

**Summer Training at
Indiabulls Foundation
Nagaur, Rajasthan
(April 11-June 3, 2012)**

**Situation Analysis for Dairy as an Income Generation Alternative in
Targeted Villages of Mundwa Block of Nagaur District of Rajasthan**

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**Post Graduate Diploma in Rural Management
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CERTIFICATE

This is to certify that **Ms. Ritu Raj Rathore**, student of PGDRM 2011-2013, has undergone Summer Training in **Indiabulls Foundation, Nagaur, Rajasthan** from April 11 to June 3. The title of the summer internship project was "*Situational Analysis for Dairy as an income generation alternative in targeted villages of Mundwa Block of Nagaur District of Rajasthan*".

The candidate carried out all the studies related to the summer training. Her approach to the studies has been sincere, scientific and analytical.

This summer training as partial fulfilment of the course requirement is recommended for the award of Post Graduate Diploma in Rural Management (PGDRM).

We wish her success in all future endeavours.



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Ritu Raj Rathore

Table of Contents

Acronyms/Abbreviations.....	4
List of tables.....	5
List of figures.....	6
Section 1 : Executive Summary.....	7-8
Section 2 : Introduction.....	9-18
Section 3 : Methodology.....	19-23
Section 4 : Organization Profile.....	24-26
Section 5 : Present Scenario in Villages.....	27-47
Section 6 : SWOT Analysis for Starting a Dairy.....	48-50
Section 6 : Conclusion (Learning, Implementation Plan, Strategy Plan, Recommendations)....	51-55
Section 7 : References.....	56
Section 8 : Annexure.....	57-66

Acronyms/Abbreviations

ANM	: Auxiliary Nurse and Mid Wife
AWW	: Anganwadi Workers
BCG	: Bacillus Calmette-Guerin
BPO	: Business Process Outsourcing
BPL	: Below Poverty Line
CSR	: Corporate Social Responsibility
DPT	: Diphtheria Pertussis Tetanus
FGD	: Focused Group Discussion
MDM	: Mid Day Meal
GP	: Gram Panchayat
GEN	: General Castes
ICDS	: Integrated Child Development Scheme
IT	: Information and Technology
IBF	: Indiabulls Foundation
IRM	: Institute of Rural Management, Jaipur
MoU	: Memorandum of Understanding
MNREGA	: Mahatma Gandhi National Rural Employment Guarantee Act, 2005
MBBS	: Bachelors of Medicine and Bachelors of Surgery
OBC	: Other Backward Classes
PS	: Primary School
SWOT	: Strength, Weakness, Opportunity and Threat
SC	: Scheduled Castes
ST	: Schedule Tribes
SHG	: Self Help Groups
UPS	: Upper Primary School

List of Tables

Table 1: Location of Villages with respective to Mundwa.....	12
Table 2: Demography Details of Selected Villages.....	12
Table 3: Infrastructural Facilities in Targeted Villages.....	13
Table 4: Land Composition.....	15
Table 5: Social composition of households, family size and primary occupation.....	60
Table 6: Total livestock, milch animal and milk production.....	60
Table 7: Surplus milk & selling, availability of veterinary doctor and vaccination.....	61
Table 8: Fodder storage and key activities of daily routine.....	61
Table 9: Assistance by husbands in household works and value to women opinion.....	62
Table 10: Interest in income generation and awareness about dairy.....	62
Table 11: Livestock care and interest in stating a dairy.....	63
Table 12: Preferred working mode for starting a dairy, reason for livestock mortality and role of MNREGA and pond renovation.....	63

List of Figures

Figure 1	: Social composition in sample size.....	19
Figure 2	: Family Size.....	26
Figure 3	: Primary Occupation.....	27
Figure 4	: Participation in animal husbandry.....	28
Figure 5	: Total livestock.....	29
Figure 6	: Milch animal.....	29
Figure 7	: Average milk production.....	30
Figure 8	: Availability of surplus milk.....	31
Figure 9	: Household with surplus milk and note selling.....	32
Figure 10	: Availability of veterinary services.....	33
Figure 11	: Practice of regular vaccination.....	34
Figure 12	: Type of fodder used.....	35
Figure 13	: Fodder storage.....	36
Figure 14	: Use of readymade animal feed.....	37
Figure 15	: Activities of daily routine.....	38
Figure 16	: Assistance by husbands in household works.....	39
Figure 17	: Value to opinion of women.....	40
Figure 18	: Interest in income generation.....	41
Figure 19	: Preferred mode of working to raise income.....	41
Figure 20	: Awareness about dairy.....	42
Figure 21	: Livestock care.....	43
Figure 22	: Interest in starting a dairy.....	43
Figure 23	: Preferred working mode for starting a dairy.....	44
Figure 24	: Reason for livestock mortality.....	45
Figure 25	: Role of MNREGA and pond renovation.....	45

Section 1

Executive Summary

The project included conducting a situation analysis for dairy as an income generation alternative in targeted five villages (Asawari, Bhatnokha, Kankday, Lalap and Sheelgaon) across five Gram Panchayats of Mundwa block of Nagaur district of Rajasthan. It consisted of generating community mobilization for starting women dairy interventions, SWOT analysis, checking feasibility of the project and designing an implementation plan.

As part of the project, 100 women from 100 households (SC, OBC and GEN category) of 5 villages were interviewed. Along with this, interviews of key informants and focused group discussions with different caste groups in different geographical locations within the villages were also organised. Visit conducted to four individual dairies in Merta city area to know their working approach.

It has been noticed that interviewed women and their family members are very keen to be a part of dairy farming. As rearing livestock is a household practice and skilled manpower is available within their family to do daily care of livestock, therefore, the people are more inclined to join the dairy interventions to include it as a secondary source of income. There is plenty of fodder available (produced from own farms during rainy season) and women have respect for their opinion in their families. Moreover, there is sufficient availability of surplus milk in the surveyed households. At the same time, there is huge demand for milk and milk products in the unorganized retail and either commercial selling point are non-available or not have geographical spread to meet the existing demand.

There are many threats and weaknesses exists which may prevent people in starting a dairy. It is experienced that these limitations are manageable as people are living with these threats and weaknesses since long and can handle it. When asked by the company to do a comparative analysis between individual and cooperative mode of working, the latter appears to be more effective because of associated benefits (regular vaccination, medical checkup, animal feed, scholarship, credit facility, etc.), easy expansion and demand-supply relationship. Women interviewees also preferred to work in cooperative mode.

Though there was favorable response from women for starting dairy cooperative, there is need to work towards strengthening at organization level. It includes extensive mobilization drive, orientation and exposure visit for implementing staff, regular training and capacity building by dairy experts, continuous monitoring and evaluation, demonstration of piloted dairy model to the government and other organizations, and advocacy for scaling up.

Section 2

Introduction

2.1. Dairy Industry

Dairy industry is of crucial importance to India. India is world's largest milk producer, accounting for more than 13% of world's total milk production. It is the world's largest consumer of dairy products, consuming almost 100% of its own milk production. Dairy products are a major source of cheap and nutritious food to millions of people in India and the only acceptable source of animal protein for large vegetarian segment of Indian population, particularly among the landless, small and marginal farmers and women.

Dairying has been considered as one of the activities aimed at alleviating the poverty and unemployment especially in the rural areas in the rain-fed and drought-prone regions. In India, about three-fourth of the population live in rural areas and about 38% of them are poor. In 1986-87, about 73% of rural households own livestock. Small and marginal farmers account for three-quarters of these households owning livestock, raising 56% of the bovine and 66% of the sheep population. According to the National Sample Survey of 1993-94, livestock sector produces regular employment to about 9.8 million persons in principal status and 8.6 million in subsidiary status, which constitute about 5% of the total work force. The progress in this sector will result in a more balanced development of the rural economy.

- *Policy*

The total amount of milk produced has more than tripled from 23 million tones back in 1973 to 74.70 million tones 26 years later in 1998. The tremendous rise in milk production is primarily the fallout of the dairy farming policy reflected in Operation Flood. Following the success of dairy farming policy, the Government has set up a dairy processing policy, reflected in the Milk and Milk Products Order. In addition, the Government uses a variety of import restrictions to protect its domestic dairy market.

