at the time when holding size has been decreased many folds. It was also envisaged to provide rural women opportunities in the farm of viable enterprise from where income may be generated.

In such a situation entrance of Krishi Vigyan Kendra (KVKs) in co-ordination with state agriculture departments in the field of provision of technology for different enterprises perhaps proved to be a new revolution in the rural economy. In this approach awareness among women through training etc. may prove a turning point for providing employment to half of the labour force of women. In this chapter role of scientists of Himachal Pradesh Krishi Vishva Vidyalaya (HPKVV) those are directly involved in selected activities and frame work of its institutions like KVKs have also been discussed.

In fact, women in Himachal Pradesh actively involved in both agriculture and non-agriculture based activities/ enterprises. However, scope for non-agricultural activities are very poor due to non-establishment of industries in hilly topography of Himachal Pradesh. Initially the list of coverage of different enterprises in the state in which women were actively involved was prepared from the Directorate of Extension Education of Himachal Pradesh Agriculture University Palampur and discussion with various resource persons and government officials concerned with women enterprises (table 3.1). Amongst the different agriculture based enterprise, a few were the most popular amongst the women in the state. These enterprises were self employment of rural through dry flower production, fish farming in hills, nutritional security through value addition of locally available fruit and vegetables, popularization of chips-potato and bio-agents for the management of insect pest in cereals and vegetable agriculture,

preparation and utilization of vermi-compost for sustainable agriculture, specialized training on bee keeping for pollination and honey production, diversification through vegetable cultivation, agro-techniques for nursery raising and cultivation of winter vegetables, adoption of mineral mixture and uromole bricks for improving productivity and health of milch animals and income generation from silk cocoon rearing (sericulture) through value addiction. In case of non-farm activities embroidery and stitching, pot making, preparation of detergents and soap, bakery and candle making were the most poplar activities/enterprises in the state.

Table:3.1 Different Enterprises Adopted by Women Entrepreneurs in Himachal

S.No.	Agriculture Based Enterprises	Non-agriculture Based Enterprises
1.	Self employment of rural through dry flower production.	Pot making
2.	Fish farming in hills.	Art and Craft
3.	Nutritional security through value addition of locally available fruits and vegetables.	Soft toy making
4.	Popularization of Chips-Potatoes and bio-agents for the management of insect pest in cereal and vegetable agriculture.	Preparation of detergents and soaps
5.	Preparation and utilization of vermi-compost for sustainable agriculture.	Bakery
6.	Specialized training on bee keeping for pollination and honey production.	Candle and chalk making
7.	Diversification through vegetable cultivation; agro-techniques for nursery raising and cultivation of winter vegetables.	Embroidery and stitching
8.	Preservation of food/fruit	
9.	Mushroom cultivation	
10.	Hybrid seed production	
11.	Storage of food-grains	
12.	Value addition to raw material (Wheat Flour)	
13.	Use of Medicinal plants for health purposes	
14.	Nursery raising (Poly houses)	
15.	Poultry farming	

Methodology

The present study based on the data /information collected through both the primary and secondary sources regarding the women entrepreneurial trades in agriculture. The micro level data were aimed at eliciting the information from the women entrepreneurs in the selected enterprises whereas the macro level data were based on different socio-economic aspects related to the whole state as were as the selected districts for the present study. More elaborately the secondary data of the agro-economic characteristics of the study on different aspects like demography, natural resources occupation pattern, agriculture, social, infrastructural and institutional developments were collected from the relevant sources. The primary information on different aspects like socio-economic characteristics, agriculture, empowerment, viability and constraints for various entrepreneurial trades for women in agriculture was collected through well designed questionnaire from the women entrepreneurs. The reference period for study was the year 2004-2005.

Sample Information

In this study initially list of women training moduls was gathered from the Directorate of Extension Education HPKVV, Palampur. Further discussions with scientists for selection of particular enterprises were made.. Finally, head of the institute of KVK Kangra Prof. Sant Prakash who has responsibility of motivation and popularization of women oriented trades in the State was consulted for final selection of the trades. As per these directions a list of entrepreneurs of selected trades i.e. dairy, beekeeping, vermi-compost, chips Potato, diversification and fishery prepared. Further multi stage random sampling technique was used and initially two leading districts of selected trades i.e. Bilaspur for dairy and Kangra for other trades were selected. In second stage higher concentration zones for

particular trade was chosen where different KVKs and other departments of state government had worked for women oriented trades. In third stage a cluster of villages of different groups of trainees and non trainees was made for detailed study. Lastly in these villages 30 women entrepreneur classified into 'With training' representing different size of farms (Table 1.1) and 30 those have not attended training and stated as 'Without Training' were conducted randomly for data collection. The criterion for selection of this cluster of villages was followed under progressiveness of particular trades in particular region from where technology awareness had been extended.

Table 3.2: Selection of the Sample Households, Himachal Pradesh, 2004-05

(Number)

Particulars	Entrepreneurs						
	Dairy	Bee Keeping	Vermi – compost	Chips Potato	Diversification	Fishery	Overall
With training	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	180 (50.00)
Without training	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	30 (50.00)	180 (50.00)
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Note: Figures in parenthesis are the percentages to the total.

Enterprises Information

Dairy

In study district, although farmers have started rearing cross bred cows but due lack of knowledge in feeding, health of milch cattle etc. could not be maintained, thus leading to poor productivity and infertility problems. With the inception of ATMA (Agricultural Technology management Agency), this issue was taken up for creating awareness. Regarding scientific management of dairy units in the district the efforts of the KVK Berthin and participation of entrepreneurs resulted in some positive development.

Introduction of technology provided by KVK berthin especially to group of women entrepreneurs meant to increase milk yield by supplementing feed with mineral mixture. At the same time knowledge about how to ensure regular heat in heifer and cows at regular intervals and successful conception and to maintain health of milch animals was achieved.

Bee Keeping

This enterprise is very successful in district Kangra. Honey produced in this particular patch is famous in India. This enterprise is very old and at present marketing of produce is either through producers society or through traders like 'Dabur'. The Bee Research Station Nagrota Bagwan established in 1936 under the department of Agriculture Punjab and now the part of HPKVV Palampur launched women oriented training programme under a project of ICAR for further development of the activity in surrounding areas. Some of the newly trained bee keepers have developed contacts with big growers and seek their help during migration. Majority of the new producers were selling produce to local consumers and also marketing to traders during migration.

Vermi Compost

At present under the guidance of KVK Kangra and departments of state agriculture the farmers have started this activity on a very small scale. The activity may flourish once the popularity of organic farm products increases. This calls for consumer awareness and publicity campaign. The raw material in the shape of worms were available in plenty with in the village, but the enterprise suffered from the initial decline in the productivity of crops for 4-5 years after which it is recouped.

Chips potato

Spring Potato is one of the major cash crops in Kangra district particularly in Nagrota and Bhawarna Developmfental Blocks.This Potato is suitable for chips making purpose and about 25,000 M. Tonnes is being produced annually and exported to neighboring States. Since, potato is perishable and could be stored in cold stores for longer period which generally happened in Azadpur market of Delhi. Though, such type of facility was not available to the growers but farmers like to store potato for a short period to take advantage of favourable prices. But the crop in the area is infested by potato tuber moth at the time of harvesting and storage. With the inception of ATMA in the district safe storage devices vise Bio-pesticides/pheromones traps were successfully introduced and popularized to tackle these burning issues. This attempt proved beneficial and prices of the product started rising for treated potato

Diversification

In district Kangra, brinjal used to be the main cash crop particularly in Kangra and Nagrota blocks of the district. But due to severe incidence of bacterial wilt in the past decade, crop totally failed and the farmers were disappointed. In this concern intervention and process made to revive abandoned cultivation of these crops through assessment of bacterial wilt varieties collected from HPKVV. Secondly the seedlings of disease resistant

varieties were made available to the women groups through poly house technology for early summer planting. In this way new brinjal based cropping patterns have been introduced successfully

Fishery

Himachal Pradesh is the hilly State and availability of water in the shape of rivers ponds, *nallas* etc. remained comparatively higher. The availability of water is not in use for fishery due to lack of technical now how and awareness among the farmers. In such a situation department of extension HPKVV Palampur through KVK to spread technology for fishery which is not a costly enterprise. Though Himachal Pradesh divided into different agro-climatic zones and water is running 8243 km in rivers, stored in 25500 hectares of land in natural lakes and also stored in about 50,000 hectare of artificial lakes.

Keeping all these facts in consideration KVK Palampur started providing technology on selection of the site, construction of tank, preparation of tank, protection from weeds, uprooting of other water living breeds, use of lime, use of FYM, selection of variety, collection of seed, technology about feed and to control diseases on fishery especially Fungal Infection Gill rot, Bacterial diseases, Ulcerative system, eye disease, dropsy disease, protozoan disease, worm disease and harvesting of fish. Special training for women on fishery is conducted through KVK, Palampur.

Social Classification

Social classification of different enterprises presented in Table 3.3 reveals that except dairy majority of the respondents (63%) were belonging to OBC (other backward class). This was due to the fact that in district Kangra about half of the population belongs to caste 'Ghirath'. The history reveals that this community was the tiller of the land and upper castes had ownership of majority

of the land hence, Ghirath have been placed under tenants group. In seventies Govt. of Himachal Pradesh implemented a rule under which tenant became owner of the land. At present there is a financial corporation at Kangra providing various facilities for purchasing tractor etc on subsidizes prices to this OBC society. Along with this the said community as well as schedule castes have also been provided with the facility of community land distribution to landless household. This community is scattered around 10 to 30 km. of Himachal Pradesh Agricultural University, Palampur. In district Bilaspur about 68 per cent of the respondents belong to general casts followed by OBC, ST and SC. In fact, there are number of casts under the head of OBC and Ghirath is one among them and they are only residing in district Kangra. Only a few families of muslims religion at Bilaspur district were encountered whereas, all others belonged to Hindu religion in total sample.

Table 3.3: Social Class and Religion of the Sampled Households (2004-05)

(Percent)

Categories	Entrepreneurs						
	Dairy	Bee Keeping	Vermi – Compost	Chips Potato	Diversifications	Fishery	Overall
Social Class							
I General	68.33	3.33	20.00	45.00	28.33	26.67	31.94
II Schedule Caste	5.00	-	3.33	-	-	15.00	3.89
III Schedule Tribe	8.33	-	-	-	-	-	1.39
O. B. C.	18.34	96.67	76.67	55.00	71.67	58.33	62.78
Religion							
I. Hindu	86.67	100.00	100.00	100.00	100.00	100.00	97.78
II. Muslim	13.33	-	-	-	-	-	2.22
III. Christian	-	-	-	-	-	-	-
Iv. Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Houses

In table 3.4 it may be observed that the percentage of semi-pucca houses was highest (39%) followed by kutcha (31%) and semi-pucca (30%) among different enterprises. The higher percentage of kacha houses in Kangra district reflects that nature of the soil of all the categories except dairy was clay which is very suitable for preparing bricks and house constructed of these bricks proved very suitable in all seasons. The roofs of the kutcha houses were made with slate (locally produced) and repair can easily be made with very little cost however, maintenance of pucca houses is costly.

Power and Fuel

Power and fuel utilized by respondents presented in Table 3.4 reveals that 100 percent of respondents of all the activities have electric connections. In fact, Himachal Pradesh is one of the State having cent percent electrification. Wood for fuel was utilized almost in all houses except a few cases belonging to diversification and fishery. Still there were some respondents utilizing kerosene oil and the percentage of these vary between 4 per cent to 37 per cent under the activity of dairy, bee keeping and Chips- Potatos. The low use of kerosene may be due to the reason of large popularity of LPG. The use of LPG vary between 20 to 47 per cent among all the activities. Discussion concludes that wood and LPG were the main sources of fuel whereas, electricity is the main source of power.

Table 3.4: House and Power/fuel Asset of the Sample Households (2004-05)

(Percent)

Categories	Entrepreneurs						
	Dairy	**Bee Keeping**	**Vermi – compost**	**Chips Potato**	**Diversifications**	**Fishery**	**Over all**
House							
Pucca	32.00	37.00	17.00	32.00	28.00	37.00	30.00
Semi-Pucca	48.00	38.00	33.00	36.00	45.00	33.00	39.00
Kutcha	20.00	25.00	50.00	32.00	27.00	30.00	31.00
Power/fuel Asset							
Electricity	100.00	100.00	100.00	100.00	100.00	100.00	100.00
L.P.G	30.00	32.00	37.00	35.00	38.00	33.00	34.00
Electricity & Kerosene	18.00	32.00	-	22.00	-	-	12.00
Electricity & Wood	100.00	98.00	95.00	100.00	92.00	80.00	94.00
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Asset Ownership

Ownership of assets is an indicator of standard of living of the people. In Table 3.5 it may be observed that about 97 percent of the entrepreneurs have their own televisions and 85 percent of the respondents have possessed air fans. In case of tractor and four- wheeler these were available only with dairy enterprises whereas two wheelers are available in each enterprise. At overall level 12.50 percent of the respondents have their own two wheelers.

Table 3.5: Asset Ownership of the Sample Farm Households (2004-05)

(Percent)

Assets	Entrepreneurs						
	Dairy	**Bee Keeping**	**Vermi – compost**	**Chips Potato**	**Diversifi cations**	**Fishery**	**Overall**
Tractor	5.00	-	-	-	-	-	0.83
Television	100.00	100.00	95.00	90.00	100.00	100.00	97.50
Fan	100.00	100.00	48.33	60.00	100.00	100.00	84.72
Two-wheeler	3.33	10.00	10.00	6.67	26.67	18.33	12.50
Four-wheeler	3.33	-	-	-	-	-	0.55
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Type of livestock

Livestock profile of the sample households presented in Table 3.6 shows that cow, buffalos, bullocks, sheep and goats young stock and dry animals were the main livestock possessed in the study area. Per farm detail of type of livestock in sample has given in Table 3.11. In which it may be observed that at overall level there were (3.82) animal in a household economy of all the enterprises. The highest number of animals may be observed in case of Chips potato (4.90) followed by dairy (3.83), vermi-compost (4.67), diversification (3.93), fishery (3.43) and bee-keeping (2.30).

Table 3.6: Type of Livestock

(Nos. Per Farm)

Name of Enterprise	Cow	Buffalo	Sheep	Goat	Young stock	Dry animals	Bullock	Total
Dairy	59	80	6	5	9	53	18	230
	(0.98)	(1.33)	(0.10)	(0.08)	(0.15)	(0.88)	(0.30)	(3.83)
Beekeeping	20	30	2	6	9	14	57	138
	(0.33)	(0.50)	(0.03)	(0.10)	(0.15)	(0.23)	(0.95)	(2.30)
Vermi Compost	13	88	-	21	28	28	102	280
	(0.22)	(1.47)		(0.35)	(0.47)	(0.47)	(1.70)	(4.67)
Chips Potato	21	92	1	24	21	33	102	294
	(0.35)	(1.53)	(0.02)	(0.40)	(0.35)	(0.55)	(1.70)	(4.90)
Diversification	28	73	-	-	29	23	73	226
	(0.47)	(1.22)			(0.48)	(0.38)	(1.22)	(3.77)
Fishery	30	50	-	2	31	21	72	206
	(0.50)	(0.83)		(0.03)	(0.52)	(0.35)	(1.20)	(3.43)
Total	171	413	9	58	127	172	424	1374
	(0.47)	(1.15)	(0.02)	(0.16)	(0.35)	(0.48)	(1.18)	(3.82)

Note: Figures in parenthesis denotes per farm percentages of number of live stock.

Farm Size

After implementation of tenancy act in Himachal Pradesh the average size of land holding reduced significantly in the State. The scenario of farm size on the basis of owned land holding in different selected activities indicates that percentage of marginal farmers was highest (48%) followed by small (37.53) medium (9.18%) and large (5.07%). Similar trend may be observed in case of farm size on the basis of operational holding. In dairy the concentration of marginal farms was comparatively less may be due the reason of joint family system especially among Muslims (Table 3.7). Regarding ownership of land and house it may be observed from the table that 100 percent of the respondents have their own land and house. Majority of the respondents have irrigated land and only a few cases in dairy have unirrigated portion may be due to hilly topography of the fields.

Crop Activities

Cultivation of food crops and commercial crops along with tending animal were the major activities in the sample drawn. The distribution of different crop activities has been presented in Table 3.8. In this table it may be observed that only 5.63 percent of the area was under commercial crops and remaining 94.37 percent under food crops. All the respondents are operating animal husbandry. In case of irrigated land about 42 percent of the cultivated area of different activities availing irrigation on more then 70 percent of the land and this percentage came

down to 38 percent where irrigation vary between 30 to 70 percent of the area. Only 21 percent of the land was recorded placed under un-irrigated condition (Table 3.8).

Table 3.7: Land Ownership and Farm Class of the Sample Households (2004-05)

(Percent)

Categories	Entrepreneurs						
	Dairy	**Bee Keeping**	**Vermi – compost**	**Chips Potato**	**Diversifi cations**	**Fishery**	**Overall**
Status of Land							
Landless	-	-	-	-	-	-	-
Homestead land	-	-	-	-	-	-	-
Owned farm land + House	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Farm Class on the basis of owned land holding							
Marginal (0-1ha)	61.67 (25.29)	95.00 (77.52)	75.00 (63.23)	56.67 (42.65)	78.33 (61.68)	80.00 (56.83)	74.44 (48.22)
Small (1-2 ha)	23.33 (27.87)	1.67 (3.28)	25.00 (36.77)	41.67 (54.38)	21.67 (38.32)	20.00 (43.17)	22.22 (37.53)
Medium (2-4 ha)	11.68 (27.54)	3.33 (19.20)	-	1.66 (2.97)	-	-	2.78 (9.18)
Large (above 4 ha)	3.33 (19.29)	-	-	-	-	-	0.56 (5.07)
Avg. Farm Size (ha)	1.24	0.30	0.76	1.12	0.64	0.66	0.79
Farm class on the basis of operational land holding							
Marginal (0-1ha)	17.53	69.50	54.86	50.54	42.68	48.60	44.90
Small (1-2 ha)	33.09	6.10	45.14	46.11	57.32	51.40	42.81
Medium (2-4 ha)	31.49	24.40	-	3.35	-	-	8.83
Large (above 4 ha)	17.89	-	-	-	-	-	3.46
Avg. operational size of holding (ha)	0.74	0.28	0.64	1.11	0.55	0.52	0.64
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Note: Figures in parenthesis are the proportion of total area under different farm size.

Table 3.8 Crop Activity and Irrigated Land of the Sample Households (2004-05)

(Percent)

Categories	Entrepreneurs						
	Dairy	Bee Keeping	Vermi – compost	Chips Potato	Diversifications	Fishery	Overall
Crop Activity							
Food crops	98.27	97.05	69.09	88.69	92.00	98.39	94.37
Commercial crops	1.73	2.95	30.31	11.31	8.00	1.61	5.63
Animal husbandry	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Others	-	-	-	-	-	-	-
Irrigated Land							
Unirrigated	62.33	2.40	3.40	4.70	-	17.04	20.57
Irrigation 30 to 70%	37.67	-	-	-	-	-	37.67
Irrigation > 70%	-	97.60	96.60	95.30	100.00	82.96	41.76
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Cropping pattern

Cropping pattern of sample households of different enterprises presented in Table 3.9. The table revealed that out of 444.46 hectare of gross cropped area about 45 percent was cultivated under wheat followed by paddy 32 percent and maize 18 percent .Maize is very popular crop of dairy enterprise and grown on 44 percent of the area. This may be due to the reason that maize is a rainfed crop and availability of FYM along with timely supply of rains water resulted into better yield. The vegetables crops has started grown in each of the enterprise and accounted 5.4 percent of the GCA..

Table 3.9: Cropping Pattern of the Sample Households from Major Food Crops (2004-05)

(Percent to G.C.A.)

Crops	Entrepreneurs						
	Dairy	**Bee Keeping**	**Vermi – compost**	**Chips Potato**	**Diversifications**	**Fishery**	**Overall**
Maize	44.01	-	14.45	15.67	11.43	8.04	17.90
Paddy	7.75	50.17	37.12	35.00	31.91	41.98	31.89
Wheat	46.51	46.88	44.52	38.64	48.67	48.35	44.57
Vegetables	1.73	2.95	3.91	10.68	7.99	1.63	5.64
G.C. A. (ha)	83.60	33.98	72.78	125.36	66.82	62.12	444.66
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

Economics of Crops in Different Enterprises of the Study

The operated area, percentage irrigated area, average yield, percentage output sold, cost of farming (paid out costs), income per hectare among all the trades have been discussed in below mentioned order.

Maize Maize is important crop of rabi season and almost grown on rainfed conditions in the study reigion. Economics of maize among different enterprises has been presented in Table 3.10 which reveals that percentage area devoted to this crop in dairy enterprises was highest (76%) when compared to other enterprises. In study area the maize was grown in 35 percent of the area in kharif season among all selected enterprises. This crop required less quantity of water and grown under un-irrigated condition in kharif season and it is because of this reason it is growing highly in dairy where irrigated area is comparatively

less. At overall level it may be observed in table 3.7 that per hectare cost of farming of maize accounted Rs. 5312 whereas, income of these enterprises was recorded Rs. 9607. Further table reveals that about half of the produce use to be sold in the market. At present there is a demand of Himachal produced maize for feeding poultry at adjoining State like Haryana and Punjab.

Paddy Paddy is an important crop of district Kangra in Himachal Pradesh. It is because of the reason the people of district Kangra prefer to take rice even twice a day, resulting in low marketable surplus. At overall level per hectare income generated from paddy accounted Rs. 22933 whereas cost of farming was recorded Rs. 6480 among all the enterprises. The highest income (Rs.36580) from paddy was observed in the enterprises of fishery which may be due to the reason of permanent availability of water for irrigation

Wheat Wheat is the important crop of Rabi season and percentage area devoted to this crop varied between 76 to 98 per cent among farms selected under different enterprises (Table 3.10). At overall level the per hectare income generated from wheat accounted Rs. 14316 and cost was recorded of Rs. 6572. The per hectare income from wheat vary between Rs11142 to Rs.21575 among all enterprises. Entrepreneurs of fishery followed by bee-keeping has shown highest returns from this crop. In case of per hectare average yield it was lowest in dairy and chips potato when compared to other enterprises. The percentage of output sold in dairy of district Bilaspur has shown highest range when compared to other enterprises.

Table 3.10: Costs and Returns of the Sample Farm Households (2004-05)

Categories	Entrepreneurs						
	Dairy	Bee Keeping	Vermi – compost	Chips Potato	Diversifications	Fishery	Overall
Maize							
% Operated area	75.58	0.00	27.22	30.92	23.09	15.90	34.84
% Area irrigated	55.24	0.00	100.00	100.00	100.00	100.00	79.31
Average yield (q/ha)	17.24	0.00	25.76	17.36	19.33	28.00	19.63
% Output sold	75.66	0.00	16.60	12.61	74.28	88.92	51.27
Cost of farming (Rs/ha)	5042	-	5330	5254	5457	5479	5312
Income (Rs/ha)	8600	-	12880	8681	10392	14000	9697
Paddy							
% Operated area	14.49	100.00	69.93	69.08	64.45	82.95	62.08
% Area irrigated	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Average yield (q/ha)	25.31	39.47	31.83	23.02	37.47	57.80	35.35
% Output sold	92.07	65.67	18.83	22.27	65.95	57.51	47.35
Cost of farming (Rs/ha)	6270	6268	6614	6163	6856	6712	6480
Income (Rs/ha)	9398	25656	20785	14962	26234	36580	22933
Wheat							
% Operated area	86.94	93.43	83.85	76.26	98.31	95.55	86.76
% Area irrigated	72.32	100.00	100.00	100.00	100.00	100.00	94.57
Average yield (q/ha)	16.46	27.68	20.89	15.91	22.29	26.88	20.74
% Output sold	78.12	58.25	29.09	27.88	74.89	66.13	55.33
Cost of farming (Rs/ha)	6276	6578	6692	6612	6643	6630	6572
Income (Rs/ha)	11523	21575	14626	11142	15605	17470	14316
Sample size	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	360 (100.00)

CHAPTER 4

SOCIO ECONOMIC BACKGROUND OF WOMEN ENTREPRENEURS

If any evaluation of women's economic roles is to be meaningful, it has to take unto account the socio-economic status of different female workers in different enterprises. The level of socio-economic conditions of women in any society indicates their level of status. There is a general approval among the majority of social scientists that women's function could effectively be classified into (1) productive and (2) unproductive spheres. It is productive functions refer to the domestic, child-bearing and child rearing functions. The productive generating functions come under the wage-earning work for income operations while the unproductive functions are non-remunerative and confined to the household duties.

In Himachal Pradesh most of the agricultural work is done by women. Except for ploughing operation they participate in almost all the activities of farming besides household work and animal related works. The work load of women is maximum in May, June, July and October. Household work is almost the same through out the year except in January and February when total workload is low. The time spent in fuel collection is more during winter as fuel requirement is high during this period. Farm work load is higher in the months of April (Harvesting of Rabi crop) and June and July (Sowing kharif crops), September, October and November (harvesting of Kharif crops and sowing of rabi crops. The present chapter highlights the socio-economic characteristics of the women entrepreneurs and how the increased income from the enterprise has led to the improving the standards of living of the family.

Age Group

The detail of the age, relation to head, education and marital status has been presented in Table 4.1. This table shows that 40 percent of the women entrepreneurs were belonging to the age group of 26 to 35 years. In this age

group women can devote more time for carrying out economic activities because of the reason that children starts going to schools. Low level of percentage in the age group of above 55 years indicates that at this age women participation in developmental works came down due to old age.

Table 4.1: Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Categories	Dairy	Bee Keeping	Vermi compost	Chips potato	Diversifications	Fishery	Overall
Age group in years							
15 to 25	18.33	31.67	31.67	23.33	25.00	21.67	25.28
26 to 35	40.00	43.33	31.67	40.00	45.00	45.00	40.83
36 to 55	25.00	23.33	13.33	18.33	28.33	31.66	23.33
Above 55	16.67	1.67	23.33	18.34	1.67	1.67	10.56
Sample	60	60	60	60	60	60	360

Education

Table 4.2 shows that about 53 percent of the entrepreneurs were belonging to Primary to school passed and said percentage may be observed highest in diversification where facilities of education were higher when compared to other enterprises. Higher education of institutions are very close to the location of vermi compost trade and it may be due to the reason that percentage of women in higher education was highest (20%) when compared to other enterprises.

Table 4.2: Profile of the Sample Women Entrepreneurs, H.P., 2004-05

(Percent)

Categories	Dairy	Bee Keeping	Vermi – compost	Chips potato	Diversifi cations	Fishery	Overall
No schooling or primary	21.67	23.33	21.67	23.33	20.00	31.67	23.61
Primary to school passed	51.67	48.33	46.67	56.67	61.67	55.00	53.33
Higher Education	13.33	18.33	20.00	8.33	15.00	6.67	13.61
At least primary & vocational training	13.33	10.01	11.66	11.67	3.33	6.66	94.45
Sample	60	60	60	60	60	60	360

Occupation

In case of occupation of the women entrepreneur in study districts the table4.3 shows that about 98 percent of the women have agriculture as their main occupation among all the enterprises. Only 1.67 percent of women may be seen in dairy, vermi-compost and Chips potato. However, 100 of these sample women are engaged in one or another enterprise. The percentage of women entrepreneur engaged in private service/business may be seen only in diversification and fishery.

Table 4.3: Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Categories	Dairy	Bee Keeping	Vermi – compost	Chips potato	Diversifi cations	Fishery	Overall
Main Occupation							
Agriculture	98.33	100.00	98.33	98.33	96.67	96.67	98.05
Govt. Service	1.67	-	1.67	1.67	-	-	0.83
Private Service/Business	-	-	-	-	3.33	3.33	1.12
Entrepreneur	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Sample	60	60	60	60	60	60	360

Salaried Job in Family

In Table 4.4 it may be seen that the percentage of male on salaried job classified into three categories i.e. husband, father, son and other members of the family. Under these relationship of women entrepreneur the majority of the salaried job belonged to the category of husbands (27.22%) . In this category the percentage of salaried job vary between 16.27 to 41.67 percent among different enterprises.

Table 4.4: Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Family member has salaried job							
Categories	**Dairy**	**Bee Keeping**	**Vermi – compost**	**Chips potato**	**Diversifications**	**Fishery**	**Overall**
Husband	26.67	25.00	41.67	28.33	16.67	25.00	27.22
Father	-	-	-	-	-	-	-
Son	1.67	-	-	1.67	-	1.67	0.83
Others	-	-	-	-	-	-	-
Property ownership	-	5.00	3.33	-	3.33	1.67	2.22
Sample	60	60	60	60	60	60	360

Relation to Head of Family

In case of relation to head of the family Table 4.5 reveals that only 2 percent of the female themselves were the head of the family and 98 percent were placed in the category of spouse where head of the family was husband of the entrepreneur.

Table 4.5: Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Relation to Head							
Categories	**Dairy**	**Bee Keeping**	**Vermi – compost**	**Chips potato**	**Diversifications**	**Fishery**	**Overall**
Self	-	5.00	3.33	-	3.33	1.67	2.22
Spouse	100.00	95.00	96.67	100.00	96.67	98.33	97.78
Daughter	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-
Sample	60	60	60	60	60	60	360

Marital Status

Among all the women of different trades the percentage of married women vary between 80 to 100 per cent which indicates that majority of the women have their male partner in the trade.

Table 4.6 Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Marital status							
Categories	**Dairy**	**Bee Keeping**	**Vermi – compost**	**Chips potato**	**Diversifications**	**Fishery**	**Overall**
Married	100.00	95.00	96.67	100.00	96.67	98.33	97.78
Married widow	-	5.00	3.33	-	3.33	1.67	2.22
Separated	-	-	-	-	-	-	-
Unmarried	-	-	-	-	-	-	-
Sample	60	60	60	60	60	60	360

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Age Distribution of Children

Age wise distribution of children among different enterprises reveals in Table 4.7 that the percentage children below 7 years of age vary between 16 per cent to 30 per cent in all the enterprises. The majority of the children may be seen in the age group of 7 to 15 years of age among enterprises. There was no children not attending school in said age group and the average number of

children in the family was observed 1.46 among enterprises. This shows education level has developed in all the activities

Table 4.7 Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Number of children							
Categories	**Dairy**	**Bee Keeping**	**Vermi – compost**	**Chips potato**	**Diversifi cations**	**Fishery**	**Overall**
Below 7 years	23.07	21.33	15.89	30.00	27.12	16.47	22.20
7 to 15	76.93	78.67	84.11	70.00	72.88	83.53	77.80
Children 7 to 15 yrs not going to school	-	-	-	-	-	-	-
Avg. No. of children per household	1.52	1.25	1.78	1.83	0.98	1.42	1.46
Sample	60	60	60	60	60	60	360

Enterprise as Main/subsidiary Occupation

Table 4.8 shows that 98percent of the entrepreneurs accepted enterprise as their main occupation whereas; 2percent accepted their enterprise as subsidiary occupation. In this table it may be seen that 100 percent of the entrepreneurs of beekeeping, vermi-compost and fishery has accepted enterprise as their main occupation.

Table 4.8: Profile of the Sample Women Entrepreneurs (2004-05)

(Percent)

Categories	**Dairy**	**Bee Keeping**	**Vermi Compost**	**Bio pesticides**	**Diversif ications**	**Fishery**	**Overall**
Enterprise as main occupation	98.33	100.00	98.33	96.67	98.33	96.67	98.05
Enterprise as subsidiary occupation	1.67	-	1.67	3.33	1.67	3.33	1.95
Personal source of income	-	-	-	-	-	-	-
Sample	60	60	60	60	60	60	360

Time Spent

Average time spent on various enterprises indicates in Table 4.9 that on an average entrepreneur remained busy in work for 11.60 hours in a day. Out of total work in a day the highest (2.36 hours) used to be spent on cooking followed by farm work (2.31 hours) ,enterprise work (1.39 hours) and family care (1.28 hours) . Rest of the work of the day allocated to fuel collection (0.60 hours) water carriage (0.37 hours), other household work (0.84hours) and income earning activity (0.15 hours) . Time devoted for enterprise's work was highest in dairy 2.40 hours and lowest in fishery 0.52 hours in a day. In case of time spent on farm work it was highest (3.40 hours) in bee-keeping. It may be due to the reason of cultivation of paddy which required more labour when compared to other crops. The time devoted for family care varies between 0.98 hours to 1.48 hours among different enterprises. Except, dairy time spent on livestock was almost equal and vary between 1.40 to1.69 hours in a day. Time devoted for fuel collection was recorded highest in the enterprise of Chips- Potatos 0.74 hours due to lack of forest area and comparatively higher population growth in the area. Discussion concludes that those entrepreneurs who were comparatively spending less time on family care were also consuming more time on leisure.

Table 4.9: Average Time Spent on Various Activities by the Sample Women Entrepreneurs (2004-05)

(Hrs. per day)

Categories	Dairy	Bee Keeping	Vermi Compost	Bio Pesticides	Diversifications	Fishery	Average
Enterprise	2.40	1.30	0.59	1.20	2.36	0.52	1.39
Farm Work	2.24	3.40	2.67	1.50	1.20	2.85	2.31
Cooking	2.28	2.48	1.86	2.41	2.48	2.75	2.36
Family Care	1.17	1.71	0.98	1.03	1.38	1.48	1.28
Livestock	-	1.69	1.47	1.40	1.66	1.51	1.29
Fuel wood or dung	0.56	0.46	0.56	0.74	0.58	0.69	0.60
Water	0.41	0.46	0.31	0.34	0.37	0.36	0.37
Other household work	0.63	0.89	0.63	0.54	0.96	1.41	0.84
Income earning activity	0.13	-	0.13	0.26	0.13	0.26	0.15
Total	9.72	12.39	9.20	9.42	11.07	11.83	10.61
Leisure	14.28	11.61	14.80	14.58	12.93	12.17	13.39
Total hours	24.00	24.00	24.00	24.00	24.00	24.00	24.00
Sample size	60	60	60	60	60	60	360

Contribution of Women in Household Income

The income generated by women is not restricted only to the enterprises they have adopted but have been instrumental in generating substantial income from farming and other activities. Distribution of income among various sectors like male and female income, total farm income, total enterprise income and overall household income under different enterprises has been presented in Table 4.10. In this table it may be observed that out of total income of rupees 798227 the income earned by male accounted about 61 percent followed by farm income 34 percent , enterprise income 2.85 percent and female income of about one percent . The highest income of male may be due to the reason of employment in service sector especially in government jobs. Further table shows

that diversification and beekeeping has shown high level of viability as compared to other enterprises this may be due to the reason of higher demand of the produce in the market. The reason behind low level of returns (Table4.6) in chips potato was due to the reason of more requirement of family labour in different operations of cultivation.

Table 4.10: Distribution of the Household Income of the Sample Women Entrepreneurs (2004-05)

(Rs. per farm.)

Categories	Dairy	Bee Keeping	Vermi Compost	Bio Pesticides	Diversifications	Fishery	Overall
Total Male Income	341898 (93.01)	40633 (52.20)	40188 (37.77)	24018 (23.45)	9439 (20.75)	33183 (33.70)	489359 (61.30)
Total Female Income	1785 (0.48)	-	865 (0.81)	1115 (1.02)	361 (0.70)	3583 (3.64)	7709 (0.97)
Farm Income	15020 (4.09)	32325 (41.52)	62900 (59.11)	75246 (73.47)	32784 (72.07)	60139 (61.08)	278414 (33.88)
Enterprise Income	8893 (2.42)	1888 (6.28)	2160 (2.31)	2040 (1.99)	2904 (6.38)	1560 (1.58)	22745 (2.85)
Total household income	367596 (100.00)	77846 (100.00)	106413 (100.00)	102419 (100.00)	45488 (100.00)	98465 (100.00)	798227 (100.00)
Sample	60	60	60	60	60	60	360

Note: Figures in parenthesis are the percentages to total.

Socio-Economic Impact of Income Earned by Women

The objective of introducing entrepreneurial trades to women has been to make them financial independent and to bring a positive change in their status in the society. This section presents the impact of income earned by women on their status, education of children, family health etc. (Table 4.11).

The analysis revealed that 100 percent of females working in the trade of vermi-compost dairy and diversification reported positive difference to household income. This was followed by 97 percent in fishery, 73 per cent in Chips-Potatoes and only 53 per cent in beekeeping. In case of beekeeping 47 per cent of female felt that there was no additional income in the trade may be due to the family operations and hence requires further rigorous training.

Majority of the women felt that training had encouraged them to adopt trades which ultimately helped in improvement of their status in the household and society at large. However, this scenario did not prevail in case of women practicing vermi-compost.. The majority of women confirmed that the adoption of activities and generation of income hence resulted in public welfare. One of the most desirable out come of the income earned by women has been that this has facilitated the children's education which has becoming costlier and costlier. All the women of four categories confirmed that some of the income is being utilized on children education.

Majority of the women replied (Table 4.11) that there was an improvement in the health of family members as now it was possible to make expenditure for private consultations and costly medicines. The increased income has also been instrumental in fulfilling own needs of women, which earlier were difficult to meet out as they had to depend on male members. The women are also now in a position to do something for their parents due to same reason.