- *Milk Processing*

The milk processing industry is small compared to the huge amount of milk produced every year. Only 10% of all the milk is delivered to some 400 dairy plants. A specific Indian phenomenon is the unorganized sector of milkmen, vendors who collect the milk from local producers and sell the milk in both, urban and non-urban areas, which handles around 65-70% of the national milk production. In the organised dairy industry, the cooperative milk processors have a 60% market share. The cooperative dairies process 90% of the collected milk as liquid milk whereas the private dairies process and sell only 20% of the milk collected as liquid milk and 80% for other dairy products with a focus on value-added products.

- *Domestic Consumption*

The huge volume of milk produced in India is consumed almost entirely by the Indian population itself, in a 50-50 division between urban and nonurban areas. Increasingly, important consumers of the dairy industry are fast-food chains and food and non-food industries using dairy ingredients in a wide range of products.

- *Trade*

In spite of having largest milk production, India is a very minor player in the world market. India was primarily an import dependent country till early seventies. Most of the demand-supply gaps of liquid milk requirements for urban consumers were met by importing anhydrous milk fat / butter and dry milk powders. But with the onset of Operation Flood Programme, the scenario dramatically changed and commercial imports of dairy products came to a halt except occasional imports of very small quantities. In the 1990s, India started exporting surplus dairy commodities, such as SMP, WMP, butter and ghee. The Agricultural and Processed Food Products Export Development Authority (APEDA) regulated the export and import of dairy products till early 1990s. However, in the new EXIM Policy announced in April 2000, the Union Government has allowed free import and export of most dairy products.

Dairy Farming in Rajasthan

Rajasthan State possesses 11.2 percent of the total livestock in the country. As per the livestock census 1992, the State had 116.7 lac cows, 77.5 lac buffaloes, 24.9 lac sheep, 152.6 lac goats, 7.5 lac camels, 2.5 lac pigs and 30 lac poultry. The State of Rajasthan has proud possession of 9 cattle breeds, 8 sheep breeds, 6 goat breeds, 4 camel breed and also endowed with thorough bred horses. The important breeds of cattle traded in the State are Rathi, Kankrej, Nagour, Tharparkar, Haryana, Malvi, Gir, Sanchori and Mehwati. Regarding buffalo breed, Murrah buffalo is the only preferred breed found in Rajasthan. Sheep also occupy an important place in animal husbandry sector of the State. The important breeds of sheep are, Nali, Magra, Chokla or Shekkavati, Marwari, Jaisalmeri, Malpuri, Sonari or Chanother, Pugal and Bagdi. The important goat breeds in the State are Jamnapari, Badwari, Alwari and Sirohi breeds, which are reared for milk and meat; Lohi, and Jhalwadi breeds are mainly for meat purpose.

Unlike income generated from crop production, which is seasonal in Rajasthan, dairying is a source of a stable income bringing in cash on a daily basis and providing livelihoods security. This gives small farmers an important economic incentive to adopt dairying for their livelihoods. In India, dairying is recognized as a catalyst for social and economic development. Besides being a source of liquidity and insurance against crop failure, milk is the only product where the farmers realize 60-70 percent of the consumer price.

2.2. Nagaur

Nagaur is one of the 33 districts of the state of Rajasthan in western India where Panchayati Raj was introduced. Area of the district is 17,718 km² and it is situated between 26°25' & 27°40' North Latitude and 73°10' & 75°15' East Longitude. The district lies in the Marwar region of Rajasthan, in the north-western thorn scrub forests belt surrounding the Thar Desert.

The district consists of ten tehsils. These are Nagaur, Khinvsar, Jayal, Merta, Degana, Didwana, Ladnun, Parbatsar, Makrana and Nawa. Except Khinvsar all of these are sub-

divisions also. There are 11 blocks and 1607 villages (across 461 GPs) in the district. The languages spoken in Nagaur are Marwari, Hindi, English, Urdu and Rajasthani.

The total area of the district is 17,718 sq. km, out of which 17,448.5 sq. km is rural and 269.5 sq. km is urban. As per the 2001 census, the population of the district is 27, 75,058 (4, 77,337 urban and 22, 97, 721 rural population) which is 4.91 percent of the total population of the State. The density of population in the district is 157, as against 165 of Rajasthan as a whole. 12, 87, 921 persons of the district are literate, out of which 10, 21, 314 are rural and 2, 66, 607 are urban, which makes it 58.26 percent of the total population. Out of this literate population 75.33 percent are males and 40.45 percent are females. Nagaur has a sex ratio of 948 females for every 1000 males.

Nagaur has a dry climate with a hot summer. Sand storms are common in summer. The maximum temperature recorded in district is 117F with 32F as the lowest recorded temperature. The average rainfall in the district is 36.16 cm and 51.5 percent relative humidity.

The district of Nagaur is poor in forest resources. The total area, including hills, is reported to be 240.92 sq. kms, which is 1.3 percent of total geographical area of the district. Scanty rainfall and other geographical constraints account for this. The western part of the district is divided of natural vegetation cover except for low herbs and grass which grows on low sand dunes. Khejri trees are commonly found in the district and its leaves are used as fodder. The other common species found in the district are babul, neem, shisham, peepal, rohira, kalsi, dhangood, akara etc.

2.3. Mundwa

Mundwa block of Nagaur district is located at 27.07°N 73.82°E and has an average elevation of 335 meters (1099 feet). There are four Talabs on all the four directions of Mundwa. These Talabs are Gyantalav, Lakholav, Pokhandi, Motelav and Dedaahni.

As of 2001 India census, Mundwa had a population of 16,004. Males constitute 51 percent of the population and females 49 percent. Mundwa has an average literacy rate of 47 percent, lower than the national average of 59.5 percent: male literacy is 61 percent, and female literacy is 33 percent. In Mundwa, 18 percent of the population is under 6 years of age.

2.4. Profile of Targeted Villages

With objective of conducting situation analysis for starting dairy as an income generation activity following five villages of five different Gram Panchayats of Mundwa block of Nagaur district of Rajasthan are selected. Table 1 illustrates the name of villages and their representative panchayats with their distance and direction from Mundwa block. Illustration 1 describes their position on Mundwa map.

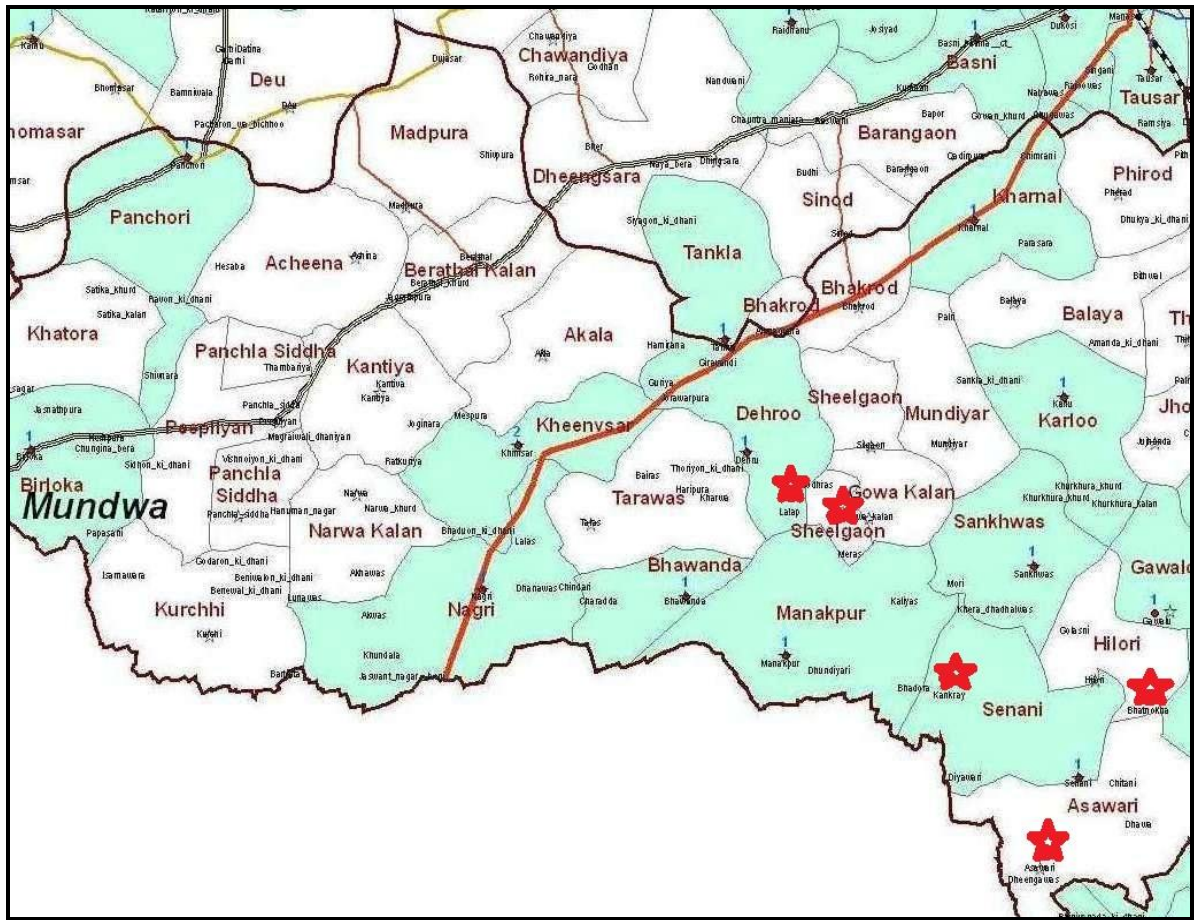
Table 1: Location of Villages with respective to Mundwa

S. No.	Village	GP	Distance from Mundwa	Direction
1	Asawari	Asawari	45 km	North
2	Bhatnokha	Hilori	32 km	North
3	Kankday	Senani	35 km	North
4	Lalap	Dehru	40 km	East
5	Sheelgaon	Sheelgaon	30 km	East

Table 2: Demography Details of Selected Villages

Village	GP	Total Households	Total Population	Dominant Castes
Asawari	Asawari	1000	3800	Jat, Rajpoot, Lauhar, Chaukidar
Bhatnokha	Hilori	400	2250	Jat, Rajpoot, Rajpurohit, Bhat
Kankday	Senani	350	1750	Jat, Meghwal
Lalap	Dehroo	750	3750	Jat, Meghwal
Sheelgaon	Sheelgaon	560	2782	Chaukidar, Jat, Meghwal

Illustration 1: Position of Surveyed Villages on Mundwa Map



* Position of five surveyed villages is marked with red colored star symbol

Table 3: Infrastructural Facilities in Targeted Villages

Village	PS	UPS	Secondary	Senior Secondary	Electricity	PHC	Sanitation	Drinking Water	Road	Transport	Aanganwari Center
Asawari	3	2	-	1	Yes	Asawari	No	community pond, government supply, tubewell	Yes	poor frequency	3
Bhatnokha	4	-	1	-	Yes	Asawari	No	community pond, government supply, tubewell	Yes	poor frequency	2
Kankday	-	1	1	-	Yes	Asawari	No	community pond, tubewell	Yes	poor frequency	1
Lalap	1	2	-	-	Yes	Khimsar	No	community pond, private supply	Yes	poor frequency	2
Sheelgaon	-	1	1	1	Yes	Bhakrod	No	community pond, private supply	Yes	poor frequency	3

Education

From the survey of five villages it was found that there are total eight primary schools, six upper primary schools, three secondary and two senior secondary schools. Lalap village not have a secondary school. For the girl's education, parents are not interested for their study. They said that in schools, there is unavailability of quality teachers; therefore, it is worthless to send the children to the school. They prefer to send their children to private schools as they believe children learn in a better way.

Primary Health Center

From the survey of five villages it was found that there is only one PHC located in Asawari panchayat, while there is non-availability of PHC in rest of villages. Rest of the villages has Sub-Centers and an ANM is associated with this center. Asawari PHC is well equipped with human resource and facilities. Two MBBS and one Ayurvedic/Homeopathic doctor are posted at this PHC. Residents of Asawari, Bhatnokha and Kankday village go to Asawari panchayat PHC whereas Lalap and Sheelgaon villagers approach to Khimsar and Bhakrod PHC.

Electricity/ Sanitation/Water

All the villages are being connected by electricity. Even Asawari village has road lights. There is lack of sanitation facilities in these villages. Except Asawari open defecation is most prevalent in rest of villages. In spite of Asawari being a *Nirmal Gram* (awarded in 2009), there are cases of open defecation. If we talk about source of drinking water then community pond is the common source in all the villages. All the villages have tube wells and water supply through private tanker is also available. The rate of supply by private tankers varies from Rs.100 to Rs.400 per tanker. Bhatnokha, Sheelgaon and Asawari have government supply connection in some of the surveyed households. Supply frequency is twice a month. During the summer season there is huge scarcity of water as the water table went down. For agriculture majority of farmers are dependent on rainfall. But due to scanty rainfall the agriculture production are not up to the mark and they are most vulnerable to drought. Therefore water availability for irrigation is a major constraint.

Transport and Communication

All the surveyed villages have road connectivity. But there is no adequate road within villages. Also, there is no proper road connecting these villages with associated hamlets. Apart from that there is lack of frequent transportation facilities in these villages. There are no government transportation facilities running in these villages. Only private vehicles are available, but frequency of these vehicles is very low. Therefore vehicles are heavily crowded with passengers with no adequate provision of giving enough space to passengers. Passengers have to face a lot of problems in travelling.

Anganwadi

There is at least an anganwadi centre in each of these villages. In total, there are 11 anganwadi centers. There are only two staff member in the centre, one assistant and the other helper. They are mainly responsible for providing the basic education to the children between the ages three to six years. Apart from that they are also responsible for providing nutritious food under I.C.D.S programme. They teach them through showing colors, toys and the pictures. The anganwadi centre also provides the vaccinations such as polio, DPT, BCG, small pox etc. to these children. They also help the pregnant women of villagers in providing all the medical facilities. They are also responsible for registering the number of birth and death of the village.

Table 4: Land Composition¹

Village	Total Land (hectare)	Irrigated Land	Non-irrigated Land	Pasture Land	Waste Land
Asawari	2273	844	938	96	2-3
Bhatnokha	1323	281	484	36	2-3
Kankday	2150	51	1609	220	4-5
Lalap	2301	311	1845	174	6-7
Sheelgaon	2251	34	1735	196	2-4

**Above table is filled after collecting information from the concerned patwari*

¹ 1 hectare=6.4 bigha and 1 bigha=20 biswa. Total land data not equals to the sum of rest of the sections in above table as some lands like ponds, populated land, government land, barren land, etc. are not included.

2.5. Dairy as an Income Generation Alternative

The dependency of rural poor on livestock for their livelihood is quite substantial. Among the livestock, dairy livestock (cow and buffalo) play a pivotal role in the livelihoods of the poor people especially those who are poor not only in land assets but also in literacy, access to infrastructure facilities, information and basically unskilled. These rural poor had no option but to take up dairy farming as an alternative (after agriculture) as it is the only enterprise which could provide regular income.

Livestock rearing often emerge as economically viable secondary source of income accessible to the poor people as it does not require formal education or large amounts of capital and often no land ownership. Moreover, the practice of rearing animals for domestic purpose is part of Indian culture, and also in the targeted area under the internship project area. Availability of fodder from monsoon based agriculture and manpower to take care of livestock supports the dairy work significantly. Dairy farming in an organised manner, whether as cooperative or individual, could contribute in empowering the marginalized people and at the same time, raising their income levels to make them economically independent.