Table 4.11: Socio-economic Impact of Income Earned by Women

(Percentages)

Particulars/ District	Dairy	Bee keeping	Vermi-Compost	Chips-Potatos	Diversification	Fisheries
Weather enterprise made a difference to household income						
Yes	60 (100.00)	32 (53.33)	60 (100.00)	44 (73.33)	60 (100.00)	58 (96.67)
No	0 (0.00)	28 (46.67)	0 (0.00)	16 (26.67)	0 (0.00)	2 (3.33)
Weather the contribution made an improvement in status of women in household						
Yes	60 (100.00)	32 (53.33)	56 (93.33)	44 (73.33)	60 (100.00)	44 (73.33)
No	0 (0.00)	28 (46.67)	4 (6.67)	16 (26.67)	0 (0.00)	16 (26.67)
Weather contribution made to public welfare						
Yes	0 (0.00)	0 (0.00)	40 (66.67)	44 (73.33)	60 (100.00)	40 (66.67)
No	0 (0.00)	0 (0.00)	20 (33.33)	8 (26.67)	0 (0.00)	20 (33.33)
Weather the income helped in children's education						
Yes	60 (100.00)	32 (53.33)	60 (100.00)	60 (100.00)	60 (100.00)	30 (50.00)
No	0 (0.00)	28 (46.67)	0 (0.00)	0 (0.00)	0 (0.00)	30 (50.00)
Weather the income helped in family's health						
Yes	60 (100.00)	32 (53.33)	60 (100.00)	44 (73.33)	60 (100.00)	36 (60.00)
No	0 (0.00)	28 (46.67)	0 (0.00)	8 (26.67)	0 (0.00)	24 (40.00)
Weather income helped to attend own needs						
Yes	60 (100.00)	32 (53.33)	60 (100.00)	22 (73.33)	60 (100.00)	20 (66.67)
No	0 (0.00)	28 (46.67)	0 (0.00)	8 (26.67)	0 (0.00)	10 (33.33)
Weather income helped in visiting or attending to parental obligations						
Yes	60 (100.00)	32 (53.33)	60 (100.00)	22 (73.33)	60 (100.00)	22 (73.33)
No	0 (0.00)	28 (46.67)	0 (0.00)	8 (26.67)	0 (0.00)	8 (26.67)
Sample	60	60	60	60	60	60

CHAPTER 5

IMPACT OF TRADES ON WOMEN EMPOWERMENT

The introduction of entrepreneurial trades for women has been envisaged to transform the women folk from secondary position in the family and society to important member having independent economic status. This has important ramifications for improving their status in family and society at large. The independent income has enabled them to contribute for family expenditure and most importantly for expenditures like children education, improving nutritional status and household durables etc. However, there are many aspects related to empowerment of women. Whether they are encouraged by other family members have they gained freedom for and do they have any say in decision making process are some of the question which need through proving. The present chapter attempts to answer these questions and results have been presented in Table 5.1. The responses have been categorized into low, moderate and high improvement in respective variables.

Improvement in status in family and society

The first aspect about status of women in family improved or not it has been observed that 30 per cent of the respondents in bee keeping followed by diversification (27 per cent), fishery (23per cent), dairy (20 per cent), vermi-compost (13 per cent) and Chips- Potatos (7 per cent) felt that status in their respective families has highly improved. Except bee keeping and vermi compost more than 60 per cent of the respondents were of the opinion that status has moderately improved. Low level of improvement in status after joining in the trade can be seen only in bee keeping and vermi- compost. Similarly majority of women felt that their status in society has moderately improved. The trend of responses is mixed and no clear-cut picture emerges from the analysis.

Interaction improved the awareness

The women have to interact with various people and agencies for production and marketing of the produce. It has been envisaged that such interactions would improve general awareness of women, who earlier had been confined to their homes and farms. In fact such interactions have improved the awareness of the women and it was reported that the awareness has highly increased incase of about 77% of women who had adopted the trade of diversification. This was followed by women who had adopted fishery as trade and 50% of women reported that increase in awareness has been high. However, majority of women ranging from 10 % to 50 % reported that such gain has been moderate. Majority of women in bee keeping and vermi-compost trade reported that their awareness did not increase by any appreciable extent.

Level of encouragement by family

About 70 and 67% of the women under dairy and Chips- Potato respectively reported that they were moderately encouraged by their families for the adoption and improvement in the trade they have adopted. The percentage of women, who felt that the encouragement they received was low, was found in case of bee keeping and vermin-culture, about 53 and 80% of women respondents reported that the level of encouragement they received was low. It was the trade of diversification and fishery where 90 and 67 per cent women felt that they received very high level of encouragement from their families and this as proved to be very important for the development of their trades.

Contribution towards children's and family welfare

Despite the increase in income about 60 and 83 per cent women of bee keeping and vermin-culture trades reported that they do not significantly contribute towards the welfare of children and family as a whole. On the other hand 83 and 60 per cent of women of diversification and fishery trades reported that their contribution towards welfare has been high. The moderate level of

contribution was reported by majority of respondents under dairy and Chips-Potatoes trades.

Freedom in spending the money

Although the women entrepreneurs have now become economically independent the traditional social setting of the farming families sometimes prohibit them to independently spend their own earned money in a way they desire. The trend of responses in this respect has been observed to be mixed. Majority of women under dairy trade reported moderate freedom, under bee keeping and vermi-compost it was low freedom whereas in the rest of trades the freedom allowed to them has been reported to be moderate.

Freedom in family decisions

One of the positive outcomes of the financial independentness has been that the women now have some freedom in taking family decisions. It was found that majority of women under bee keeping and Vermi compost, 50 and 87 per cent respectively, have low level of freedom in taking family decisions. This freedom was reported to be moderate by majority of women in rest of the trades. The highest percentage of women reported high level of freedom was under bee keeping and diversification and was 33 per cent in each case.

Greater freedom in own decisions

Even if the women are not allowed to take the family decisions, it is expected that they be allowed at least to take decision in their own concern such as visit to the parental homes or about their children. It may be observed that the percentage of women who have high freedom in this regard is slightly better than the earlier responses. Again, the percentage of women who reported moderate freedom in this regard was better in most of the trades.

Help of Male Members

The women being entrepreneurs are expected to carry out the various tasks connected with the trades independently. However, it is also expected that they being new to the trade, have low level of exposure and feel shy in interacting with other people and traders in market, the male members of family would help them in conducting their business, at least in the initial stages. The help rendered by male members has been categorized into three types viz, arrangement of inputs, marketing of produce and help in field operations. It was heartening to find that overwhelming majority (about 80%) of women reported that the male members of the family help them in all these three operations. It was only in field operations under Chips- Potatoes, diversification and fishery that only about 25 per cent women reported that male were helping them in this operation.

Help of male member in household work

The women being entrepreneurs naturally have to devote a significant portion of their time for their adopted trades. As such they might run short of time for households chores. They will be greatly relieved and concentrate more on their business if some of the household responsibilities are shared by male members. Although, the male members do help the women in household's chores but the level of the help could be categorized as low. In each trade about 70 per cent or even more women reported that they receive insignificant help from male members.

Male member's attitude

The income generation activity of women has brought a change in attitude of male members and this change has been largely observed to be positive. The level of change in attitude had been varying but one of the positive aspect is that none of the respondents reported negative attitude in any manner. The responses has been mixed varying from about 7 per cent reporting low positive

change in attitude under dairy activity to more than 87 per cent of women under diversification reporting highly significant change in attitude of male members.

Women's say in Panchayats

The women now earning members of the society cannot be taken lightly by male members of the society. This has helped the women in putting their opinions in panchayat or other village platforms. It is heartening to note that with gaining the financial independentness, they do not hesitate to participate in panchayat proceedings and most importantly they put forward their viewpoints. This has been further facilitated by 33 per cent reservation they have got in panchayat. Majority of women reported either moderate or high weight now they carry in panchayat or other village society deliberations.

Development of leadership quality

The women entrepreneurs have to interact with other sections of society and deal with them on equal footing for watching their interests. This has helped in development of leadership qualities among the women. However, majority of the women reported moderate advancement in this respect.

Safety and Security

Himachal Pradesh being very peaceful State, the safety and security of women has never been a major problem. As such the women entrepreneurs feels safe and secure even when traveling alone for carrying out marketing operations or other tasks of their trades. Overwhelming majority of the women reported that they feel highly safe during their travels or when they are alone.

Cooperation in market and institutional dealings

The cooperation the women received during their dealings in market or other institutions like bank etc., has been reported to be moderate by majority of women entrepreneurs under dairy, bee keeping, Vermi compost and fishery. In rest of the trades the cooperation received has been reported to be high.

Table 5.1: Impact of trade on Women Entrepreneur

(Percentage)

Particulars/ Districts	Dairy	Bee keeping	Vermi-compost
1 Improvement of status in family			
i) Low	16.67	46.67	80.00
ii)Moderate	63.33	23.33	6.67
iii)High	20.00	30.00	13.33
2 Improvement of status in society			
i) Low	13.33	46.67	73.33
ii)Moderate	60.00	26.67	16.67
iii)High	26.67	26.66	10.00
3 Interactions helped in gaining awareness			
i) Low	13.33	46.67	80.00
ii)Moderate	50.00	33.33	10.00
iii)High	36.67	20.00	10.00
4. Level of encouragement by family			
i) Low	10.00	53.33	80
ii)Moderate	70.00	33.33	10.00
iii)High	20.00	13.34	10.00
5 Contribution towards children's and family welfare			
i) Low	16.67	60.00	83.33
ii)Moderate	63.33	26.67	10.00
iii)High	20.00	13.33	6.67
6. Freedom in spending the money			
i) Low	16.67	50.00	86.67
ii)Moderate	60.00	10.00	6.66
iii)High	23.33	6.67	6.67
7 Freedom in families decisions			
i) Low	16.67	50.00	86.67
ii)Moderate	66.67	16.67	6.66
iii)High	16.66	33.33	6.67
8. Greater freedom in own decisions			
i) Low	16.67	23.33	20.00
ii)Moderate	36.67	50.00	60.00
iii)High	46.66	26.67	20.00
9 Help of male members			
i) Arrangement of Input	73.0	80.00	83.0
ii) Marketing of produce	83.00	80.00	-
iii) Help in field operation	67.00	60.00	83.0
10 Help of male members in household work			
i) Low	83.33	76.67	70.00
ii)Moderate	6.67	16.67	20.00
iii)High	10.00	6.66	10.00
11 Male member's attitude			
i) Low	6.67	16.67	10.00
ii)Moderate	16.67	40.00	50.00
iii)High	76.66	43.33	40.00
12. Women's say in Panchayats			

i) Low	6.67	6.67	20.00
ii)Moderate	26.66	50.00	60.00
iii)High	66.67	43.33	20.00
13. Development of leadership quality			
i) Low	13.33	20.00	16.67
ii)Moderate	36.67	40.00	50.00
iii)High	50.00	40.00	33.33
14 Safety and security			
i) Low	10.00	6.67	13.33
ii)Moderate	10.00	20.00	16.67
iii)High	80.00	73.33	70.00
15 Cooperation in all market & institutional dealings			
i) Low	10.00	16.67	20.00
ii)Moderate	60.00	56.67	60.00
iii)High	30.00	26.66	20.00

Table 5.1: Contd.

Particulars	Chips- Potatos	Diversification	Fishery
1. Level of improvement of family status			
i) Low	26.67	6.67	16.67
ii)Moderate	66.67	66.67	60.00
iii)High	6.66	26.66	23.33
2. Level of status in society has improved			
i) Low	33.33	10.00	6.67
ii)Moderate	60.00	50.00	33.33
iii)High	6.67	40.00	60.00
3. Level of interactions helped in gaining awareness			
i) Low	26.67	3.33	10.00
ii)Moderate	50.00	20.00	40.00
iii)High	23.33	76.67	50.00
4. Level of encouraged by family			
i) Low	20.00	3.33	16.67
ii)Moderate	66.67	6.67	16.67
iii)High	13.33	90.00	66.66
5. Contribution towards children's and families welfare			
i) Low	16.67	6.67	6.67
ii)Moderate	60.00	10.00	33.33
iii)High	23.33	83.33	60.00
6. Level of women has freedom in spending the money			
i) Low	6.67	10.00	10.00
ii)Moderate	60.00	70.00	50.00
iii)High	33.33	20.00	40.00
7. Level of women has greater freedom in families decision			
i) Low	13.33	16.67	20.00
ii)Moderate	60.00	50.00	60.00
iii)High	26.67	33.33	20.00
8. Greater freedom in own decisions			
i) Low	46.67	53.33	10.00

ii)Moderate	40.00	33.33	40.00
iii)High	13.33	13.34	26.67
9. Level of women male members help in enterprise & in what way			
i) Arrangement of Input	67.0	87.0	87.0
ii)Marketing of produce	83.0	90.0	87.0
iii)Help in field operation	25.0	25.0	23.0
10.Level of male members help in household work			
i) Low	66.67	60.00	73.33
ii)Moderate	16.67	33.33	23.33
iii)High	16.66	6.67	3.34
11. Level of male member's attitude affected			
i) Low	33.33	6.67	3.34
ii)Moderate	50.00	6.67	33.33
iii)High	16.67	86.66	63.33
12. Level of women's voice is heard in panchayat			
i) Low	10.00	6.67	10.0
ii)Moderate	40.00	33.33	30.00
iii)High	50.00	60.00	60.00
13. Level of the participation helped in developing leadership quality in society			
i) Low	40.00	26.67	33.33
ii)Moderate	46.67	50.00	40.00
iii)High	13.33	23.33	26.67
14. Level of women finds safety & security			
i) Low	100.00	16.67	13.34
ii)Moderate	33.33	16.67	50.00
iii)High	56.67	43.33	36.66
15. Level of woman finds co-operation in all market & institutional dealings			
i) Low	13.33	6.67	10.00
ii)Moderate	26.67	33.33	50.00
iii)High	60.00	60.00	40.00
Sample Size	60	60	60

CHAPTER 6

REQUIREMENT OF RAW MATERIAL, EMPLOYMENT PATTERN & PROFITABILITY OF WOMEN ENTERPRISES

In this chapter the profile of different women entrepreneurs, product/processes involved and requirement of raw material for various women enterprises selected for the study were discussed in detail. This chapter also includes the employment pattern and profitability along-with problems and prospects of different women enterprises.

Dairy

Age and Education

Profile of women entrepreneur in dairy enterprise has been presented in Table 6.1. In this table it may be observed that the highest (40%) of women belonging to the age group of 26 to 35 which indicates that middle age group has shown their farsightedness in favors of women empowerment . This table also shows that 100 per cent of the women have husband as their head in the family. About 50 per cent of the women have attained education up to primary to school passed followed by 22 per cent up to no school or primary. Education standard has shown better performance among women enterprises in the study.

Houses, Social Class and Marital Status

The detail of structure of houses presented in Table 6.2 reveals that majority (48%) of the women entrepreneurs have constructed semi-pucca houses. There were 20 per cent of the women entrepreneurs who have kutcha house. This shows construction of houses have started turning from kutcha to either pucca or semi-pucca. In case of households income table relates that 100 per cent of the women have income above one lac of rupees. This may be due to the fact that male members of the household used to generate income from

Table 6.1: Profile of Women Entrepreneurs in Dairy Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age Group in Years			
15 to 25	20.00	16.67	18.33
26 to 35	40.00	40.00	40.00
36 to 55	20.00	30.00	25.00
Above 55	20.00	13.37	16.67
Relation to Head			
Self	-	-	-
Spouse	100.00	100.00	100.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or/ primary	13.33	30.00	21.67
Primary to school passed	56.67	46.67	51.67
Higher Education	16.67	10.00	13.33
At least primary & vocational training	13.33	13.33	13.33
Sample Size	30	30	60

Table 6.2: Profile of Women Entrepreneurs in Dairy Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	40.00	23.33	31.67
Semi-pucca	46.67	50.00	48.33
Kutcha	13.33	26.67	20.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	-	-	-
50000 to 100000	-	-	-
> 100000	100.00	100.00	100.00
Social Class			
General	76.67	60.00	68.33
SC	10.00	-	5.00
ST	-	16.67	8.33
OBC	13.33	23.33	18.34
Marital Status			
Married	100.00	100.00	100.00
Married Widow	-	-	-
Separated	-	-	-
Unmarried	-	-	-
Sample Size	30	30	60

service. In this table it may also be observed that the majority (68%) of the women entrepreneur belonged to the general cast followed by other backward class (18%), schedule tribes (8.33%) and schedule casts (5.00%).

Nature of Production

Rearing milch animal has also been recognized a best source of livelihood in Himachal Pradesh. In Table 6.3 it may be seen that 100 percent of the produce of milk use to be sold locally. In fact, there was a problem of marketing of milk production due to low level of demand in the market. Though there is a demand for milk in local markets but consumers as well as retailers prefer to consume and purchase packed milk generally imported from adjoining states like Punjab and Haryana. Therefore, it needed to make arrangements of packing in the regions so that producer may get remunerative prices of their produce.

Table 6.3: Nature of Product Produced by the Sample Women Entrepreneurs in Dairy Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	-	-	-
Medicinal	-	-	-
Milk	100.00	100.00	100.00
New	-	-	-
Traditional	100.00	100.00	100.00
Perishable	100.00	100.00	100.00
Fragile	-	-	-
Whether locally marketed	100.00	100.00	100.00
Accreditation	100.00	100.00	100.00
Sample Size	30	30	60

Raw Material Used and Equipment Required

Feed, fodder, straw and oil are the major raw material used in rearing dairy. Whereas, weighing and quality assessment machine were the major equipments of the women entrepreneurs of dairy (Table 6.4). In case of feed,

Table 6.4: Description of Raw Materials used and Major Equipments Required by the Sample Dairy Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
Raw Materials used			
1. Feed			
Home/Farm produced (No.)	3	2	5
Avg. price (Rs./qtl)	650	650	650
Purchased locally (No.)	22	28	50
Avg. price (Rs./qtl)	820	820	820
Purchased outside (No)	2	-	2
Avg. price (Rs./qtl)	800	-	800
Supplied by co-operatives	3	4	7
Avg. price (Rs./qtl)	570	570	570
2. Fodder			
Home/farm produced (No.)	28	25	53
Avg. price (Rs./qtl)	70	70	70
Purchased locally (No.)	2	5	7
Avg. price (Rs./qtl)	80	80	80
Purchased outside	-	-	-
Avg. price (Rs./qtl)	-	-	-
3. Straw			
Home/farm produced (No.)	20	25	45
Avg. price (Rs./qtl)	250	250	250
Purchased locally (No.)	-	-	-
Avg. price (Rs./qtl)	-	-	-
Purchased outside	10	5	15
Avg. price (Rs./qtl)	350	350	350
4. Oil			
Home/farm produced (No.)	3	1	4
Avg. price (Rs./qtl)	5000	5000	5000
Purchased locally (No.)	27	29	56
Avg. price (Rs./qtl)	5500	5500	5500
Purchased outside	-	-	-
Avg. price (Rs./qtl)	-	-	-
Major equipments required			
Weighing and quality assessment machine			
Ownership	-	-	-
Source of funding	-	-	-
Distance from place to enterprise	-	-	-
Cost of use	-	-	-
Purpose of use	-	-	-
Sample Size	30	30	60

Co-operative society as well as local retail shops are the main source of supply of feed in the study area. Table shows that maximum quantity of feed purchased from local shops. Regarding availability of fodder table reflects that only 7 entrepreneurs use to purchase fodder from local market and rest of the requirement fulfilled from home/farm produce. Fodder of maize, wheat and paddy produced in the study region and 95 percent of demand fulfilled from home produced fodder. Similar trend may be seen in supply of straw but in this case quantity purchased from outside increased to double when compared to fodder. Requirement of oil generally fulfilled through local purchase.