2.6. Background

Milk production for domestic purpose is in the practice of households in targeted project area of the Indiabulls Foundation (IBF). IBF has conducted a survey of 60 SHGs in 20 villages across 3 blocks and found out that more than 80 percent of members are dependent on agriculture as primary source of income, more than 50 percent members do not have a secondary source of income and more than 70 percent have skills in dairy and agriculture. IBF has planned to promote integrated dairy farming to women members as an economically viable activity with steady secondary income stream. For this purpose, a survey was conducted by the students of IRM, Jaipur in 2011 in 28 villages to understand the environment for starting women dairy. Based on this survey, villages were selected to start the present internship project to get an exact idea about feasibility of starting dairy farming project in targeted villages.

2.7. Project Title

Situation analysis for dairy as an income generation alternative in targeted villages of Mundwa block of Nagaur district of Rajasthan.

2.8. Objectives of the Project

1. To analyse the present scenario and feasibility of dairy project in the targeted area.
2. SWOT analysis and design an implementation plan for setting up dairy.
3. To generate community mobilization for starting women cooperative dairies in targeted villages

Section 3

Methodology

3.1. Type of Research

Exploratory and Descriptive (In this project, present situation of the project area was explored and various relevant indicators of the situation were described)

3.2. Sample Size

100 women from 100 households (from 5 villages-Asawari, Bhatnokha, Kankday, Lalap and Sheelgaon and from General, OBC and SC category)

Village selection was based on a survey conducted by students of IRM, Jaipur in 2011 to understand the environment for starting women dairy project. Of 28 villages surveyed, 11 were finalised by IBF because of positive community response and other favorable indicators for starting a dairy as an income generation option. Out of finalised 11 villages, 5 were selected by IBF team for the present project. These villages included Asawari, Kankday, Lalap, Sheelgaon and Dharnawas. Afterwards, Dharnawas village was replaced by Bhatnokha village as anganwadi workers of this village showed great willingness for the project in a meeting of anganwadi workers at Asawari village. This meeting was part of mobilization process for starting dairy project in Asawari village under the present internship project.

3.3. Sampling Technique

Purposive (Stage 1: Indiabulls Foundation's operations in Nagaur, Stage 2: IBF dairy project in Mundwa block, Stage 3: Village selection—four purposive and one due to mobilization efforts)

3.4. Selected Household

20 household from each village fixed before survey (time and money constraint)

In each of the five targeted villages 20 households were selected randomly with

composition of GEN, OBC and SC category. As there was no ST population present in these villages, therefore this category was not included in sample selection. In each of the selected households the senior most female was interviewed. In category wise sample selection proportion of 30 percent for General Category whereas 35 percent each for OBC and SC category was maintained. However, in Kankday proportion of 30 percent in General was not worked out as the village do not has required number of households. Therefore, an additional household was selected in OBC category. Similarly, in Asawari, as interviewees from OBC category was not available at time of survey, an additional house selected in SC category.

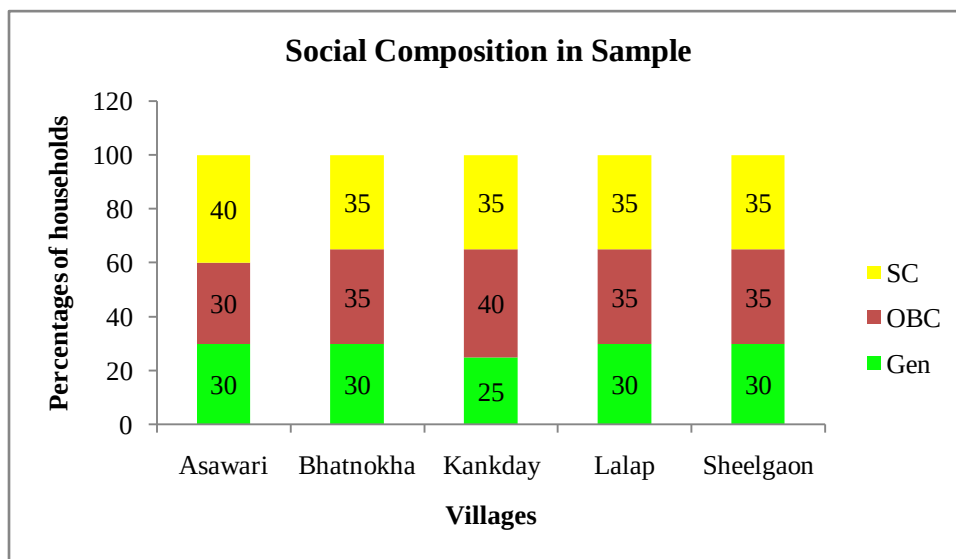


Fig. 1

3.4. Data Collection Tools: Interview schedule, FGD checklist, key informant interviews and photographs

3.5. Data Collection Techniques: Interviews, FGDs and observations

3.6. Method of Data Collection

The methodologies comprised of a mixture of qualitative and quantitative research methods and were as follow:

- **Secondary Data**

A review of literature and existing studies were conducted to determine existing knowledge and insights on the subject of dairy cooperatives for women. Documents provided by IBF were also studied to get information on the steps taken so far by the organization for initiating the dairy project and develop understanding on overall scenario of dairy in Nagaur district. Experiences of persons who sometime associated with dairy work in targeted villages were also taken into consideration.

- **Primary Data**

- *Interviews with Key Informants*

Interaction conducted to derive qualitative data from key informants, specifically their knowledge, opinions and perceptions about concept of dairy project, existing culture of dairy and possible ways to start women dairies in targeted villages. It also intended for gathering general information about the targeted



Picture 1: Interaction with Ms. Mariam, ANM, Sheelgaon

villages like social structure, geographical coverage, infrastructural facilities, education trend, role of women in village development, health and sanitation related issues, sources of income, occupation pattern, agriculture, water sources, perception of villagers about dairy, etc.

- *Focused Group Discussions (FGD)*



Picture 2: Discussion with Meghwal community at Sheelgaon

In each of the targeted villages, number of FGDs conducted with representation of different caste groups. FGD mainly discussed idea of women cooperatives, income generation, women empowerment, responsibilities towards development of village, working of dairy and feasibility. Total 14 FGDs were conducted in the targeted villages as part of mobilization process.



Picture 3: Discussion at Khatiyon Ka Baas, Asawari



Picture 4: Mobilization at Meghwalon Ka Baas, Asawari

– Sample Survey

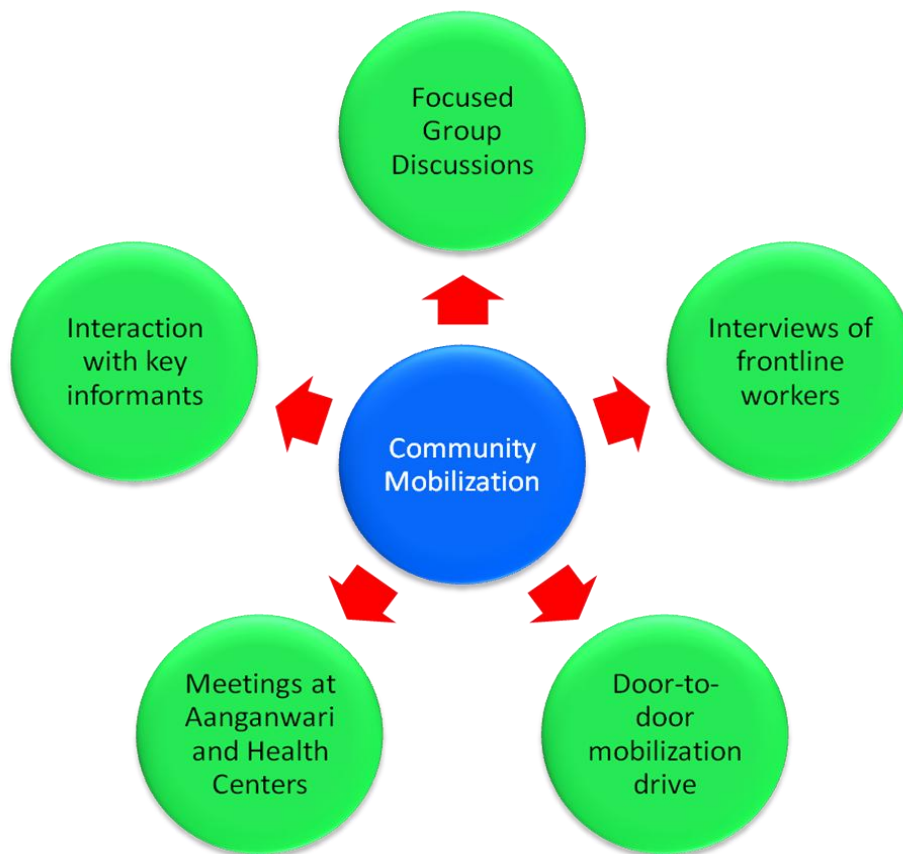
Interviews conducted with senior most female members of selected households in all the targeted villages by using an interview schedule (Annexure I). Response of 100 female interviewees from 100 households across 5 selected villages recorded during the interview exercise.



Picture 5 and 6: Survey Exercise at Asawari and Bhatnokha

– Observations

Through observation socio-economic status, geographical structure and other relevant indicators of targeted villages was indentified. It helped in preparing profiles of all the targeted villages.



3.7. Expected Outcome

- Knowing the present environment and analyzing it in relation with feasibility of women dairy cooperatives in targeted five villages of Mundwa block.
- Knowing SWOT analysis and a plan of action for intervention in targeted villages
- Knowing responses of target population after conducting mobilization to share the concept and start women cooperative dairies.

3.8. Limitations

- Time and money constraint
- Social constraint (no interaction with daughter-in-laws in the targeted households)
- Lack of transportation to the surveyed villages
- Geographical spread of the surveyed villages
- Non-availability of required respondents as per social structure (resulted in non-uniform selection of respondents)

Section 4

Organization Profile

Indiabulls Foundation is a CSR initiative of the Indiabulls Group. Indiabulls Foundation (IBF) has started its operations in Nagaur district of Rajasthan in the year 2010. The organization is dedicated for the development of Nagaur through a multipronged approach and has interventions through below mentioned projects.

- *Forest development project*

This project is functional with the objectives to create awareness in the community about tree plantation and forest development, protect the land against degradation by soil erosion, floods, landslides, desertification and other effects of ecological imbalance, and meet the people's basic needs of fodder and pasture land.

- *Rain water harvesting*

Indiabulls foundation in partnership with IHMR Jaipur and Bhoruka Charitable Trust is started this programme. Under this programme, IBF has built household rainwater harvesting structures and storage tanks in 385 rural households across 10 villages in Ladnu and Didwana blocks of Nagaur district. The organisation has also built 90 household toilets to promote sanitation, repaired 50,000 litre community-owned tanks and built temporary rooftops to extend catchment area of tanks in these villages.

- *Rural entrepreneurship and economic development*

IT Project is functional with the objectives of creating awareness about the use of IT and IT related services among the rural youth, providing training to youth to start and run an IT literacy and training center in his / her village and generating employment opportunities for rural youths.

- *Rural BPO and training center*

IBF is exploring avenues to set up rural BPOs and skill training centers in the Nagaur. IBF has initiated a project called CLICK (Computer Literacy and Internet for

Communication and Knowledge) to help rural youth learn to use computers and Internet for their own utility. 13 teachers have been trained and they in turn are training 49 students. A MoU with the Government of Rajasthan and the Rajasthan Mission on Skill and Livelihoods is also signed to try and create a Skills Training Hub in Nagaur district, under which 10+ skills training centers are expected to be set up in 2012. In March 2012, the organization has launched a Transport & Logistics Training Centre in Makrana and tied up with Transport Corporation of India for course content, job placement and financial support.

- *Women empowerment programme*

IBF has partnered with *The Village Store* to set up small-scale units for production of incense sticks by rural women using pedal-operated machines. Support is being provided on the complete process cycle to these units—including purchase of machines and raw material, training of women, and buyback of finished products. Seven such units with 60 machines are already operational in rural Rajasthan, run by local entrepreneurs and trusts.

- *Health*

In partnership with Bhoruka Charitable Trust, eye camps in 43 Gram Panchayats conducted in which 20,761 children of 365 government schools have been tested and 1,687 children with requirement for spectacles have been found. The spectacles will be provided to the concerned children.

- *MNREGA programme*

IBF is trying to help and motivate the panchayats to incorporate common land plantation as an integral part of the NREGA proposal planning. Till now two panchayats Pabusar and Bomasar have made the proposal of common land plantation in 350 and 150 bighas of land respectively.

- *Ground Water Management*

Indiabulls Foundation has commissioned a study of the groundwater scenario in Nagaur district by a hydrologist (associated with the Stockholm Environment Institute) and a hydro-geologist (from the Indian Institute of Science, Bangalore). IBF has begun discussions with district administration but more importantly, the organization is planning to work with a number of Panchayats to help them measure, plan and conserve their groundwater.

- *Tree Plantation*

The organization has partnered with the community in Gudla and Amarpura villages of Nagaur district for a pilot project and planted 23,000 trees on common land and along farm boundaries with continued water support. IBF also motivated 6 Gram Panchayats to include tree plantation on common land in their MNREGA proposals, under which a cumulative of about 30,000 trees are proposed to be planted.

- *SHGs and Dairy*

IBF has conducted a survey to understand the status of SHGs and their women members in Nagaur district. 60 SHGs in 20 villages across 3 blocks were surveyed, and the findings have confirmed that most SHGs are not functioning in the region. IBF is looking to promote integrated dairy farming to women members as an economically viable activity with steady secondary income stream.

- *Panchayat Webpage Project-Citizen's Initiative*

IBF is helping youth develop their Gram Panchayat (GP) webpage which can showcase their village to the entire world, highlighting achievements and challenges, indicating what external help they need, things that rural youth want to buy and sell, interviews of GP leaders about their plans, videos of schools, Primary Health Centers, MNREGA projects, sports etc. BF has trained youth across 43 GPs covering 142 villages and has given them smart phones to record the data, take photos and videos needed for the web pages. Data for most of the GPs has been collected and 11 GP web pages have been uploaded (<http://www.panchayatsofindia.com>).

Section 5

Present Scenario of Villages

Following findings are based on the interviews with 100 women respondents from 100 households of 5 targeted villages.

I. Family Size

Fig. 2 describes village wise family size (in percentages) of surveyed households

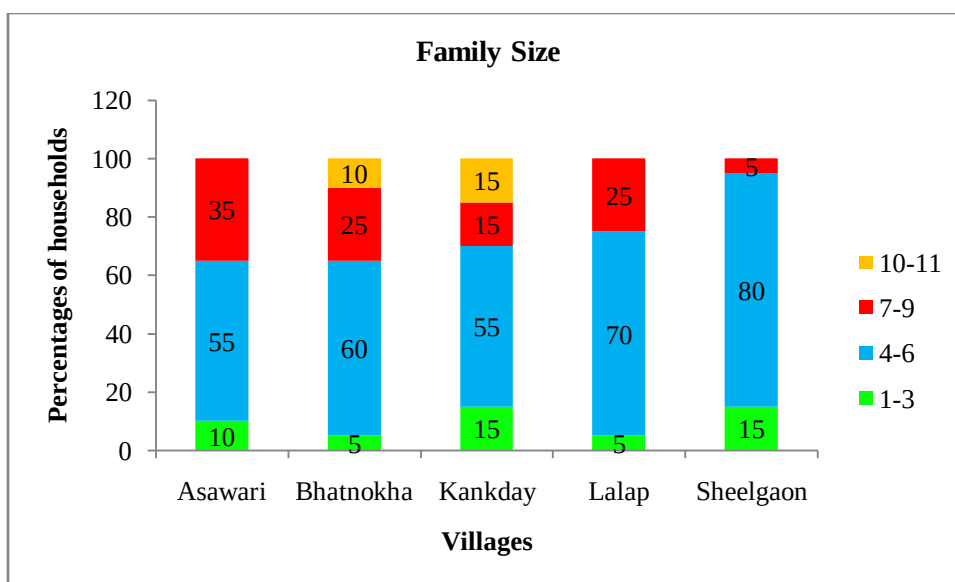


Fig. 2

- 90 percent of total surveyed household have at least 4 to 6 family size. It indicates that there is enough number of manpower available to take care of livestock at household level.