Intensity of Resource Use

Intensity of resource use presented in Table 6.5 shows that feed and fodder, dung, and marketing management of milk required high level of family labour. Whereas, watering and milking have shown low level of labour intensity in rearing milch animals. Mostly, collection of feed and marketing of milk handled by the male members of the family and rest of the operation use to be done by the female members.

Table 6.5: Intensity of Resource use in Important Process Involved in Production for Dairy Enterprise (2004-05)

Particulars	Feed & Fodder Management	Watering	Milking	Cleaning & Bathing	Cow dung Management	Marketing of Milk
Need for family labour	High	Low	Low	Moderate	High	High
Need for hired labour	Moderate	Low	Low	Low	Low	Low
Supervision	Low	Low	Low	Low	Low	Low
Skill	Low	Low	Low	Low	Low	Low
Equipment	Low	Low	Low	Low	Low	Low
Time	Moderate	Low	Low	Low	Low	Moderate
Labour intensive	Low	Low	Low	Low	Low	Moderate

Employment in Enterprise

Dairy is the activity which operates throughout the year and required day to day management of milch animals. In Himachal Pradesh dairy is the traditional enterprise and had proved very helpful in increasing household income. Generally the male members were remaining engaged in non-farm income and crop activities whereas; dairy enterprise was mostly managed by the female labour. Table 6.6 indicates that at overall level 70 per cent of the labour was contributed by female and 30 per cent by male in dairy management. This shows that enterprise of dairy is dominated by female section of the household labour. Further, table shows that hired labour has also been utilized in dairy enterprise and 58 per cent of male and 42 per cent of female were hired for maintaining dairy. At overall level 66 per cent of the female labour among trainees and non trainees engaged in dairy enterprises. Discussion concludes that most of the day to day operations required for dairy management were performed by the women entrepreneurs themselves. The dairy operates various activities like cleaning of the cattle sheds, feed, fodder and water management to animals, milking, selling of milk and making cakes of the cow dung. Among these operation marketing of milk and collection of feed use to be performed by male members of the family. Further table shows that training group of the sample putting higher Mandays as compared to non-trainees group for various operations.

Economics of Dairy

Economics of milch animal shows in Table 6.7 and 6.8 that net returns over per cow and buffaloes were recorded Rs.7301 and 8109 respectively. The returns were marginally higher among trained entrepreneurs as compared to non-trained. In case of per animal cost it may also be observed from the table that it was almost the same in both cases. However gross returns were higher in buffaloes as compared to cows due to high production followed by higher prices of buffalo's milk. During the course of study it was observed that generally cross bred (Jersey) use to be reared by the enterprises. These type of cows required

vary sensitive management especially for their feed and fodder and diseases. The inputs required for maintaining cows required costly process as compared to buffaloes which ultimately resulted into almost equal costs between cow and buffalo. At the same time initial and depreciation costs for cow remained higher when compared to buffaloes (Table 6.7 and 6.8). Further table 6.9 reveals that on an average per farm net returns of per unit of milch animals (3.3 animals) were highest (Rs 16087) on cost followed by cost C, B and D. In this table it may also be observed that net returns over per unit of milch animals in a family remained higher among trainees as compared to non trainees. Table 6.9 reveals that total cost without resource overhead recorded highest (Rs. 11534/-). In case of returns over different costs recorded highest under cost A.

Table 6.6: Employment of Labour for Dairy Enterprise of the Sample Women Entrepreneurs (2004-05)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	36 (30.00)	-	30 (30.00)	-	66 (30.00)	-
Female	84 (70.00)	-	70 (70.00)	-	154 (70.00)	-
Total	120 (100.0)	-	100 (100.00)	-	220 (100.0)	-
Hired						
Male	7 (58.00)	80.00	13 (59.00)	80.00	20 (58.00)	80.00
Female	5 (42.00)	70.00	9 (41.00)	70.00	14 (42.00)	70.00
Total	12 (100.00)	150.00	22 (100.00)	150.00	34 (100.00)	150.00
Overall						
Male	43 (33.00)	-	43 (35.00)	-	86 (34.80)	-
Female	89 (67.00)	-	79 (65.00)	-	168 (66.00)	-
Total	132 (100.00)	-	122 (100.00)	-	254 (100.00)	-
Sample Size	30	-	30	-	60	-

Note: Figures in parenthesis denote percentage to total in each column.

Table 6.7: Economics of Dairying per Cow for Dairy Women Entrepreneurs (2004-05)

(Rs./Cow)

Particulars	With Training	Without Training	Total
1. Fixed Costs (FC)	8558	8520	8542
Initial Investment			
i) Interest on fixed capital @ 11% p.a.	941	937	939
ii) Depreciation (cattle shed, animals)	265	260	263
Total Fixed Cost (TFC)	**1206**	**1197**	**1202**
2. Variable Cost (VC)			
i) Feed	2677	2650	2665
ii) Fodder	2691	2970	2809
iii) Straw	1825	1510	1691
iv) Labour	3993	3942	3971
v) Miscellaneous	180	190	184
Total Variable Cost	**11366**	**11262**	**11320**
3.Total Cost (TFC+TVC)	**12572**	**12459**	**12527**
4. Gross Returns			
i) Milk Production	1488	1460	1476
ii) Price of milk (Rs/lt)	12	12	12
Total	17856	17520	17712
Value of Dung/FYM	2150	2070	2116
Total Returns	**20006**	**19590**	**19828**
5. Net returns over total cost	**7434**	**7131**	**7301**
Sample Size	**30**	**30**	**60**

Table 6.8: Economics of Dairying per Buffalo for Dairy Women Entrepreneurs (2004-05)

(Rs./Buffalo)

Particulars	With Training	Without Training	Total
1. Fixed Costs (FC)	91103	11500	11305
Initial Investment			
i) Interest on fixed capital @ 11% p.a.	941	937	939
ii) Depreciation (cattle shed, animals)	196	185	190
Total Fixed Cost (TFC)	**1137**	**1122**	**1129**
2. Variable Cost (VC)			
i) Feed	3285	3140	3210
ii) Fodder	2472	3432	2962
iii) Straw	1697	637	1156
iv) Labour	4037	3950	3993
v) Miscellaneous	115	130	123
Total Variable Cost	**11606**	**11289**	**11444**
3.Total Cost (TFC+TVC)	**12743**	**12411**	**12573**
4. Gross Returns			
i) Milk Production	1207	1190	1198
ii) Price of milk (Rs/lt)	14	14	14
Total	16898	16660	16772
FYM	3985	3840	3910
Total Returns	**20883**	**20500**	**20682**
5. Net returns over total cost	**8140**	**8089**	**8109**
Sample Size	**30**	**30**	**60**

Table 6.9: Average Annual Production, Costs & Profits Associated with Dairy Enterprise for Dairy Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
1. No. of milch animals	3.40	3.20	3.30
2. Total Production (ltrs.)	4409.00	4020.00	4225.00
3. Total costs involved (Rs.)	-	-	-
(i) Total cost actual (A)	4379	4299	4340
(ii) Total cost imputed material and labour (B)	9603	9411	9510
(iii) Total cost actual material and imputed labour (C)	8664	8475	8572
(iv) Total cost without resource overhead (D)	11526	11542	11534
3. Gross returns (Rs.) (E)	20590	20263	20427
4. Total profits gained (Rs.)	-	-	-
(i) Total profits imputed output actual cost (E-A)	16211	15964	16087
(ii) Total profits imputed output imputed material labour cost (E-B)	10987	10852	10917
(iii) Total profits imputed output imputed labour cost (E-C)	11926	11788	11855
(iv) Total profits imputed output resource overhead cost (E-D)	9064	8721	8893
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced material and family labour.
B – Total cost including the cost of home owned farm produced material and family labour valued at market price.
C - Total cost including the cost of home-owned farm produced material and excluding the cost of family labour.
D – Total cost excluding the fixed cost.

Prospects

The prospects of dairy enterprises in the region was recorded through the response of entrepreneurs (Table 6.10). About 21 per cent of the entrepreneurs were planning to expand the same enterprise. Low response on expansion may be due to the reason that it has become tough to the entrepreneurs to market their produce easily due to high competition with imported packed milk from adjoining States like Punjab and Haryana. This required packing units in the region for competing imported milk. Regarding planning to add new products about 67 per cent of the entrepreneurs replied that they would like to add new products but it required government assistance especially for marketing. About 33 per cent of the respondents were in view that they need finance for addition of new products and 30 per cent of non-trainees demanded training for maintaining dairy.

Table 6.10: Prospects of Dairy Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	22 (73.33)	25 (83.33)	47 (78.33)
Planning to expand same enterprise	8 (26.67)	5 (16.67)	13 (21.67)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	18 (60.00)	22 (73.33)	40 (66.67)
Planning to continue if finance available	12 (40.00)	8 (26.67)	20 (33.33)
Asking for training	-	30 (100.00)	30 (50.00)
Planning to close down	-	-	-
Sample Size	**30**	**30**	**60**

Beekeeping

Age, Relation and Education of Entrepreneurs

Profile of women entrepreneur like age group, relation to head and education has shown in Table 6.11 indicates that majority of the women entrepreneurs (43%) has been placed in the group of 26 to 35 years of age in beekeeping. Only 5 per cent of the women entrepreneurs themselves were head of the household as they were the widows. Otherwise head of the household was the husband or parents in lows of the women. Most of the women (48%) were primary to school pass and only 23 per cent were either illiterate or had education up to primary level. Whereas, 18 percent of the women were belonging to higher education. Improved education level of women in this enterprise will prove helpful in advancement of women entrepreneurs.

Table 6.11: Profile of Women Entrepreneurs in Bee-keeping Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age group in years			
15 to 25	30.00	33.00	32.00
26 to 35	47.00	40.00	43.00
36 to 55	23.00	23.00	23.00
Above 55	-	4.00	2.00
Relation to Head			
Self	3.00	7.00	5.00
Spouse	97.00	93.00	95.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or primary	20.00	27.00	23.00
Primary to school passed	53.00	43.00	48.00
Higher Education	23.00	13.00	18.00
At least primary & vocational training	4.00	17.00	10.00
Sample Size	**30**	**30**	**60**

House, Income, Casts and Marital Status:

Table 6.12 shows that majority of the houses of entrepreneur of trainees and non-trainees were either pucca (37%) or semi pucca (38%). This shows the type of houses turning from kutcha to semi pucca/pucca. Further table shows that 50 per cent of the entrepreneurs living in the range of income of rupees 50 thousands and remaining 50 per cent have their range above one lac of rupees. Classification of status by casts reflects in table that 97 per cent of the entrepreneurs belonged to the category of other back ward class (OBC). In fact, this community named as girath dominated in the region and are expert in cultivation of crops and now when holdings came down this community trying to find viable enterprises and hence, joined to develop bee keeping as their enterprises. Marital status of the entrepreneurs indicates in Table 6.2 that 95 per cent of the entrepreneurs ware married and remaining 5 per cent were widows.

Table 6.12: Profile of Women Entrepreneurs in Bee-keeping Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	40.00	33.00	37.00
Semi-pucca	37.00	40.00	38.00
Kutcha	23.00	27.00	25.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	-	-	-
50000 to 100000	53.00	47.00	50.00
> 100000	47.00	53.00	50.00
Social Class			
General	7.00	-	3.00
SC	-	-	-
ST	-	-	-
OBC	93.00	100.00	97.00
Marital Status			
Married	97.00	93.00	95.00
Married Widow	3.00	7.00	5.00
Separated	-	-	-
Unmarried	-	-	-
Sample Size	**30**	**30**	**60**

Nature of Product

The nature of product in Table 6.13 revealed that the product has high medicinal value and 100 per cent of the produce of product sold locally. Though there is a marketing society in the region but demand from traders like Dabur and other parts of the country providing better prices.

Table 6.13: Nature of Product Produced by the Sample Women Entrepreneurs in Bee-keeping Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	-	-	-
Medicinal	100	100	100
Milk	-	-	-
New	-	-	-
Traditional	100	100	100
Perishable	-	-	-
Fragile	100	100	100
Whether locally marketed	100	100	100
Accreditation	-	-	-
Sample Size	**30**	**30**	**60**

Raw Material and Equipments

This enterprise is dependent on community fields from where honey bees can collect their feed. During winter beekeepers migrate to adjoining States where flowers of eucalyptus are available in plenty. In Table 6.14. It may be observed that sugar and sulphur are the main diets of bees which use to be purchased from local markets by all the entrepreneurs of trainees and non-trainees. Further table reveals that be hives, bee colonies and honey extractor are the major equipments required for bee keeps and all trainees and non-trainees have their own above mentioned equipments.

Table 6.14: Description of Raw Materials used & Major Equipments required by the Sample Bee-keeping Women Entrepreneurs, (2004-05)

Particulars	With Training	Without Training	Total
Raw Materials used			
1. Feed (Sugar)			
Home/Farm produced (No.)			
Avg. price (Rs./qtl)			
Purchased locally (No.)	30	30	60
Avg. price (Rs./qtl)	1500	1500	1500
Purchased outside			
Avg. price (Rs./qtl)			
Supplied by co-operatives			
Avg. price (Rs./qtl)			
2. Medicines/chemicals (Sulphur)			
Home/farm produced (No.)			
Avg. price (Rs./qtl)			
Purchased locally (No.)	30	30	60
Avg. price (Rs./qtl)	2800	2800	2800
Purchased outside			
Avg. price (Rs./qtl)			
3. Comb foundation sheets			
Home/farm produced (No.)	-	-	-
Avg. price (Rs./qtl)			
Purchased locally (No.)	18	15	33
Avg. price (Rs./qtl)	90.0	90.00	90.00
Purchased outside	12	15	27
Avg. price (Rs./qtl)	85.00	85.00	85.00
Major equipments required			
1. Bee hives and bee colonies			
Ownership	Own	Own	Own
Source of funding	Own	Own	Own
Distance from place to enterprise			
Cost of use			
Purpose of use	Bee-rearing	Bee rearing	Bee rearing
2. Honey extractor			
Ownership	Own	Own	Own
Source of funding	Own	Own	Own
Distance from place to enterprise	-	-	-
Cost of use	-	-	-
Purpose of use	Honey extraction	Honey extraction	Honey extraction
Sample Size	**30**	**30**	**60**

Intensity of Resource Use

Intensity of resource use in Table 6.15 reveals that there was a need of skill at high level for running the enterprise whereas, in case of supervision it required moderate level of intensity in the enterprise. Further table reveals that there was high need of hired labour, supervision, skill, equipments, and labour etc.

Table 6.15: Intensity of Resource use in Important Process Involved in Production for Bee-keeping Enterprise (2004-05)

Particulars	Bringing the bee hives & migration of bees	Care of bee hives	Feeding	Honey extraction	Marketing of honey
Need for family labour	High	Low	Low	High	High
Need for hired labour	High	Low	Low	High	Low
Supervision	High	Moderate	Moderate	Moderate	Moderate
Skill	High	High	High	High	Moderate
Equipment	High	Moderate	Moderate	High	Low
Time	High	Low	Low	Moderate	Low
Labour intensive	High	Low	Low	Moderate	Low

Employment

Employment scenario indicates in Table 6.16 that at overall level 798 days required to run the enterprise. Out of total employment 65 per cent labour of male and 35 per cent of female required in the enterprise. The use of higher labour of male may be due to the reason of migratory nature of enterprise, which required more male labour. Comparatively trainees were utilizing higher labour as compared to non-trainees. This enterprise is generating 232 days for hired labour, which was about 40 per cent of labour required in the enterprise.

Table: 6.16: Employment of Labour for Bee-keeping Enterprise of the sample Women Entrepreneurs (2004-05)

(Mandays/annum)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	136 (45.00)	-	156 (158.00)	-	292 (51.00)	-
Female	160 (55.00)	-	114 (42.00)	-	274 (49.00)	-
Total	296 (100.00)	-	270 (100.00)	-	566 (100.00)	-
Hired						
Male	112 (100.00)	100	120 (100.00)	100	232 (100.00)	100
Female	-	-	-	-	-	-
Total	112 (100.00)	100	120 (100.00)	100	232 (100.00)	100
Overall						
Male	248 (61.00)	-	276 (71.00)	-	524 (65.00)	-
Female	160 (39.00)	-	114 (29.00)	-	274 (35.00)	
Total	408 (100.00)	-	390 (100.00)	-	798 (100.00)	-
Sample	30	-	30	-	60	-

Note: Figures in parentheses are the percentages to the total in each column.

Fixed Capital

Per box fixed capital for bee keeping was recorded 2883 rupees at over all level (Table 6.17). The highest (Rs.1247) fixed cost required for bee keeps for honey extractor, knives and tray etc. followed by bee hive (Rs.1162). Both these head of fixed capital required about 84 per cent of the total fixed costs. The distribution of fixed capital among trainees and non-trainees may be observed similar in the table.

Table 6.17: Fixed Capital per box for the Bee-keeping Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
Bee hive	196885 (1165)	290000 (1160)	486885 (1162)
Four frame bee colonies	54925 (325)	80000 (320)	134925 (322)
Hive stand	14365 (85)	20000 (80)	34365 (82.0)
Honey extractor, knife, tray etc.	211250 (1250)	311250 (1245)	522500 (1247)
Smoker, net, brush, gloves, etc.	8450 (50)	12500 (50)	20950 (50.0)
Honey storage containers	3380 (20.0)	5000 (20)	8350 (20.0)
Total	489255 (2895)	718750 (2875)	1208005 (2883.0)
Sample Size	**30**	**30**	**60**

Economics of Beekeeping

Economics of bee keeping presented in Table 6.18 reveals that net return on per colony accounted rupees 98. In this table it may be seen that out of total costs of rupees 1361 about 44 per cent were fixed costs and 56 per cent were the variable costs. Similarly out of total gross returns 70 per cent were from honey production followed by 22 per cent from bee wax and remaining 8 per cent from additional increase in colonies. The low level of returns was due to the reason of continuously decreasing prices of honey as well as non-availability of support price from of the government. It is very surprising that with in 5 years of span, prices reduced @ 50 per cent in the study region. Further table 6.19 reveals that in comparison of other costs actual material and imputed labour costs recorded high (Rs. 1361/-). In case of profits these were highest over cost D as compared to costs A and C.

Table 6.18: Economics of Bee-keeping with per box for bee-keeping Women Entrepreneurs (2004-05)

(Rs.)

Particulars	With Training	Without Training	Total
1. Fixed Costs (FC)			
Initial Investment	2883	2895	2875
i) Interest on fixed capital @ 12% p.a.	347	345	346
ii) Depreciation on equipment @ 10%	257	255	256
Total Fixed Cost (TFC)	**604**	**600**	**602**
2. Variable Cost (VC)			
i) Comb foundation sheets	360	370	366
ii) Sugar	84	86	85
iii) Sulphur	5	4	4
iv) Human Labour	250	235	242
v) Misc. Expenses	18	20	19
vi) Interest on VC at 12 % for 6 months	43	43	43
Total Variable Cost (TVC)	**760**	**758**	**759**
3.Total Cost (TFC+TVC)	**1364**	**1358**	**1361**
4. Gross Returns			
i) Honey Production (Rs 40/kg)	1000	1040	1024
ii) Beeswax production	110	105	107
iii) Additional increase in colonies	340	320	328
Total	1450	1465	1459
5. Net returns over total cost	**86**	**107**	**98**
6. Net returns per colony	**86**	**107**	**98**
Sample Size	**30**	**30**	**60**

Prospects

Table 6.20 indicates that about half of the entrepreneurs do not want to continue the enterprise in same way may be due to non-remunerative prices. More than 50 per cent of the entrepreneurs would like to expand the enterprise subject to the condition of financial availability. Non-trainees of the enterprise demanding training to run the trade..

Table 6.19: Average Annual Production, Costs and Profits Associated with Bee-keeping Enterprise for Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
1. No. of bee colonies	169	250	419
2. Total Production (kgs.)	25	25	25
3. Total costs involved (Rs.)	1364	1358	1361
(i) Total cost actual (A)	1114	1123	1119
(ii) Total cost actual material and imputed labour (C)	1364	1358	1361
(iii) Total cost without resource overhead (D)	760	758	759
3. Gross returns (Rs.) (E)	1450	1465	1459
4. Total profits gained (Rs.)			
(i) Total profits imputed output actual cost (E-A)	336	342	340
(ii) Total profits imputed output imputed labour cost (E-C)	86	107	98
(iii) Total profits imputed output resource overhead cost (E-D)	690	707	700
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Table 6.20: Prospects of Bee-keeping Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	-	-	-
Planning to expand same enterprise	20 (66.67)	12 (40.00)	32 (53.33)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	-	-	-
Planning to continue if finance available	12 (40.00)	14 (46.67)	26 (43.33)
Asking for training	-	30 (100.0)	30 (50.0)
Planning to close down	-	-	-
Sample Size	**30**	**30**	**60**

Vermi-Compost

Profile of Women Entrepreneurs

Age, relation to head and Education

In table 6.21 it may be observed that 32 per cent of the entrepreneurs were belonging to the age group of 15 to 25 and 26 to 35 years. This shows vermi- compost was preferred by the young women of the enterprise. In case of relation to head of the family only 3 per cent women entrepreneurs were the head of the family as they were widow. Other-wise, head of the household was the husband or parents-in-laws of the women. Most of the women (47%) were educated primary to school pass and the percentage of this category of education may be observed high among trainees.

Table 6.21: Profile of Women Entrepreneurs in Vermi compost Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age group in years			
15 to 25	27.00	37.00	32.00
26 to 35	40.00	23.00	32.00
36 to 55	13.00	13.00	13.00
Above 55	20.00	27.00	23.00
Relation to Head			
Self	7.00	-	3.00
Spouse	93.00	100.00	97.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or primary	20.00	23.00	22.00
Primary to school passed	53.00	40.00	47.00
Higher Education	20.00	20.00	20.00
At least primary & vocational training	7.00	17.00	12.00
Sample Size	**30**	**30**	**60**

House, Income, Social Class and Marital Status:

Structure of the house mentioned in Table 6.22 reveals that 50 per cent houses of entrepreneurs were Kutcha but slowly turning towards semi pucca houses. In case of household income all the entrepreneurs have more than one lac of rupees of their annual income. This may be due to the reason of employment in service sector of male members in the family. Majority (77%) of the women entrepreneurs were belonging to other backward class. Regarding marital status table reveals that only 7 women themselves were their head of the family as they are widows. The others are living with their husband or parents in laws as head of the family.

Table 6.22: Profile of Women Entrepreneurs in Vermi compost Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	20.00	13.00	17.00
Semi-pucca	33.00	33.00	33.00
Kutcha	47.00	54.00	50.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	-	-	-
50000 to 100000	-	-	-
> 100000	100.00	100.00	100.00
Social Class			
General	17.00	23.00	20.00
SC	6.00	-	3.00
ST	-	-	-
OBC	77.00	77.00	77.00
Marital Status			
Married	93.00	100.00	97.00
Married Widow	7.00	-	3.00
Separated	-	-	-
Unmarried	-	-	-
Sample Size	**30**	**30**	**60**

Nature of Product

This enterprise is newly introduced and entrepreneurs have purchased vermi-compost on very nominal prices and had started its growth for self use as well as for sale. Table 6.23 revealed that this product has demand and generally marketed locally.

Table 6.23: Nature of Product Produced by the Sample Women Entrepreneurs in Vermi compost Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	100.00	100.00	100.00
Medicinal	-	-	-
New	100.00	100.00	100.00
Traditional	-	-	-
Perishable	-	-	-
Fragile	-	-	-
Whether locally marketed	100.00	100.00	100.00
Accreditation	-	-	-
Sample Size	**30**	**30**	**60**

Intensity of Resource

Table 6.24 shows that only intensity for family labour was little higher when compared to need of hired labour, supervision skill equipment etc.

Table 6.24: Intensity of Resource use in Important Process Involved in Production for Vermi compost Enterprise (2004-05)

Particulars	Animal	Agricultural waste	Forestry Wastes	Marketing
Need for family labour	High	Moderate	Moderate	Low
Need for hired labour	Low	Low	Low	Low
Supervision	Low	Low	Low	Low
Skill	Low	Low	Low	Low
Equipment	Low	Low	Low	Low
Time	Moderate	Moderate	Moderate	Moderate
Labour intensive	Low	Low	Low	Low

Employment of Labour

Employment of labour for vermi-compost reflects in Table 6.25 that this enterprise required very low level of labour. On an average 60 entrepreneurs were employing 36 days annually out of which female labour was recorded 69 per cent. The per cent age of female participation was high among non-trainees.

Table: 6.25: Employment of Labour for Vermi compost Enterprise of the Sample Women Entrepreneurs (2004-05)

(Mandays/annum)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	12 (33.00)	-	10 (28.0)	-	11 (31.0)	-
Female	25 (67.00)	-	25 (72.00)	-	25 (69.00)	-
Total	37 (100.00)	-	35 (100.00)	-	36 (100.00)	-
Hired						
Male	-	-	-	-	-	-
Female	-	-	-	-	-	-
Total	-	-	-	-	-	-
Overall						
Male	12 (33.00)	-	10 (28.00)	-	11 (31.00)	-
Female	25 (67.00)	-	25 (72.00)	-	25 (69.00)	-
Total	37 (100.00)	-	35 (100.00)	-	36 (100.00)	-
Sample Size	30	-	30	-	60	-

Note: Figures in parenthesis denote the percentage to total each column.

Economics of Vermi-Compost

Table 6.26 depicts that this enterprise is highly paying and total return per annum was recorded 6813 rupees. In case of costs involved for preparation of vermi-compost table indicates that out of total costs (Fixed and variable) of

rupees 2229 about 92 per cent accounted for variable costs in which higher costs (Rs. 975) involved for labour followed by cost of input (Rs.750) and harvesting and packing (Rs.315). Returns of non-trainees remained slightly higher as compared to trainees. In table 6.27 it may be observed that among cost A,C and D only cost D has shown highest amount whereas, profits over cost A recorded high.

Table 6.26: Economics of Vermi compost for Women Entrepreneurs (2004-05)

(Rs.)

Particulars	With Training	Without Training	Total
1. Fixed Costs (FC)			
Initial Investment	1300	1150	1225
i) Interest on fixed capital @ 12% p.a.	156	138	147
ii) Depreciation on equipment @ 10%	40	45	42
Total Fixed Cost (TFC)	**196**	**183**	**189**
2. Variable Cost (VC)			
Cost of Input	750	750	750
Labour	1000	950	975
Harvesting & Packing	330	300	315
Total Variable Cost (TVC)	2080	2000	2040
3.Total Cost (TFC+TVC)	**2276**	**2183**	**2229**
4. Gross Returns	4500	4500	4500
Total			
5. Net returns over total cost	2224	2317	2271
6. Net returns per pit	2224	2317	2271
7. No. of preparation per year (2224x2)	2	2	2
8. Total net return per year	**4448**	**4634**	**4542**
Sample Size	**30**	**30**	**60**

Prospects

The prospects of this enterprise looks very bright as Table 6.28 reveals that 92 per cent of the entrepreneurs would like to continue the enterprise in the same way. However 5 per cent were interested in expanding the same

enterprise. In fact, this enterprises is newly introduced and slowly farmers has started feeling the value of vermi-compost in favour of organic farming which has became the need of modern agricultural production

Table 6.27: Average Annual Production, Costs and Profits Associated with Vermi compost Enterprise for Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
1. Tank Size 100 sq. mts.			
2. Total Production (kgs.)	1500	1500	1500
3. Total costs involved (Rs.)			
(i) Total cost actual (A)	196	183	189
(ii) Total cost actual material and imputed labour (C)	1080	1050	1065
(iii) Total cost without resource overhead (D)	2080	2000	2040
3. Gross returns (Rs.) (E)	4500	4500	4500
4. Total profits gained (Rs.)			
(i) Total profits imputed output actual cost (E-A)	4304	4317	4311
(ii) Total profits imputed output imputed labour cost (E-C)	3420	3450	3435
(iii) Total profits imputed output resource overhead cost (E-D)	2420	2500	2460
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Table 6.28: Prospects of Vermi compost Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	30(100.00)	25(83.00)	55(92.00)
Planning to expand same enterprise	-	5(17.00)	5(8.00)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	-	-	-
Planning to continue if finance available	-	-	-
Asking for training	-	30 (100.00)	30 (50.00)
Planning to close down	-	8 (27.00)	8 (13.00)
Sample Size	**30**	**30**	**60**

Chips Potato

Socio-Economic Characteristics

Age, Relation and Education

Table 6.29 indicates that majority (40%) of the women entrepreneurs were belonging to the age group of 26 to 35 years. This reflects that this age group has more awareness for strengthening women entrepreneurs. Further, table shows that 100 per cent of the women has husband as their head of the family. Education of these entrepreneur reveals in table that majority (57%) of the women qualified primary to school pass followed by no schooling or primary (23%) primary and vocational training (12%) and higher education (8%).

Table 6.29: Profile of Women Entrepreneurs in Chips- Potato Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age group in years			
15 to 25	17.00	30.00	23.00
26 to 35	47.00	33.00	40.00
36 to 55	20.00	17.00	18.00
Above 55	16.00	20.00	19.00
Relation to Head			
Self	-	-	-
Spouse	100.00	100.00	100.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or primary	20.00	27.00	23.00
Primary to school passed	67.00	47.00	57.00
Higher Education	-	16.00	8.00
At least primary & vocational training	13.00	10.00	12.00
Sample Size	**30**	**30**	**60**

Houses, Income, Costs and Marital Status

Structure of the houses presented in table 6.30 reveals that about 37 per cent of the women entrepreneurs were living in semi-pucca houses followed by 32 per cent in pucca and 31 per cent in kutcha. This shows structure of the houses turning from kutcha to pucca in the study region. Further table shows that all the women entrepreneurs of chips potato have more than one lacs of their annual income. In case of social status 55 per cent of the entrepreneurs were belonging to other backward classes whereas 45 per cent belonged to general class of the society. Marital status reveals in table that 100 per cent of the women entrepreneurs were married.

Table 6.30: Profile of Women Entrepreneurs in Chips- Potato Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	33.00	30.00	32.00
Semi-pucca	40.00	33.00	37.00
Kutcha	27.00	37.00	31.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	-	-	-
50000 to 100000	-	-	-
> 100000	100.00	100.00	100.00
Social Class			
General	67.00	23.00	45.00
SC	-	-	-
ST	-	-	-
OBC	33.00	77.00	55.00
Marital Status			
Married	100.00	100.00	100.00
Married Widow	-	-	-
Separated	-	-	-
Unmarried	-	-	-
Sample Size	**30**	**30**	**60**

Nature of Product

The study district is very famous for the production of chips potato in Himachal Pradesh. Though, this enterprise is traditional but agricultural practices required specific technology to save the product from diseases. Presently this crop attacked by a disease which originates especially at the time of harvesting. In this concern KVK has introduced a eco-friendly treatment by drying leaves of Phulanu, Pudina, eucalyptus, Ritha etc. and had shown better results. The product is fragile in nature therefore, entrepreneurs growing chips potato needs to market the produce immediately after harvest. However, the treatment provided by scientists proved helpful to protect and store the produce for a month or two. Intensity of resource mentioned in Table 6.31 shows that intensity of need for family labour remained high as compared to need of hired labour supervision, skill, equipment and time etc.

Table 6.31: Nature of Product Produced by the Sample Women Entrepreneurs in Chips- Potato Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	-	-	-
Medicinal	100.00	100.00	100.00
New	100.00	100.00	100.00
Traditional	-	-	-
Perishable	-	-	-
Fragile	-	-	-
Whether locally marketed	100.00	100.00	100.00
Accreditation	-	-	-
Sample Size	**30**	**30**	**60**

Table 6.32: Intensity of Resource use in Important Process Involved in Production for Chips- Potato Enterprise (2004-05)

Particulars	Bringing the raw material	Marketing
Need for family labour	High	High
Need for hired labour	-	-
Supervision	Low	Low
Skill	Low	Low
Equipment	Low	Low
Time	Low	Low
Labour intensive	Low	Moderate

Employment of Labour

Employment of labour scenario presented in Table 6.33 reveals that on an average this entrepreneur was generating 88 days of employment annually among trainees and non –trainees . In this employment 60 per cent of labour contributed by female among trainees and non-trainees and table shows that only family labour has been utilized in the enterprise. Participation of female trainees labour remained marginally higher when compared to non-trainees.

Table: 6.33: Employment of Labour for Chips- Potato Enterprise of the Sample Women Entrepreneurs (2004-05)

(Mandays/annum)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	36 (40.00)	-	37 (42.00)	-	36 (40.00)	-
Female	54 (60.00)	-	51 (58.00)	-	52 (60.00)	
Total	90 (100.0)		88 (100.0)	-	88 (100.0)	
Hired						
Male	-	-	-	-	-	-
Female	-	-	-	-	-	-
Total	-	-	-	-	-	-
Overall						
Male	36 (40.00)	-	37 (42.00)	-	36 (40.00)	-
Female	54 (60.00)	-	51 (58.00)	-	52 (60.00)	
Total	90 (100.0)		88 (100.0)	-	88 (100.0)	
Sample size	30	-	30	-	60	-

Note: Figures in parenthesis are the percentage to each column.

Economics of Chips Potato

Economics of chips potato presented in Table 6.34 reveals that out of total cost of rupees 52276 about 99 per cent were accounted for variable costs. Further table shows that among all costs use of raw material remained high (85%) as compared to other crops. In this table it may be observed that on an average the net returns were rupees 20699 in the enterprise and these returns were slightly higher among non-trainees. In case of profits over different costs table 6.35 reveals that total profits were recorded highest (Rs. 25114/-) in cost A followed by C and D.

Table 6.34: Economics of Chips- Potato for Women Entrepreneurs (2004-05)

(Rs.)

Particulars	With training	With out training	Overall
1. Fixed Costs (FC)			
Initial Investment	11987	12425	12162
i) Interest on fixed capital @ 12% p.a.	280	260	275
ii) Depreciation on equipment @ 10%	322	320	321
Total Fixed Cost (TFC)	602	580	596
2. Variable Cost (VC)			
(i) Raw material (Inputs)	44558	44452	44529
Family labour	7200	7000	7151
Total Variable Cost (TVC)	51758	51452	51680
3.Total Cost (TFC+TVC)	52360	52032	52276
4. Gross Returns	71925	74550	72975
5. Net returns over total cost	19565	22518	20699
Sample Size	**30**	**30**	**60**

Prospects

Net returns from the enterprise reveal that this trade is viable and it may be due to the fact that about 60 per cent of the entrepreneurs prefer to continue the enterprise in the same way. But 40 per cent were in the opinion that they would like to expand the enterprise. All the non-trainees were in view that

training should be provided so that new technology in the field of various operation of cultivation may be adopted.

Table 6.35: Average Annual Production, Costs and Profits Associated with Potato- Chips Enterprise for Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
1. Total Production (Qtls)	13700	14200	13900
2. Total costs involved (Rs.)			
(i) Total cost actual (A)	47647	48257	47861
(ii) Total cost actual material and imputed labour (C)	57147	57457	57287
(iii) Total cost without resource overhead (D)	63745	63877	63842
3. Gross returns (Rs.) (E)	71925	74550	72975
4. Total profits gained (Rs.)			
(i) Total profits imputed output actual cost (E-A)	24278	26293	25114
(ii) Total profits imputed output imputed labour cost (E-C)	14778	17093	15688
(iii) Total profits imputed output resource overhead cost (E-D)	8180	10673	9133
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Table 6.36: Prospects of Chips- Potato Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	20 (66.00	18 (60.00)	38 (64.00)
Planning to expand same enterprise	10 (34.00)	12 (40.00)	22 (40.00)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	-	-	-
Planning to continue if finance available	-	-	-
Asking for training	-	30 (100.00)	30 (50.00)
Planning to close down	-	-	-
Sample Size	**30**	**30**	**60**

Diversification

Profile of Women Entrepreneur

Age, Relation and Education

Age, of the women entrepreneurs presented in Table 6.37 reveals that 45 per cent of the entrepreneurs were belonging to the age group of 26 to 35 years of age followed by 28 per cent in the age group of 36-55 years of age. This shows majority of the entrepreneur were belonging to youth. In this table it may also be observed that 3 per cent of the women were widows and were the head of the family. However 97 per cent of the women have husband or parent in-low as their head of the family. Further, table reveals that level of education was recorded very high in the enterprise. There were only 20 per cent of the entrepreneurs either have not attended school or have education up to primary. The highest 62 percentage of women in the category of primary to school passed and 15 per cent could be able to achieve higher education.