III. Primary Occupation

Fig. 3 provides details (in percentage) about households which have at least one member engaged in agriculture

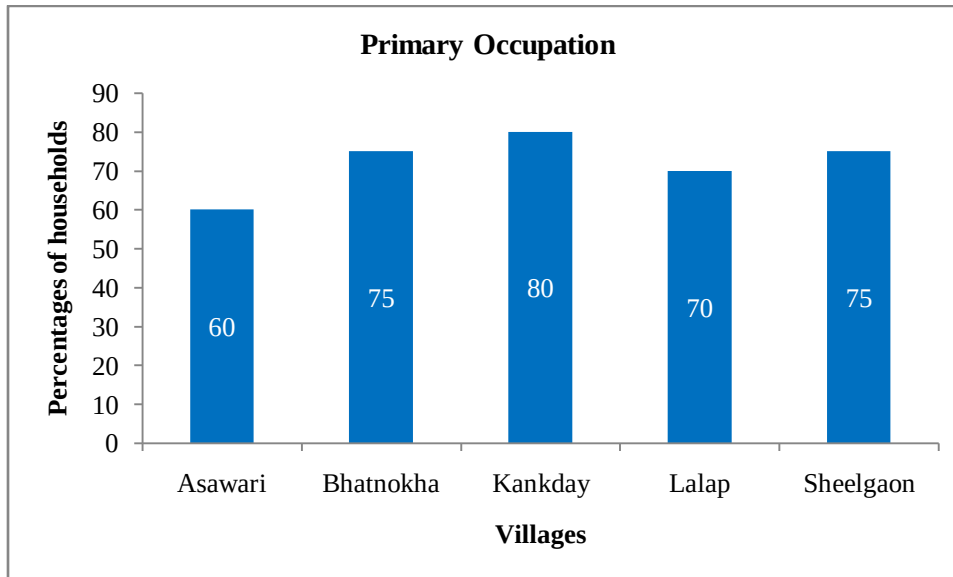


Fig. 3

- In each of the targeted villages at least 60 percent of interviewed households have members working in agriculture. Due to engagement in agriculture the production of fodder is at village level which in turn supports to meet the fodder requirement of livestock.
- Fodder is produced from the crops cultivated during the rainy season due to which there is less dependency on other sources of fodder. Thus, an average rainfall helps to manage the demand of fodder.
- As agriculture is mostly seasonal (4-5 months) thus there is an opportunity to engage these people in animal husbandry for rest of the year to raise their income level.

Following Fig. gives description about households which have at least one member engaged in animal husbandry

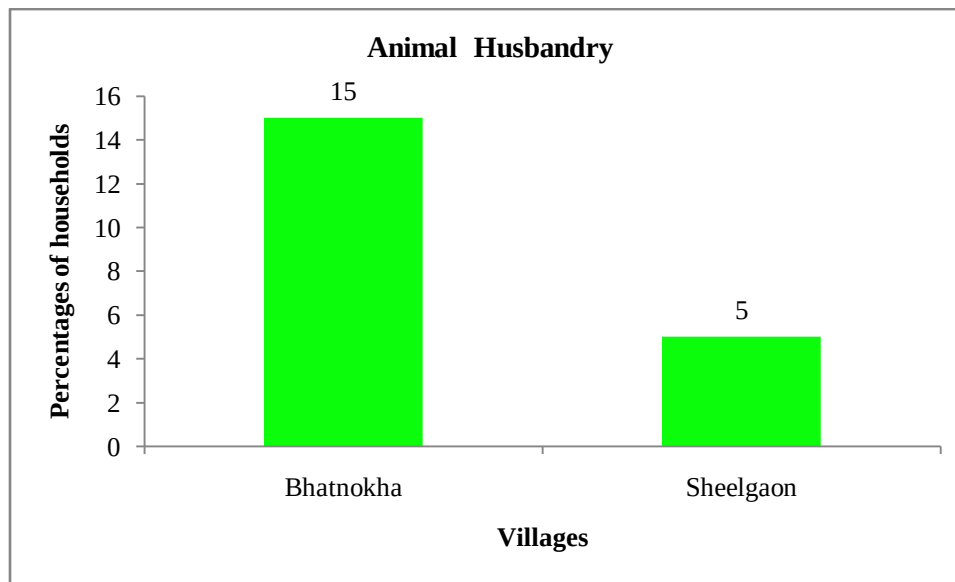


Fig. 4

- Fig. shows that three villages, that is, Asawari, Kankday and Lalap not have practice of animal husbandry in the interviewed households. Other two villages too have negligible percent of households which are involved in animal husbandry.
- There is culture of keeping livestock for domestic use thus proper care of these livestock and management can lead towards establishing dairy culture.

IV. Livestock

Fig. 5 provides details (in percentages) about livestock present in interviewed households

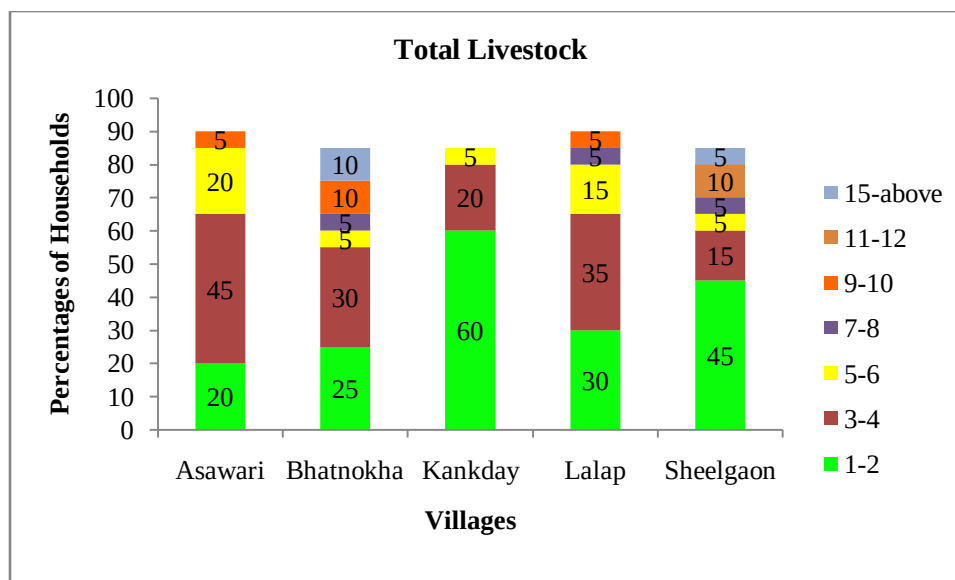


Fig. 5

- In all the villages of total interviewed households at least 85 percent have 1-2 livestock. It shows prevalent culture of keeping livestock for domestic use.