Table 6.37: Profile of Women Entrepreneurs in Diversification Enterprise, (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age group in years			
15 to 25	27.00	23.00	25.00
26 to 35	57.00	33.00	45.00
36 to 55	16.00	40.00	28.00
Above 55	-	4.00	2.00
Relation to Head			
Self	3.00	3.00	3.00
Spouse	97.00	97.00	97.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or primary	23.00	17.00	20.00
Primary to school passed	63.00	60.00	62.00
Higher Education	14.00	17.00	15.00
At least primary & vocational training	-	6.00	3.00
Sample Size	**30**	**30**	**60**

House, Income, Caste and Marital Status

Structure of the houses indicates in Table 6.38 that majority of the structure either were semi-pucca (45%) or pucca (28%). The percentage of kutcha houses was highest 44 per cent among the group of trainees. It may be due to the fact that this group of non-trainees was residing in a very congested atmosphere of kutcha houses where conversion from kutcha to pucca was tough due to thickly constructed houses. On an average 50 per cent of the entrepreneurs have their income between 25 to 50 thousands whereas, 50 per cent have their income above one lac rupees annually. Majority of the entrepreneurs (78%) were belonging to general cast and only 7 per cent of the entrepreneurs women were widows and others were married.

Table 6.38: Profile of Women Entrepreneurs in Diversification Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	33.00	23.00	28.00
Semi-pucca	57.00	33.00	45.00
Kutcha	10.00	44.00	27.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	33.00	67.00	50.00
50000 to 100000	-	-	-
> 100000	67.00	33.00	50.00
Social Class			
General	100.00	57.00	78.00
SC	-	-	-
ST	-	-	-
OBC	-	43.00	22.00
Marital Status			
Married	100.00	93.00	97.00
Married Widow	-	7.00	3.00
Separated	-	-	-
Unmarried	-	-	-
Sample Size	**30**	**30**	**60**

Nature of Product

Diversification is a traditional enterprise but still it has developed in some patches of the study district. The entrepreneurs of this enterprise use to cultivate brinjal, cucumber, bitter guard, tomato and cabbage and the department of agriculture as well as KVK has introduced some varieties and providing technology for expansion of the enterprise. These vegetables are perishable in nature and due to this factor 100 per cent of the entrepreneurs were selling their product in local markets (Table 6.39) immediately after harvesting. This enterprise is labour intensive and intensity of resource use was high in case of family labour.

Table 6.39: Nature of Product Produced by the Sample Women Entrepreneurs in Diversification Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	-	-	-
Medicinal	-	-	-
New	-	-	-
Traditional	100.00	100.00	100.00
Perishable	30.00	30.00	30.00
Fragile	70.00	70.00	70.00
Whether locally marketed	100.00	100.00	100.00
Accreditation	-	-	-
Sample Size	**30**	**30**	**60**

Table 6.40: Intensity of Resource use in Important Process Involved in Production for Diversification Enterprise (2004-05)

Particulars	Bringing the raw material	Marketing of Vegetable
Need for family labour	High	High
Need for hired labour	Low	Low
Supervision	Low	Low
Skill	Low	Low
Equipment	Low	Low
Time	Moderate	Moderate
Labour intensive	High	High

Employment

Employment of labour in diversification enterprise presented in Table 6.41 reveals that on an average this enterprise used to generate an employment of 201 days annually and participation of female labour was high (57%) when compared to male. Number of days employed among non-trainees was higher when compared to trainees. In this table it may also be observed that there is a scope for hired labour also. In case of family labour utilization table shows that on an average employment of 197 days was generated in the enterprise and out of which participation of women remained higher (58%). Employment generated among trainees was high (61%) among female when compared to non-trainees.

Table: 6.41: Employment of Labour for Diversification Enterprise of the Sample Women Entrepreneurs (2004-05)

(Mandays/annum)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	75 (39.00)	-	91 (45.00)	-	83 (42.00)	-
Female	117 (61.00)	-	112 (55.00)	-	114 (58.00)	-
Total	192 (100.00)	-	203 (100.00)	-	197 (100.00)	-
Hired						
Male	4 (100.00)	80.00	5 (100.00)	80.00	4 (100.00)	80.00
Female	-	-	-	-	-	-
Total	4 (100.00)	80.00	5 (100.00)	80.00	4 (100.00)	80.00
Overall						
Male	79 (40.00)	-	96 (46.00)	-	87 (43.00)	-
Female	117 (60.00)	-	112 (54.00)	-	114 (57.00)	-
Total	196 (100.00)	-	208 (100.00)	-	201 (100.00)	-
Sample	30	-	30	-	60	-

Note: Figures in parenthesis denote the percentage to total in each column.

Economics of Diversification

Economics of diversification shows in Table 6.42 that on an average, per hectare net returns over total costs were rupees 31834 in the enterprise. These returns were recorded higher among non-trainees. In case of various costs involved in the enterprise about 98 per cent were belonging to total variable costs. In variable costs the costs on raw material accounted about 58 percent, which may be observed slightly higher among non-trainees. In table 6.43 it may also be seen that total profits in actual costs remained highest (Rs. 49983/-) when compared cost C and D.

Table 6.42: Economics of Diversification with 10 colonies for Chips-Potato Women Entrepreneurs (2004-05)

(Rs./ha)

Particulars	With training	Without training	Total
1. Fixed Costs (FC)			
Initial Investment	11692	10975	11524
i) Interest on fixed capital @ 12% p.a.	549	519	542
ii) Depreciation on equipment @ 10%	256	259	257
Total Fixed Cost (TFC)	805	778	799
2. Variable Cost (VC)			
Raw material	21605	21932	21680
Human Labour			
Family Labour	14381	16316	14834
Total Variable Cost (TVC)	35986	38248	36514
3.Total Cost (TFC+TVC)	36791	39026	37313
4. Gross Returns	70155	65848	69147
5. Net returns over total cost	33364	36822	31834
Sample Size	**30**	**30**	**60**

Prospects

Prospects of the enterprise indicates in Table 6.44 that majority (83%) of the entrepreneurs were in opinion that they would like to continue the enterprise in the same way. However, 17 per cent were in favors to expand the same enterprise. The entrepreneurs those were planning to expand the enterprise belong to the group of non-trainees.

Table 6.43: Average Annual Production, Costs and Profits Associated with Diversification Enterprise for Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
1. Total production (kg.)	11200	10100	10600
Total costs involved			
2. (i) Total cost actual A.	19181	19112	19164
(ii) Total cost actual			
Material and imputed labour	22410	22710	22479
(iii) Total cost without			
Resource overhead (D)	35986	38244	36514
3. Gross Return (Rs.) E	70155	65848	69147
4. Total profit			
(i) Total profits imputed output actual cost E-A	50974	46736	49983
(ii) Total profit imputed output imputed labour cost (E-C)	47745	43138	46668
(iii) Total profits imputed output resource overhead cost E-D.	34169	27602	32633
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Table 6.44: Prospects of Diversification Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	30 (100.0)	20 (66.0)	50 83.00)
Planning to expand same enterprise	-	10 (64.00)	10 (17.00)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	-	-	-
Planning to continue if finance available	-	-	-
Asking for training	-	20 (66.00)	20 (33.00)
Planning to close down	-	-	-
Sample Size	**30**	**30**	**60**

Fishery

Profile of Women Entrepreneurs

Age, Relation and Education

Age of women entrepreneur reflects in Table 6.45 that majority (45%) of the women was belonging to the age group of 26 to 35 years of age followed by 32 per cent in the age group of 36 to 55 years of age. This shows majority of the young women entrepreneur in these age groups has shown preference for the enterprise. Further table shows that there were only 3 women who were the head of the family as they were widows. About 98 per cent of the women have husband or parents-in-lows as their head of the family. In this table it may also be observed that majority of the women have their education up to primary to school pass and 7 per cent of the women were either illiterate or primary.

Table 6.45: Profile of Women Entrepreneurs in Fishery Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
Age group in years			
15 to 25	17.00	27.00	22.00
26 to 35	57.00	33.00	45.00
36 to 55	26.00	37.00	32.00
Above 55	-	3.00	1.00
Relation to Head			
Self	-	3.00	2.00
Spouse	100.00	97.00	98.00
Daughter	-	-	-
Others	-	-	-
Education			
No schooling or primary	27.00	37.00	32.00
Primary to school passed	67.00	43.00	55.00
Higher Education	6.00	7.00	7.00
At least primary & vocational training	-	13.00	6.00
Sample Size	**30**	**30**	**60**

Houses, Income, Casts and Marital Status

Structure of the houses mentioned in Table 6.46 indicates that only 30 per cent of the women entrepreneurs were living in kutcha houses. However majority (37 and 33 per cent) of the entrepreneurs were living in pucca or semi pucca houses. In case of income of the entrepreneurs table shows that 100 per cent were having income above one lac of rupees. Regarding distribution of women entrepreneurs in casts table shows that majority (58%) of the respondents were belonging to other backward class and 27 per cent of general caste. Among these women, 2 percent of non-trainees were widow and 98 per cent were married.

Table 6.46: Profile of Women Entrepreneurs in Fishery Enterprise (2004-05)

(Percent)

Particulars	With Training	Without Training	Overall
House			
Pucca	33.00	40.00	37.00
Semi-pucca	33.00	33.00	33.00
Kutcha	34.00	27.00	30.00
Household Income (Rs.)			
< 25000	-	-	-
25000 to 50000	-	-	-
50000 to 100000	-	-	-
> 100000	100.00	100.00	100.00
Social Class			
General	47.00	7.00	27.00
SC	-	30.00	15.00
ST	-	-	-
OBC	53.00	63.00	58.00
Marital Status			
Married	100.00	97.00	98.00
Married Widow	-	3.00	2.00
Separated	-	-	-
Unmarried	-	-	-
Sample Size	**30**	**30**	**60**

Nature of Product

Nature of the product presented in Table 6.47 revealed that this was the traditional occupation. It was the occupation of a particular caste of the society named '*Zheever'* who performed this occupation and use to collect fishes through nets from mini rivers for marketing to the villagers. The study area is the foot hills region of the State and will prove very suitable for fishery under new technology. Under this technology fishery will be treated as commercial output and use to rear in tanks. Though this enterprise is in initial stage but it has demand in the market hence, 100 per cent of the produce sold locally (Table 6.47). The intensity of resource use remained high for family labour (Table 6.48).

Table 6.47: Nature of Product Produced by the Sample Women Entrepreneurs in Fishery Enterprise (2004-05)

(Percent)

Nature of Product	With Training	Without Training	Total
Processed	-	-	-
Medicinal	-	-	-
New	-	-	-
Traditional	100.00	100.00	100.00
Perishable	30.00	30.00	30.00
Fragile	70.00	70.00	70.00
Whether locally marketed	100.00	100.00	100.00
Accreditation	-	-	-
Sample Size	**30**	**30**	**60**

Table 6.48: Intensity of Resource use in Important Process Involved in Production for Diversification Enterprise (2004-05)

Particulars	Bringing the raw material	Marketing
Need for family labour	High	High
Need for hired labour	Low	Low
Supervision	Low	Low
Skill	Low	Low
Equipment	Low	Low
Time	Moderate	Moderate
Labour intensive	High	High

Employment

Employment scenario of the enterprise mentioned in Table 6.49 shows that this enterprise require very less employment in various operation and on an average generating 29 days of employment. In this employment participation of female labour was observed high (58%). Along with this participation of female labour among trainees was higher (62%) when compared to non-trainees. There was no scope of hired labour in this enterprise.

Table: 6.49: Employment of Labour for Fishery Enterprise of the Sample Women Entrepreneurs (2004-05)

(Mandays/annum)

Labour	With Training		Without Training		Total	
	Mandays	Wage Rate	Mandays	Wage Rate	Mandays	Wage Rate
Family						
Male	5 (38.00)	-	7 (44.00)	-	12 (41.00)	-
Female	8 (62.00)	-	9 (56.00)	-	17 (58.00)	-
Total	13 (100.00)	-	16 (100.00)	-	29 (100.00)	-
Hired						
Male	-	-	-	-	-	
Female	-	-	-	-	-	
Total	-	-	-	-	-	
Overall						
Male	5 (38.00)	-	7 (44.00)	-	12 (41.00)	-
Female	8 (62.00)	-	9 (56.00)	-	17 (58.00)	
Total	13 (100.00)	-	16 (100.00)	-	29 (100.00)	
Sample	30	-	30	-	60	-

Note: Figures in parenthesis denote the percentage to total in each column.

Economics of Fishery

Economics of fishery presented in Table 6.50 reflects that on an average the net returns over total costs were rupees 655 which were higher among trainees when compared to non-trainees of the study. In case of costs table

shows that out of total costs of rupees 2020 about 56 were variable costs. In this enterprise the percentage of fixed cost remained higher when compared to other enterprise may be due to construction of tank for fishes. In this enterprise total profits on cost D (Table 6.51) were recorded higher as compared to cost A and C.

Table 6.50: Economics of Fishery for Women Entrepreneurs (2004-05)

(Rs./ha)

Particulars	With training	Without training	Total
1. Fixed Costs (FC)			
Initial Investment	6000	7000	6500
i) Interest on fixed capital @ 12% p.a.	720	840	780
ii) Depreciation on equipment @ 10%	120	110	115
Total Fixed Cost (TFC)	840	950	895
2. Variable Cost (VC)			
Seed lings	150	170	160
Dung	100	110	105
Lime	15	15	15
Feed	340	350	345
Labour	400	450	425
Misc.	50	100	75
Total Variable Cost (TVC)	1050	1195	1125
3.Total Cost (TFC+TVC)	1890	2145	2020
4. Gross Returns (kg.)	2650	2700	2675
Total			
5. Net returns over total cost	760	555	655
6. Net returns per 100 sqmt tank.	760	555	655
Sample Size	**30**	**30**	**60**

Prospects

Detail of the prospects of fishery presented in Table 6.51 reveals that only 42 per cent of the entrepreneurs planning to continue the same enterprise and 58 per cent were in favour of expansion of the trade. Regarding planning to add new product each of the entrepreneur either demanding government support (45%) or finance (53%) from any source. This shows entrepreneurs have understood the viability of the entrepreneur but assistance especially for construction of tank required immediate assistance from the government.

Table 6.51: Average Annual Production, Costs and Profits Associated with Fishery Enterprise for Women Entrepreneurs (2004-05)

Particulars	With Training	Without Training	Total
Tank size 100 sq.mts.			
1. Total production	53	54	53.5
Total costs involved			
2. (i) Total cost actual A.	1390	1345	1490
(ii) Total cost actual			
Material and imputed labour C	1490	1695	1595
(iii) Total cost without			
Resource overhead (D)	1050	1195	1125
3. Gross Return (Rs.) E	2650	2700	2675
4. Total profit			
(i) Total profits imputed output actual cost E-A	1260	1355	1185
(ii) Total profit imputed output imputed labour cost (E-C)	1160	1005	1080
(iii) Total profits imputed output resource overhead cost E-D.	1600	1505	1550
Sample Size	**30**	**30**	**60**

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Table 6.52: Prospects of Fishery Enterprise as Revealed by Women Entrepreneurs (2004-05)

(% Multiple response)

Particulars	With Training	Without Training	Total
Planning to continue in the same way	10 (33.00)	15 (50.00)	25 (42.00)
Planning to expand same enterprise	20 (64.00)	15 (50.00)	35 (58.00)
Planning to add new products	-	-	-
Planning to continue if Govt. support available	18 (60.00)	10 (33.00)	28 (47.00)
Planning to continue if finance available	12 40.00)	20 (64.00)	32 (53.00)
Asking for training	-	20 (64.00)	20 (33.00)
Planning to close down	-	-	-
Sample Size	**30**	**30**	**60**

CHAPTER 7

VIABILITY OF ENTERPRISE

Farm management problem in India vary from place to place depending largely upon the degree of agricultural development and the availability of resources. Some of the most common problems in farm management and planning are: (i) small size of farm business, (ii) farm as household, (iii) inadequate capital, (iv) under employment of finally labour, (v) slow adoption of farm innovations, (vi) inadequacy of farm input supplies, (vii) lack of adequate managerial skills, and (viii) lack of adequate communication systems and marketing facilities (Johl and Kapur 1973). The average size of holdings in India and in the State is decreasing due to excessive pressure of population. This combined with excessive family labour depending upon agriculture has weakened the financial position of the farmers and limited the scope for further expansion. In India, the farms are not only small and sub-divided but they are also fragmented. The fragmentation is a great obstacle to economic cultivation and is responsible, to great extent, for increased overhead costs and under utilization of human resources.

According to Keating (1912) “the economic size of farm is one which allows a man chance of producing sufficient to support himself and his family in a reasonable comfort after paying his necessary expenses (cited in Tandon and Dhandyal 1962 p. 55). In this regard Mann (1917) writes “it should be enough to maintain a family at the minimum standards of life” (cited in Tandon and Dhondyal 1962 p. 55). However, Johl and Kapur (1977) explained the importance of farm on broader lines. They mentioned that through the process of mechanization, commercialization and modernization, farming has gone beyond its framework of merely providing the necessities of life to the farm family. Now the farmer producers not only to meet his family subsistence needs, but at the same time he endeavors to produce maximum surplus to be sold in the market to

buy some non-farm products for fuller satisfaction of life. This has made agricultural production market oriented and has introduced a business content in the farming profession.

Hence, suitable planning specially based on new technology is the need of the time. In fact, technology is defined as a body of knowledge. It is believed that knowledge brings desirable changes in human behaviour. This behavioral change may be in people's attitude, belief, skill, understanding and perception, but transfer of technology is the most important need for any type of change to be brought about in individual's mind. Technology refers to the spread of new ideas from originating sources to ultimate consumer. Technology has no use unless it is accepted and adopted by the people. In any programme of rural development, the strategy should not only to strive to transfer of technology to increase agricultural production, but also ensure the all round development with proper planning. In this concern approach of HPKVV Palampur to provide technology for various enterprises has been discussed and viability of enterprises has been presented as follows.

Production Costs and Profits

Annual production, costs and profits associated with different enterprises for women entrepreneur presented in Table 7.1. In this table production costs and profits has been worked out of different enterprises and discussed individually. In case of dairy it may be observed from the table that total production of milk was 4225 kg. For the production of this quantity various costs involved were cost A, B, C and D. The method of calculation of these costs has been presented in the end of the table. As per this method total net return over cost D. were recorded highest in diversification rupees 46668 (Per hectare) followed by chips potato Rs. 15688 (per hectare), dairy Rs.11855 (per unit of 3.3 animals), vermi compost rupees 3435 (per vermi bed 3x6 feet), fishery rupees 1080 (per 100 sq. meter tank), and beekeeping rupees 98 (per box). In this table it may also be observed that total net return over traditional enterprises like dairy, diversification and chips potato were in higher rank when compared to new

enterprises like beekeeping, vermi compost and fishery. New enterprises were the only enterprises where imputed material and labour costs were zero.

Table 7.1: Annual Production, Costs and Profits Associated with Different Enterprises for Women Entrepreneurs (2004-05)

Categories	Dairy	Bee Keeping	Vermi Compost	Chips-Potato	Diversifications	Fishery
1. Average scale of production (Kg.)	4225	25	1500	13900	10600	53.5
2. Total Costs involved (Rs.)						
i) Total cost actual (A)	4340	1119	189	47861	19164	1490
ii) Total cost imputed material and labour (B)	9510	242	876	9426	3315	105
iii) Total cost actual material and imputed labour (C)	8572	1361	1065	57287	22479	1595
iv) Total cost without resource overhead (D)	11534	759	2040	63842	36514	1125
3. Gross Returns (Rs.) (E)	20427	1459	4500	72975	69147	2570
4. Total profits gained (Rs.)						
i) Total profits imputed output actual cost (E-A)	16087	340	4311	25114	49983	1185
ii) Total profits imputed output imputed material labour cost (E-B)	10917	1217	3624	63549	65832	2675
iii) Total profits imputed output imputed labour cost (E-C)	11855	98	3435	15688	46668	1080
iv) Total profits imputed output resource overhead cost (E-D)	8893	700	2440	9133	32633	1550
Sample Size	60	60	60	60	60	60

Note: A – Total cost excluding the cost of home owned farm produced material and family labour; C – Total cost including the cost of home owned farm produced material and excluding the cost of family labour; D – Total cost excluding the fixed cost.

Standard Deviation

Table 7.2 reveals that standard deviation for total profits input-output actual cost in traditional enterprises is higher than the new enterprises which indicates profits in new enterprise are more uniformly distributed than the traditional enterprises. Similar results are observed in case of total profits imputed output

imputed labour cost and total profits imputed output resource overhead cost. But on analyzing the coefficient of variation for the profits in traditional and new enterprises, the results indicate that profits in traditional enterprises one more consisting as compared to new enterprises.

These variations in the results may be due to one fact that in traditional enterprises which include dairy, Chips- Potatoes and diversification some women entrepreneurs are not getting their due share or remunerating prices for their products. Whereas, in case of new enterprises like beekeeping, Vermi compost and fishery, women entrepreneurs are more aware about the market condition and they are getting remunerating prices for their products.

Table 7.2: Standard Deviation & Coefficient of Variation in Annual Profits Associated with Different Enterprises for Women Entrepreneurs (2004-05)

Profits	Traditional Enterprises		New Enterprises	
	Std. Dev.	CV (%)	Std. Dev.	CV (%)
Total profits imputed output actual cost	17554.17	57.75	2091.84	107.53
Total profits imputed output imputed material labour cost	-	-	-	-
Total profits imputed output imputed labour cost	19089.25	77.17	1714.93	111.53
Total profits imputed output resource overhead cost	13637.54	80.76	870.08	55.66

Note: Std. Dev. = Standard Deviation; CV= Coefficient of Variation; N = 180 for each for traditional and New Enterprises

Source of Raw Material

Source of raw material for different enterprises presented in Table 7.3 reveals that mostly farm produced raw material was used in dairy , diversification and chips potato in the shape of grass and FYM respectively. Regarding supply of raw material to new enterprises it was partly purchased locally or out side the village. Seed for chips potato and fertilizer far diversification were the main raw material which generally purchased partially from outside or from particular agency.

Table 7.3: Source of Raw Material for Different Enterprises (2004-05)

Particulars	Dairy				Bee-keeping			Vermi compost	
	Feed	Fodder	Straw	Oil	Sugar	Medicines	Comb sheets	Dung	Forest Waste
Farm Produced	None	Mostly	Mostly	None	None	None	None	All	Partially
Locally Produced & procured	None	Partly	Partly	None	Partially	None	None	Partially	Partially
Purchased Outside	Partially	None	None	All	Partially	All	All	Nil	Nil
Supplied agency	Mostly	None	None	Nil	Nil	None	None	Nil	Nil

Contd.

Particulars	Chips- Potatoes			Diversifications			Fishery		
	Eucalyptus	Adhatoda Viasica	Azdira chata	Seed	F.Y.M.	Fertilizer Pesticides	Feeding	Dung	Lime/ Feed
Farm Produced	Nil	Nil	Nil	Partially	All	Nil	Nil	All	Nil
Locally Produced & Procured	All	All	All	Partially	Partially	Nil	Partially	Nil	Partially
Purchased Outside	Nil	Nil	Nil	Partially	Nil	All	Partially	Nil	Partially
Supplied Agency	Nil	Nil	Nil	Partially	Nil	Partially	Nil	Nil	Nil

Labour use and Employment

Table 7.4 shows that fishery has shown highest number of labour days. This was because of the reason that fishery is the enterprise which required 8 month for harvesting the crop hence, required higher number of days. However, the number of days utilized for production of one quintal of produce vary between 0.63 days to 8 days among dairy, beekeeping, vermi compost, chips potato and diversification. Further table shows that use of female labour in production of one quintal of produced observed high when compared to male. In case of hired labour it may be seen highest in beekeeping due to migratory nature of bee boxes at adjoining States of the study area under which use of hired labour was the general practice.

Table 7.4: Labour Use and Employment Potential for Sample Women Entrepreneurs (2004-05)

(Days/qtl.)

Labour	Dairy	Be-keeping	Vermi Compost	Chips-Potato	Diversifications	Fishery	Overall
Family							
Male	1.45	2.78	0.73	0.26	0.78	4.45	
Female	3.40	2.62	1.67	0.37	1.07	3.14	
Total	4.86	5.40	2.40	0.63	1.85	7.59	
Hired							
Male	0.44	2.21	-	-	0.04	-	
Female	0.31	-	-	-	-	-	
Total	0.75	2.21	-	-	0.04	-	
Overall							
Male	1.90	5.00	0.73	0.26	0.82	4.45	
Female	3.71	2.61	1.67	0.37	1.07	3.14	
Total	5.61	7.61	2.40	0.63	1.89	7.59	
Sample	60	60	60	60	60	60	360

Note: Figures in parenthesis are the percentages to the total in each column.

Gender Dimension in Resource Use Tendency

The detail of the tendency of resource use mentioned in Table 7.5 reveals that resource use tendency of male labour was high in the enterprise of beekeeping and diversification. This was because of the reason of demand for migratory male labour in beekeeping and participation of only male labour in the operation of ploughing respectively. In case of female labour tendency it was almost high or moderate except fishery. Further, table reveals that beekeeping and fishery require low level of land when compared to other enterprises. The use of common land/property may also be observed in beekeeping under which bees collect their food from this type of land.

Table 7.5: Gender Dimension in Resource Use Tendency and Employment for Different Enterprises (2004-05)

Labour	Dairy	Bee keeping	Vermi Compost	Chips-Potato	Diversifications	Fisheries
Labour (male) intensive	Moderate	High	Low	Moderate	High	Moderate
Labour (female) intensive	High	Moderate	Moderate	High	High	Low
Land intensive	High	high	High	High	High	Low
Water intensive	Low	Low	Low	Moderate	Moderate	High
Electricity/power intensive	Low	Low	Low	Low	Low	Low
Use of common land/property	Moderate	High	Moderate	Moderate	Moderate	Low

Problems

Problems faced by different enterprises classified into various heads and presented in Table 7.6. In this table the highest 62 per cent of enterprises complaints that there was a problem of marketing of the produce. Further table shows that this problem was highest in beekeeping and vermi-compost followed by diversification, and dairy .and the percentage of said response vary between 75 to 100 per cent. However, in case of chips potato and fishery enterprises were almost satisfied with their marketing system. Table also reveals that 53 per cent of the enterprise complains about unfavorable market and percentage of these enterprises observed higher in vermi-compost and dairy (83%) followed by beekeeping and diversification (75%). The response of the enterprises on lack of capital, technical deficiency, problems related with raw material vary between 33 per cent to 37 per cent among differed enterprises. Discussion concludes that high competition in the product of dairy, beekeeping and diversification created various marketing problems among entrepreneurs.

Table 7.6: Nature of Problems Faced by the Sample Women Entrepreneurs (2004-05)

(% Multiple Response)

Labour	Dairy	Be-keeping	Vermi Compost	Chips Potato	Diversifications	Fishery	Overall
Lack of capital	67.0	28.0	-	8.00	25.00	70.00	33.00
Unfavorable market	83.00	75.0	83.00	-	75.00	3.00	53.00
Technical deficiency	17.00	18.00	53.00	58.00	17.00	50.00	36.00
Packaging	8.00	12.00	13.00	-	58.00	17.00	18.00
Marketing problem	75.00	100.00	100.00	-	92.00	3.00	62.00
Raw material	50.00	30.00	8.00	27.00	50.00	58.00	37.00
Labour problem	25.0	67.00	-	8.00	17.00	13.00	22.00
Transport	17.0	75.00	17.00	7.00	8.00	8.00	22.00
Power of water	-	-	-	-	17.00	10.00	4.00
Safety	-	50.00	-	-	13.00	37.00	17.00
Problems as woman	8.00	92.00	-	8.00	30.00	47.00	31.00
Farm work	17.00	13.00	-	12.00	17.00	3.00	10.00
Sample Size	60	60	60	60	60	60	360

CHAPTER 8

EVALUATION OF ENTREPRENEUR'S TRAINING

The profile of trainee and non-trainees women entrepreneurs have already been discussed in respect of age groups in years, relation to head, structure of houses, household income, social class, marital status and crop activities of the enterprises in chapters six. The reason behind similarity was nothing but to similar sample in both of the cases among selected enterprises. In this chapter the detail of usefulness of training programme as perceived by the trained women and comparison of profits between trained and non-trained enterprises has been presented.

Regarding training, Himachal Pradesh Krishi Vishvavidyalya, Palampur H.P. developed a few innovative approaches that proved very helpful in implementing the plan work of enterprise development through Institution Village Linkage Programme (IVLP). A brief description of said innovative methodologies which proved very helpful in implementation of training programme and has been discussed as follows.

IVLP- Family Identity Card

A unique yellow card depicting family code number based on space analysis, name of the head of the family, his/her preferred module of interventions was issued to each and every family of the project operational area. This yellow card is an identity of the client and his choice of intervention module. This innovative idea helped a lot in executing the planned programmes in general and issuance of critical inputs in particular.

Information Corners

In consultation with the farmers, the spots that were visited frequently by most of the farmers during a day or a week were selected as information corners. A yellow chart depicting IVLP programme of the day, date, purpose of meeting, special information's required to be passed on to the farmers was pasted on the selected spot so that the information to be passed on to the clientele, percolate to each and every family of the village. This was found to be very helpful in distribution of critical inputs, and demonstrations and organizing trainings and joint field visits. In the days to come this innovation will prove one of the best and cheapest tools in the hands of extension agents for reaching farmers with minimum time, efforts and cost.

Introduction of Agro-Tech Custom Hiring Service

This service to the farming community was introduced for the first time in Himachal Pradesh through IVLP in 1996. Five unemployed youths were trained by the core team of IVLP for operating various sprayers; sale of pesticides, improved useful in spraying weedicides, pesticides etc in various crops. They have been earning Rs.80-100/- per day and providing good service by way of increasing the productivity. While two other have opened their shops and are selling latest and improved varieties of vegetables, cereals and pesticides with the consultation of the core team members. This approach helped lot in adoption of technology by providing the critical inputs in the vicinity of the villages. The poly house available in village Sunehar was utilized for the production of off-season vegetable nurseries for which otherwise farmers were solely dependent on the Plaines of Punjab and U.P.

Technology Prescription Slip

Innovation of technology information prescription mode proved very effective in adoption of technology not only in the operational area but also helped in achieving the objective. This is like a prescription slip used by a medical practitioner. This innovation was found to be result oriented in general

and good means for fast adoption of technology (not the mandate of IVLP) by the farmers unaware of tested technology at their farm in particular.

Formation of Farmers' Clubs

These clubs strengthened the participatory approach and helped the core team in implementing various programmes of the project successfully. This approach helped in strengthening the linkage between scientists and the farmers. Under these approaches of trainings to different enterprises the important findings that emerged out from this study have been summarized in following order.

Training programme and their usefulness

Training is an essential part before initiating new enterprise. In certain traditional enterprises women have expertise from their family members. But in the era of new technology training for a particular enterprise has became a need of the time. In this concern Table 8.1 shows that in the study area the participation of State Agriculture University has shown excellent coverage and providing training to different enterprises. In this table it may be observed that 50 percent of the entrepreneurs availed facility of training from extension department of the agriculture university. Though various camps and demonstrations use to be organized by the department of agriculture but in these camps target oriented approach has been followed and generally field staffs of extension distribute inputs either on free of cost or on subsidy to the farmers. No special programme based on women empowerment has been introduced especially after 2004.

Table 8.1: Training Received from Different Institutions by the Sample Women Entrepreneurs (2004-05)

(% Multiple Response)

Departments	Entrepreneurs						
	Dairy	Bee-keeping	Vermi Compost	Chips-Potato	Diversifications	Fishery	Overall
Sample size (No.)	60.00	60.00	60.00	60.00	60.00	60.00	60.00
State Agri. Deptt.	-	-	-	-	-	-	-
State Agri. Univ.	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Extension Deptt.	-	-	-	-	-	-	-
Central Govt.	-	-	-	-	-	-	-
Any other	-	-	-	-	-	-	-
No training received	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Sample size	60	60	60	60	60	60	360

Dairy

Due to inadequate availability of green fodder, balanced feed, proper feeding, the milk production was low in study area. Therefore, according to the needs of milch animal the KVK Berthin under the guide-lines of Directorate of Extention education HPKVV Palampur developed a formula for preparing balanced feed which was mainly based on maize, barley and wheat etc. The KVK Berthin organized number of training camps both at village as well as at KVK head quarter both for men and women. Up to August 2002 about 10 courses of training on animal science were conducted under which 106 men and 93 women were trained. At the same time 32 courses were also organized by scientists of KVK on livestock production and management under which 420 men and 422 women were trained for maintaining livestock under new approach of KVK Berthin. The information about training was obtained from village level workers as well as progressive farmers of the village. The main purpose of trainees was to understand about maintaining dairy on modern lines. Table 8.2 indicate that majority of the trainees were of the view that training has proved to

be the stepping stone for management of dairy enterprise as well as up-gradation of skill and It has been able to developed knowledge among them. Generally, it was the common perception of the trainees that due to non-remunerative prices it becomes difficult for them to repay bank credit. In this concern 48 percent of the women entrepreneurs were in opinion that better returns always proved helpful for easy access to obtain credit. At overall level 83 percent of the women entrepreneurs were in opinion that training has helped in gaining knowledge of product, process and market.

Beekeeping

The bee research station Nagrota Bagwan of Himachal Pradesh Krishi Vishvavidyalaya, Palampur is one of the oldest pioneer research and training centre in Northern India. This research station proved very useful for the apiculturists of district Kangra and honey from this district became famous in Indian markets. During 2001 the Directorate of Extension HPKVV, Palampur launched a programme for women empowerment under which research stations KVK, Nagrota Wagwan started providing beekeeping technology to women. The main aim of the training was to motivate women to join this enterprise especially in areas adjacent to research station. Under this training programme the scientists of this research station conducted 32 courses during 2000 to 2004 and provided training to 864 persons among which about 40 per cent were women. Majority of the trainees attended training courses at research station, which is situated with in 15 km. of the study area. In table 8.2 it may be observed that 87to93 per cent of the trainees accepted that without training it was almost impossible to get knowledge about management of bees and up-gradation of skill. Majority of the trainees felt that credit was absolutely necessary for smooth running of the enterprise which has been facilitated by the training. The training has made a huge difference in knowledge of product, process and market. All trainees were unanimous that enterprise can provide better returns but since it is a very delicate and sensitive enterprise and hence required regular links between scientists and training especially at initial stage.

Vermi-compost

Introduction of vermi-compost by KVK Kangra has been effective technology for re-germinating soil degraded from higher use of fertilizer and insecticides/pesticides. The procedure adopted for introduction of this enterprise by KVK Kangra proved to be effective. The scientists of KVK trained a progressive farmer at Sunehar village for vermi-compost who had also made a tour to Hyderabad University prior to joining KVK. The said farmer brought worms from Hyderabad and provided technical guidance for storing multiplication and selling of worms. The main hurdle proved to be hesitation of women in application of worms. The hesitation was the result of the fact that production decreased for about four year on farms under vermi-compost. For compensating this loss, Department of agriculture installed a poly-house for growing nursery of vegetable crops. This was distributed to farms under vermi-compost. The experiment proved as the loss from opting vermi-compost was compensated by growing vegetables. As a result they started sparing a piece of land for vermi-compost especially in cereal crops. Therefore, this village became the plate-form for training to villagers especially women. In Table 8.2. It may be observed that majority (100%) of the respondents were able to get training within the village and felt that the motivation has also increased knowledge about the enterprise.

Chips Potato

Under this enterprise cultivation of spring potato in district Kangra particularly in is very famous and this region is exporting about 25,000 M. Tonnes potato annually to neighbouring States. Generally this potato used for making potato chips. The crop in the area was infested by potato tuber moth at the time of harvesting and storage. Farmers were using chemical dust, which was not eco-friendly and safe to consume. With the inception of ATMA in the district safe storage devices vise Chips- Potatoes/pheromones traps along with ensuring good market price were successfully introduced and popularized. To popularize these devices KVK Kangra provided training to the villagers especially women who were the major contributor of labour for operating this enterprise. Majority of

the entrepreneurs (above 90 percent) were in view that training has proved very helpful in up gradation of skill and had gained knowledge about product, process and market. This enterprise has shown better performance in coverage of cultivation of potato among groups of women (Table 8.2).

Diversification

In this enterprise the scientists of KVK ensured availability of seedlings of disease resistant varieties of vegetable as per the demand of farmers through poly-house technology and trained entrepreneurs for such diversifications. The response to such efforts may be observed by the progress made through training. During 2001, this intervention was introduced by ATMA through KVK and in six villages covering 10 ha. Of land. In second stage this activity has been successfully replicated in 11 villages there by covering more than 30 ha. area and during the third year activity was further extended to 60 more villages thus, covering total area of 85 ha. The major concentration of training was on female entrepreneurs as they are mainly responsible for all operations/activities. Majority of the trainees felt that training proved very helpful for managing vegetable crops and most importantly was useful in gaining knowledge about the product, process and market (Table 8.2).

Fishery

This is the only occupation which required less investment but due to lack of awareness as well as technology, farmers, could not benefit from this enterprise. At present in hilly State of H.P. availability of water is in plenty through springs, rivers, ponds and lakes etc and provides ideal situation for inland fishery enterprise. Keeping this fact under consideration HPKVV Palampur launched a programme since last 5 years back and started providing technological training to both men and women. In Himachal Pradesh this enterprise proved very successful in district Kangra (study area) of the State may be due to the reason of low hill zone of H.P. where, regular supply of water through *kuhls* is available. On the other hand dependency on import of fish has

increased the demand far local production. After availing training there were a few entrepreneurs who had maintained the tank as per guidelines and were enjoying better returns. During the course of study it was observed that one of the trainee belonged to Brahmin caste (socially restricted to run this enterprise) indicating that social stigma attached to this enterprise was gradually melting down. In table 8.2 it may be seen that each of the trainees were in view that training has helped them to gain knowledge about product, process and market.