V. Milch Animal

Fig. 5 presents details (in percentages) of milch animals owned by surveyed households

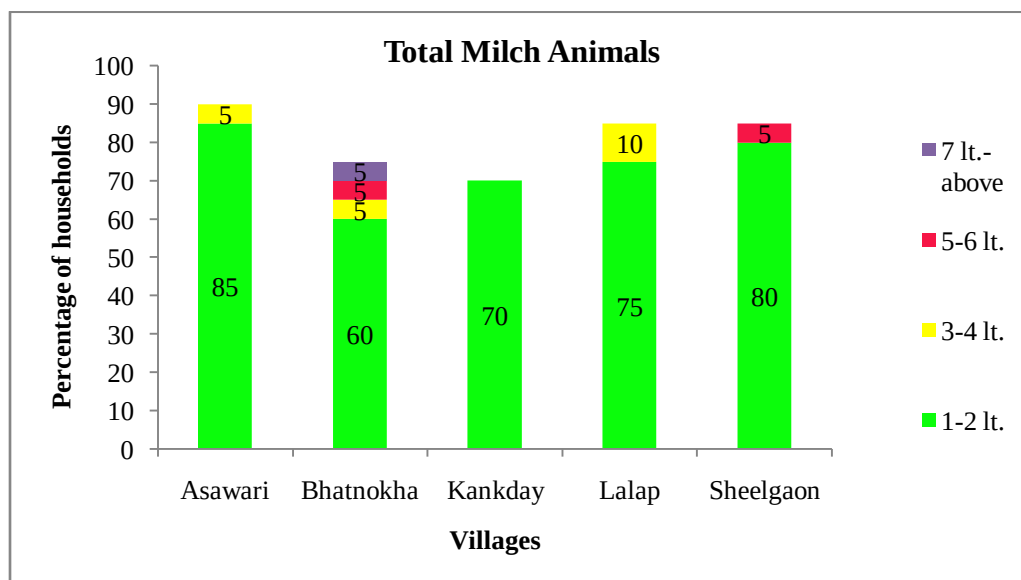


Fig. 6

- In all five villages at least 70 percent of interviewed households have milching animals. Due to summer season number of milching animals may be less, it may increase by Aug-Sept.

VI. Average Milk Production

Fig. 7 shows (in percentages) average milk production in the interviewed households

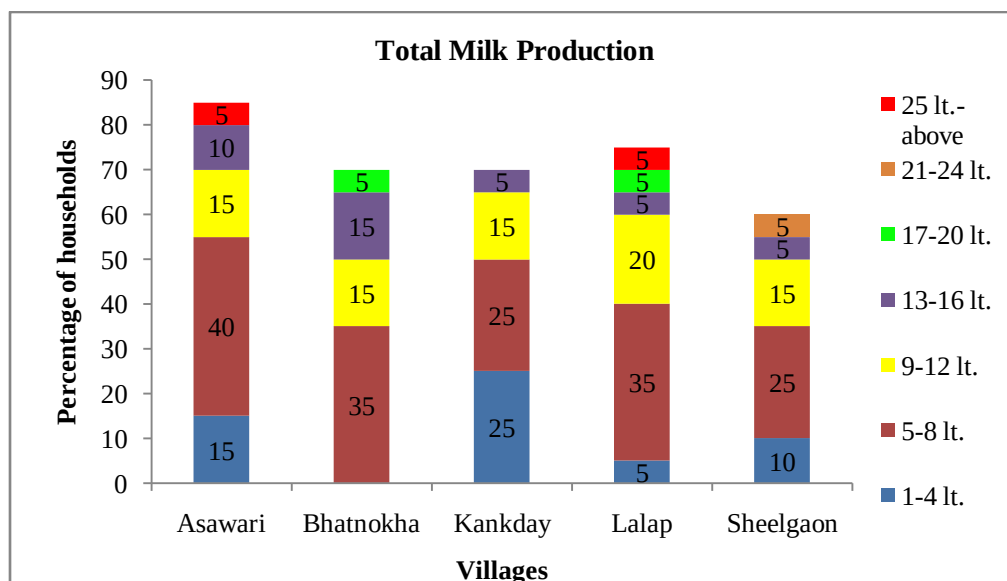


Fig. 7

- At least 60 percent of total interviewed households in all the villages produce 1 to 4 liters of milk per day. Asawari village has at least 85 percent households which produce at least 1 to 4 liters of milk per day.
- On calculating household specific milk production in interviewed households Asawari village have total milk production of 144 liters per day where as Bhatnokha, Kankday, Lalap and Sheelgaon have 144, 95, 154, 114 liters per day respectively.

VII. Surplus Milk

Fig. 8 provides information (in percentages) on availability of surplus milk per day in each of the interviewed households

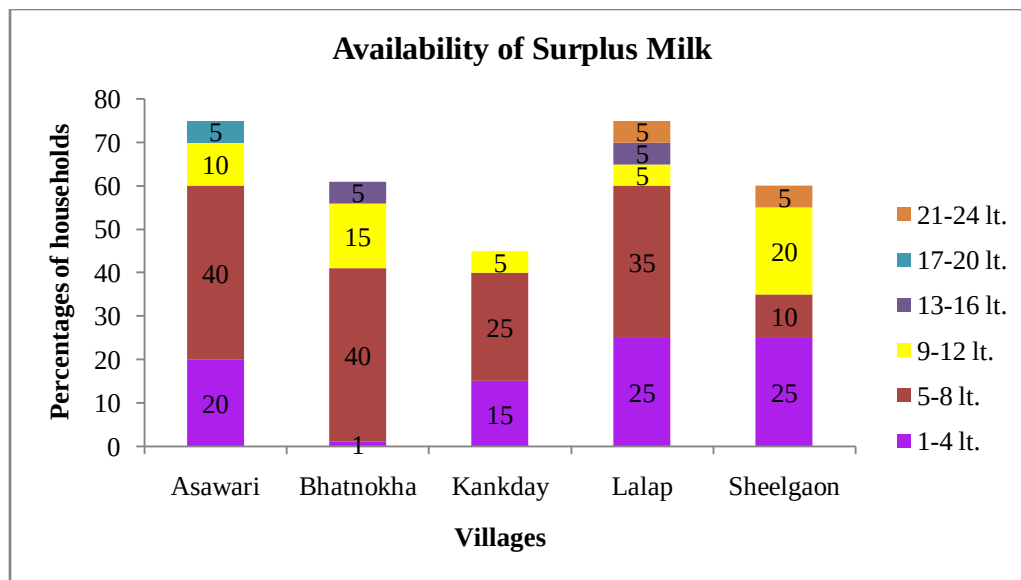


Fig. 8

- In Asawari, 70 percent of total interviewed households have at least 1-4 liters surplus milk per day while Bhatnokha, Kankday, Lalap and Sheelgaon have 70, 45, 75 and 60 percent interviewed households with at least 1-4 liters surplus milk per day.

VIII. Milk Selling

Fig. 9 gives details (in percentages) about the households which have surplus milk and are not involved in selling

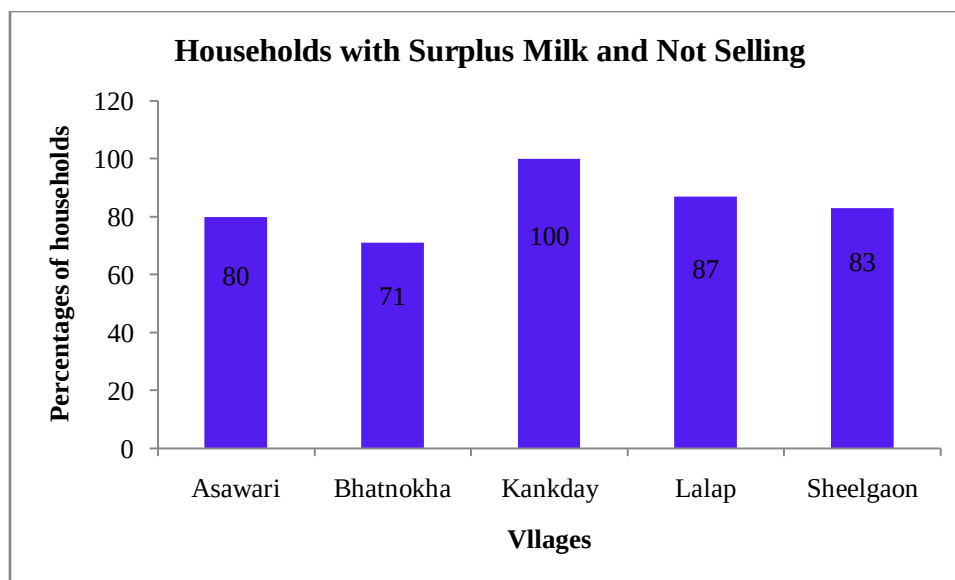


Fig. 9

- Out of total households which have surplus milk in Asawari, 80 percent are not selling it. Similarly, the percentage of households not selling surplus milk in Bhatnokha, Kankday, Lalap and Sheelgaon is 71, 100, 87 and 83 respectively.
- The reasons for not selling milk surplus milk include lack of demand at village level, not having any selling point at or nearby village, poor transportation system, payment irregularities by already functional dairies and not considering quality of milk while purchasing by villagers for daily consumption purpose.