Table 8.2: Usefulness of Training Programmes as perceived by the Trained Sample Women Entrepreneurs (2004-05)

(% Multiple Response)

Usefulness	Entrepreneurs						
	Dairy	Bee keeping	Vermi Compost	Chips Potato	Diversifications	Fishery	Overall
Sample size (No.)	30	30	30	30	30	30	180
For initiating enterprise	47.00	67.00	97.00	87.00	40.00	90.00	71.00
Up gradation of skill	83.00	93.00	88.00	90.00	80.00	73.00	83.00
Easy access to credit	33.00	73.00	-	7.00	83.00	90.00	48.00
Not usefulness	13.00	7.00	-	-	-	-	3.00
To gain knowledge of product, process and market	83.00	87.00	100.00	93.00	73.00	100.00	89.00
Sample Size	60	60	60	60	60	60	360

Profitability of Enterprises

Dairy

In Table 8.3 the enterprise's profits, purchase of raw material and marketing of produce has been discussed and compared between trainees and

non–trainees of dairy product. In this table it may be seen that profitability for the dairy enterprises was lower for trained entrepreneurs. Though the numbers of milch cattle among non-trainees were lower but profitability (per kg.) remained higher on different costs involved in the process. This may be due to the reason of scatter ness of non-trainees surrounding town where opportunities of marketing of produce followed by demand for milk were high as compared to trainees generally residing away from said site. Further this table shows that majority (97%) of the entrepreneurs of both the trainees purchasing (raw material) and selling milk in local market of village.

Table 8.3: Comparison of Trained and Non-trained Women Entrepreneurs in Dairy Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	**30**	**30**	**60**
2. No. of milch animals	**3.40**	**3.20**	**3.30**
3. Avg. production (ltrs.)	**4409**	**4020**	**4225**
4. Profitability (Rs/Kg.)			
i) Total profits imputed output actual cost	3.67	3.97	3.80
ii) Total profits imputed output imputed material labour cost	2.49	2.69	2.58
iii) Total profits imputed output imputed labour cost (Rs/Kg.)	2.70	2.93	2.80
iv) Total profits imputed output resource overhead cost (Rs/Kg.)	2.06	2.16	2.10
5. Percent of Entrepreneurs procured raw material from the market			
Local	100.00	93.00	97.00
Nearby	-	7.00	3.00
National	-		
6. Percent of entrepreneurs sold products in the market			
Local	100.00	93.00	97.00
Nearby	-	7.00	3.00
National	-	-	-
Sample Size	**30**	**30**	**60**

Beekeeping

In Table 8.4 it may be seen that though level of production in both cases of trainees and non-trainees was the same but profitability on per kg of produce may be observed high among non-trainees. This may be due to the reason that it was the only enterprise where provision of subsidy was higher especially in

reserved casts and many of the entrepreneurs were interested in subsidy instead of enterprise which resulted into lower profits. Whereas, non-trainees were expert due to adoption of the enterprise since long span of time. During the course of study it was observed that migration of bees especially at adjoining States like Punjab and Haryana was the main problem to the trainees as this activity is tough to be managed. However, traditional entrepreneurs were in practice to perform this activity in groups of entrepreneurs. Majority of the entrepreneurs were purchasing raw material and selling product locally.

Table 8.4: Comparison of Trained and Non-trained Women Entrepreneurs in Bee-keeping Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	**30**	**30**	**30**
2. No. of bee-colonies	**169**	**250**	**419**
3. Average production (kgs.)	**25**	**25**	**25**
4. Profitability (Rs./kg.)			
i) Total profits imputed output actual cost	13.14	13.68	13.60
ii) Total profits imputed output imputed labour cost	3.44	4.28	3.92
iii) Total profits imputed output resource overhead cost	27.60	28.28	28.00
5. Percent of Entrepreneurs procured raw material from the market			
Local	83.00	67.00	75.00
Nearby	17.00	33.00	25.00
National	-	-	-
6. Percent of entrepreneurs sold products in the market			
Local	90.00	73.00	82.00
Nearby	10.00	27.00	18.00
National	-	-	-
Sample Size	**30**	**30**	**60**

Vermi Compost

In table 8.5 it may be seen that per pit average production among trainees and non-trainees was the same but returns were slightly higher among non-trainees. It is because of the reason that this enterprise was newly introduced in the region and it was observed that a few of the entrepreneurs of trainees prefer to apply compost in their farms whereas, non-trainees putting efforts for

multiplicity by selling the worms. At the same time it was observed that trainees had started understanding the value of organic production and prefers to apply worms in their fields. Further table reveals that all the entrepreneurs procuring raw material and selling produce in local market.

Table 8.5: Comparison of Trained and Non-trained Women Entrepreneurs in Vermi-compost Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	30	30	60
2. Avg. production (Kgs.)	1500	1500	1500
3. Profitability (Rs./Pit)			
i) Total profits imputed output actual cost	2.87	2.87	2.87
ii) Total profits imputed output imputed material labour cost	2.28	2.30	2.29
iii) Total profits imputed output imputed labour cost	1.61	1.67	1.64
4. Percent of Entrepreneurs procured raw material from the market			
Local	100.00	100.00	100.00
Nearby	-	-	-
National	-	-	-
5. Percent of entrepreneurs sold products in the market			
Local	100.00	100.00	100.00
Nearby	Nil	Nil	Nil
National	Nil	Nil	Nil
Sample Size	**30**	**30**	**60**

Chips Potato

Comparison of trained and non-trained women entrepreneurs of chips potato has presented in Table 8.6. In this table it may be seen that average production of trained entrepreneurs was lower level but profits per kg of product on imputed labour cost was high when compared to non-trained entrepreneurs. This may be due to the fact that KVKs Kangra has innovated new technique for the control of newly developed disease which use to attack immediately after

harvesting of the crop. The eco-friendly treatment of this disease proved very helpful to the trained group of society and prices of treated produce remained high in the market. Further table shows that 100 percent of the raw material purchased locally and similarly produce has also been marketed to local traders.

Table 8.6: Comparison of Trained and Non-trained Women Entrepreneurs in Chips potato Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	**30**	**30**	**60**
2. Total production (Kgs)	**13700**	**14200**	**13900**
3. Profitability			
i) Total profits imputed output actual cost	177	1.85	1.80
ii) Total profits imputed output imputed material labour cost	1.07	1.20	1.13
iii) Total profits imputed output imputed labour cost	1.67	0.75	0.65
4. Percent of Entrepreneurs procured raw material from the market			
Local	100.00	100.00	100.00
Nearby	-	-	-
National	-	-	-
5. Percent of entrepreneurs sold products in the market			
Local	90.00	100.00	95.00
Nearby	10.00	-	5.00
National	-	-	-
Sample Size	**30**	**30**	**60**

Diversification

Table 8.7 shows that training group has shown better production followed by high returns on imputed labour cost as compared to non-trainees where returns were higher on imputed output actual costs. This may be due to the reason of low level of technology adopted by non-trainees which required less costs in different inputs. Further table shows that about 87 per cent of the raw

material and 82 per cent of the produce use to be sold at nearby markets situated at the radius of 15-20 kms.

Table 8.7: Comparison of Trained and Non-trained Women Entrepreneurs in Diversification Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	**30**	**30**	**60**
2. Total production (Kgs)	**11200**	**10100**	**10600**
3. Profitability			
i) Total profits imputed output actual cost	4.55	4.62	4.71
ii) Total profits imputed output imputed material labour cost	4.26	4.27	4.40
iii) Total profits imputed output imputed labour cost	3.05	2.73	3.07
4. Percent of Entrepreneurs procured raw material from the market			
Local	20.00	7.00	13.00
Nearby	80.00	93.00	87.00
National	-	-	
5. Percent of entrepreneurs sold products in the market			
Local	27.00	10.00	18.00
Nearby	73.00	90.00	82.00
National	-	-	-
Sample Size	**30**	**30**	**60**

Fishery

In Table 8.8 it may be seen that the average production was almost the same but profits on per kg of output were high among non- trainees as compared to trainees. Again this trend indicates that paid out costs among trainees were high due to prescribed feed and general care of among trainees which resulted into low level of returns among trainees especially on paid out or actual costs. However, profits on imputed labour costs were high among trainees., Further table shows that majority of the raw material (65%) use to be purchased in near by market whereas; produce has sufficient market in the village.

Table 8.8: Comparison of Trained and Non-trained Women Entrepreneurs In Fishery Enterprise (2004-05)

Particulars	With Training	Without Training	Total
1. Sample Size (No.)	**30**	**30**	**60**
2. Total production (Kgs)	**53**	**54**	**53.50**
3. Profitability (Rs. /kg.)			
i) Total profits imputed output actual cost	23.77	25.09	22.15
ii) Total profits imputed output imputed material labour cost	21.88	18.61	20.18
iii) Total profits imputed output imputed labour cost	30.18	27.87	28.97
4. Percent of Entrepreneurs procured raw material from the market			
Local	40.00	30.00	35.00
Nearby	60.00	70.00	65.00
National	-	-	
5. Percent of entrepreneurs sold products in the marke100.00t			
Local	100.00	-	100.00
Nearby	-	-	-
National	-		-
Sample Size	**30**	**30**	**60**

CHAPTER 9

CONCLUSION

The prioritized problems of enterprises have been tackled effectively on the basis of in depth study on “Viable Entrepreneurial Trades of women in Agriculture. The results so obtained have been discussed in the light of women’s practice and perspective, scientific intervention, status of scientific intervention over farmer’s practice and women reaction (results and their acceptability). The important findings that emerged from this study have been presented in this chapter.

Need for Public Action

(i) Viable Enterprises

The study, on the basis of cost and return structure of different enterprises under consideration indicates that dairy, chips potato and diversification were the highly viable enterprises whereas, beekeeping, vermi-compost and fishery have not yet become more viable, may be due to the fact that these enterprises have been of recent origin and may take some more time to attain the status of high level of viability.

(ii) Compatible of Women’s Aspiration

It has been observed that prior to their involvement in the enterprises; they were dependent on men folk for their financial and emotional requirements. In fact, women were deprived from their independence in carrying out various activities of daily life especially production activities. The intervention made by HPKVV, Palampur through Directorate of Extension have shown positive results and has met the women’s aspirations. During the course of study it was observed that women have started feeling independent especially after receiving training either at KVKs or in village level training programmes. The women of trainees groups were of the opinion that by attending training on various aspects also helped them in getting the status in the society where they are able to interact on equal

footing which has been the result of positive change in their mental attitude. This ultimately positively changed their family atmosphere.

Required Public Support to Women

Among major supports like finance, market, quality transport, space and material etc. it was demanded by the entrepreneurs that marketing especially in old enterprises i.e. dairy, chips potato and diversification required public support for ensuring remunerative prices to the producers and steps be taken so that higher level of market margin among traders are reduced. On the other hand the entrepreneurs of vermi-compost were demanding premium pricing for organic products for which no special arrangement for certification and hence higher prices has been made. The entrepreneurs of fishery and beekeeping needed support for ensuring the easy and cheap availability of credit as these enterprises required higher level of initial investment for starting these enterprises. The produce of all the studied enterprises has established its quality in various markets of northern India. There has been observed no need for public support in case of transport and material etc.

Need For Training Programmes

Though number of training programmes have been introduced by KVKs but still there are certain enterprise like floriculture and cultivation of medicinal herbs and aromatic plants which required immediate attention for developing its cultivation. These enterprises proved very beneficial in hill farming therefore, training programme for these enterprises should be arranged as their cultivation can be profitably taken up even on small and marginal holdings. Some of the studies have indicated that these crops are comparatively more profitable as compared with traditional cereal crops. These products have better demand in India and abroad in pharmaceutical and cosmetic industry and study area is the suitable region for the production of said crops. The training process adopted for enterprises under study are also required to be conducted in future with regularity

so that the knowledge of respondents is refreshed and they are kept abreast with the latest production and marketing techniques. In case of non-trainees all were in view that they should not be deprived from the facility of training.

Need for General Education

General education is the necessary element for generating better understanding of the development programmes. In case of vermi-compost it became very tough initially to make understand and convince the women farmers about the need and importance of organic means of cultivation. The farmers in general and women in particular were not in favors of vermi-compost due to the fear of decrease in production which they thought would persist for 4 to 5 years.

It is due to general education provided by progressive farmer as well as scientists of KVK Kangra which convinced and motivated the female farmers for adoption of organic means of production for sustainable agriculture in the form of application of worms. It required a long period of 4 to 5 years for rejuvenating and regenerating the soil as a result of application of fertilizer and pesticides over a long period of time. Similarly general education in bee-keeping and fishery had also played a very important role in running these enterprises on the modern scientific lines for ensuring the sustainable production and profits which is a primary motivating force. This clearly indicated the importance of formal and informal education aimed at women associated with these enterprises. Since, vermi-compost, beekeeping and fishery were the new enterprises hence, such efforts had to be intensified for realizing the desired results.

B. Harbinger of Change

Factor of Success

The system adopted by scientists of HPKVV, Palampur for introduction of enterprises as means of empowering women has clearly shown efficacy of training. The participation of scientist and women either at KVKs or in the farms was the practical approach involving lot of hard work for both the parties. The

role of hard work in newly introduced enterprise especially of fishery has been recommended by the beneficiaries in all respect and was the example of proper co-ordination among scientists and respondents. Similarly, efforts of Mr. Amar Singh (representative farmer of KVK Kangra) for introducing vermi-compost is another example of hard work and mutual understanding and trust. It would have been very difficult to introduce the enterprise of vermi-compost without the help of this farmer who has excellent knowledge of enterprise and local conditions. At present respondents enjoy desired co-operation from their family members.

During the course of study it was observed that enterprise of fishery felt that government support for providing subsidy for construction of tanks and other development efforts, irrespective of castes, are not keeping pace with the efforts of institution and villagers. This mismatch in the efforts is proving to be a decelerating force for the development of the enterprise in the area. If such type of government support could be available then time will come, respondents felt, that there will be a good market for fish in study district which will be ably matched by the production. This is because of the fact that Himachal Pradesh is a hilly State and availability of water for fishing at different altitude/zones is very suitable for developing enterprise of various varieties in different agro-climatic zones of the State. In case of old units i.e. dairy, Chips potato and diversification, the respondents were putting very hard work may be due to the reason of higher returns as well as regular contact with respective KVKs. Government support in the field of marketing under provision of remunerative prices of their produce by breaking the monopoly of traders may prove very helpful in advancement of enterprises. In case of bee keeping lack of infrastructure in KVK has become the main hindrance in participation of scientists in the field which is directly affecting the fallow up as well as efficiency of scientists.

Role of Institutions

The structure of institution has been classified into government, banks, training agencies, panchayat, women organization and family it self which have different important roles to play. Prior to these training programmes, the women

had to rely on information provided by organizations like Mahila Mandals, assisted and supported by State government through panchayats. This organization encourages women to sit together in the village and frame various plans for the welfare of the whole society. Such institutions have solved number of problems of different training institutions like KVKs and other State government institutions those are concerned with empowerment of women.

Impact of Enterprises

(i) Household Income and Standard of Living

The old entrepreneurs under diversification, chips potato and dairy, enterprises, had significantly improved their standard of living. Many have constructed brick and cement houses and have been providing better education to their children. Further training in such old enterprises to women proved very effective in the sense that women started thinking about their deprived status and ways to improve it. Introduction of feed mixture to the milch animal and technological guidance for tending these animals have proved to be important aspects under training on various aspect concerning milch. Similarly, under diversification and chips potato, women have been able to operationalise their ideas of developing viable units which ultimately has positively affected their income and standard of living. There is another section of the society of women which has not been able to generate sufficient income from their new enterprises i.e. fishery, beekeeping and vermin compost but they are sure that in coming time these enterprises will definitely prove to be viable enterprises for which they have been putting their best efforts and also generating resources from non-farm sector.

Impact on Women Position

The introduction of training and subsequent involvement in carrying out the enterprise encouraged the women in such way that they started feeling boldness and activeness in daily life. This also helped in inculcating the quality of leadership in them. The change helped in development of coordination among

men and women. This synergic relationship helped in relaxing the burden and drudgery of both. The sense of co-operation has become a dominating force. The uplifting women from drudgery proved highly successful. There has been increase in their knowledge and they are ready and better equipped to face any challenge in professional and personal life. During the course of study majority of the women revealed that they keep each discussion during training in mind while performing any activity of their enterprises.

Non Farm Employment and Agriculture

Among women there was hardly any trend to generate non-farm income in the absence of industry and other avenues like construction activities. However, men have employment in service, pension and labour and assisting women for participation in their selected enterprises.

Appendix I: Comments on Draft Study Report entitled Viable Entrepreneurial Trades for Women in Agriculture in Himachal Pradesh

1. I have made markings on the reports, which I now return to you along with this document. I would request you to go through all my comments and give your thought to them while revising. As I always emphasize I only make suggestions on which you may have different ideas. But please take note.

2. At the outset let me please convey, and this is not just for you, this is a coordinated study across various regions in India. From the report I find the researchers have faced varying realities. Some have not found many trainees, some have essentially studied beneficiaries of some specific programme(s) but surveyed alongside a control group of entrepreneurs with no training and others found no entrepreneurs without training in the area. Please do not assume we know anything of your objective and study group and clearly specify who you are sampling in the Chapter on objective and method.

3. Please expand all the abbreviations used at least once (with the abb. In bracket) or you may give a list of specifications at the end or beginning of report.

4. Please keep sample results and secondary results (as from Census) separate. Secondary information may be cited again in discussing sample results for comparison. In chapter 4, I am unable to fathom whether you are discussing your results (Pg 43).

5. Please give and discuss only beneficiary results in all cases (bring the B/NB comparison only in training chapter) for more clarity of the Tables. In other words I suggest omit reporting for NB except in Training chapter.

6. Only percentage values would be sufficient in all tables and last rows can give the sample sizes. In any cases the sample sizes remain unaltered. Both

values and percentages make table messy. Also Bilaspur and Kangra need not be mentioned in all tables (that is explained in sampling).

7. In chapter 3,4 and 5 the tables may give a last column for entire sample (of beneficiaries only) for all enterprises and you can mostly discuss using these results.

8. First para of each chapter can give our objectives for that chapter, sources of data and plan briefly and not go into substantial things.

9. All units in Tables have to be clearly specified. This is a major problem.

10. Please give hours per day on average time spent by entrepreneurs woman on various activities/leisure etc.

11. Please address these issues in the report (a) cooperation from men for the women in household work and enterprise (b) dependence on men/spouse for enterprise work (c) role of SHG and Banks in promoting these enterprises (d) Interest rates paid for banks/private credit (e) how product is marketed and inadequacies.

All the comments were taken into consideration while finalizing the report. These comments have been incorporated, wherever necessary, in the relevant chapters.

(C.S. Vaidya)
(Principal Investigator)