IX. Availability of Veterinary Services

Fig. 10 describes, in percentages, accessibility of veterinary services by interviewees in 5 villages

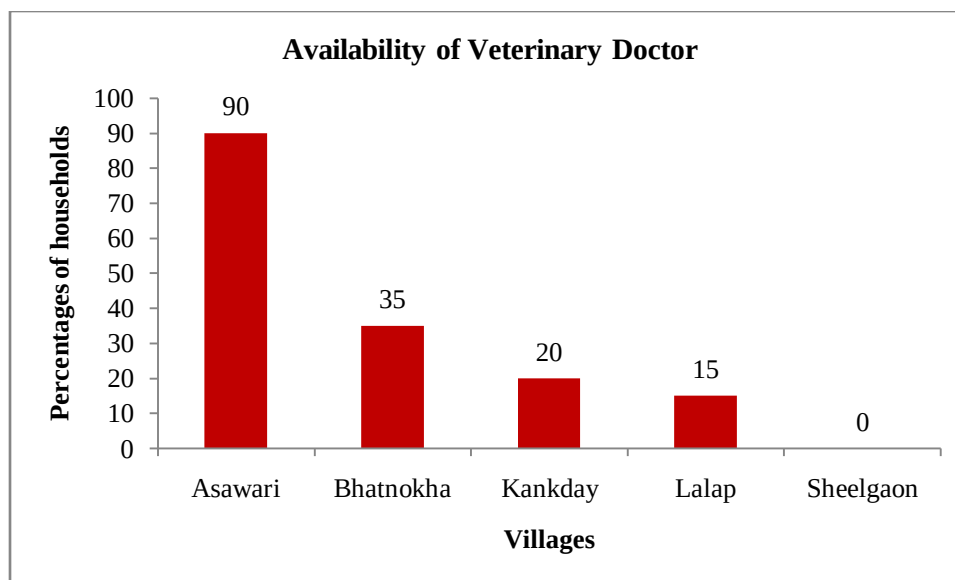


Fig. 10

- Ninety percent of total interviewed households in Asawari village shared about the availability of veterinary doctor/services. In Bhatnokha, Kankday and Lalap 35, 20 and 15 percent interviewees responded about the accessibility of veterinary services respectively. All the households of Sheelgaon village mentioned about the non-availability of veterinary services.
- In Asawari, a compounder is present in a *Goshala* to assist in treatment of livestock whenever required. In case of Bhatnokha, Kankday and Lalap the households who mentioned about availability of veterinary services may have approached the nearby locations to have treatment whenever required.

X. Regular Vaccination

Following Fig. describes practice of regular vaccination of livestock in surveyed households

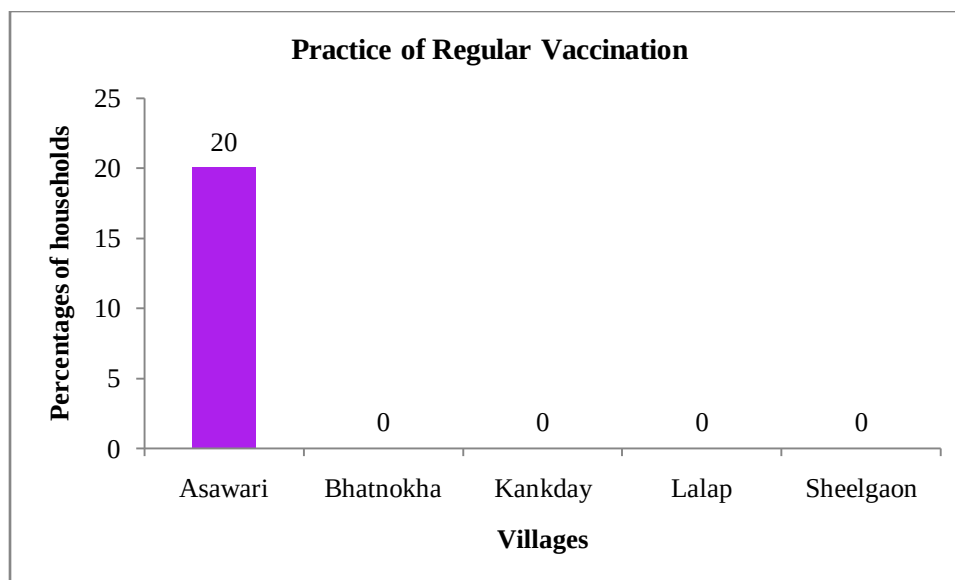


Fig. 11

- Except 20 percent interviewed households in Asawari village, rest of the interviewed households of four villages is not in practice of regular vaccination.
- In case of Asawari village it may possible that one time vaccination of animals in case of their illness is considered as regular vaccination. There is no trend visible of regular vaccination in the surveyed households.

XI. Type of Fodder Used

Fig. 12 gives information (in percentages) about type of fodder used by interviewees for their livestock

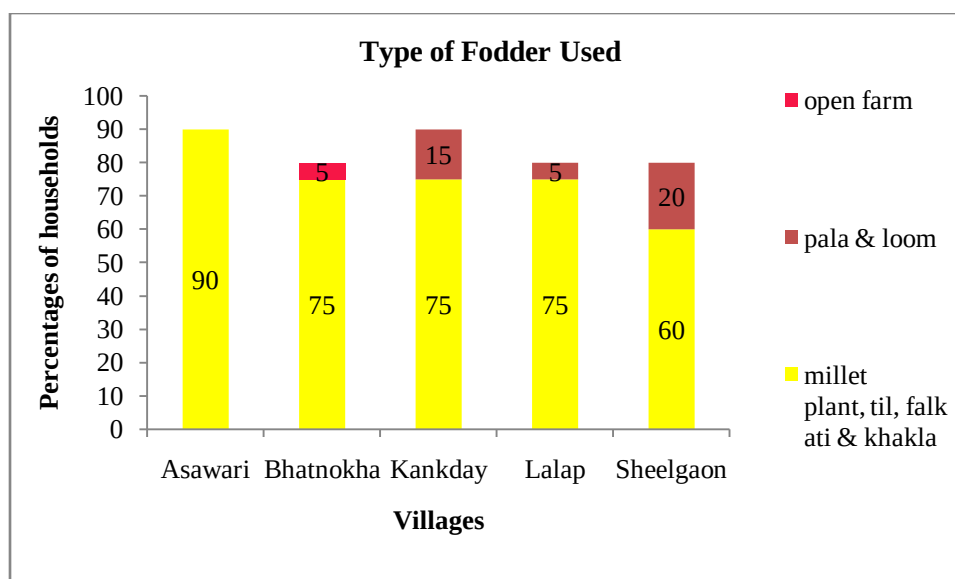


Fig. 12

- Bhatnokha, Kankday and Lalap have 75 percent of total interviewed households using millet plant, *til*, *falkati* and *khakla* as fodder for livestock. In the same way, Asawari and Sheelgaon have 90 and 60 percent interviewees using this type of fodder.
- Except Asawari and Bhatnokha, Kankday, Lalap and Sheelgaon have 15, 5 and 20 percent of interviewed households respectively which use *pala* and *loom* as fodder. *Pala* and *loom* is widely used in case of goatry whereas millet, *til*, *falkati* and *khakla* are used to feed buffalos and cows.
- Except one household of Bhatnokha rest of the households in other four villages do not use open farms to overcome the fodder requirement. Open farm grazing is common for all livestock and it is visible mostly during the rainy season (July-October).

XII. Fodder Storage

Fig. 13 presents method of fodder storage and provides information (in percentages) on proportion of interviewees using these methods

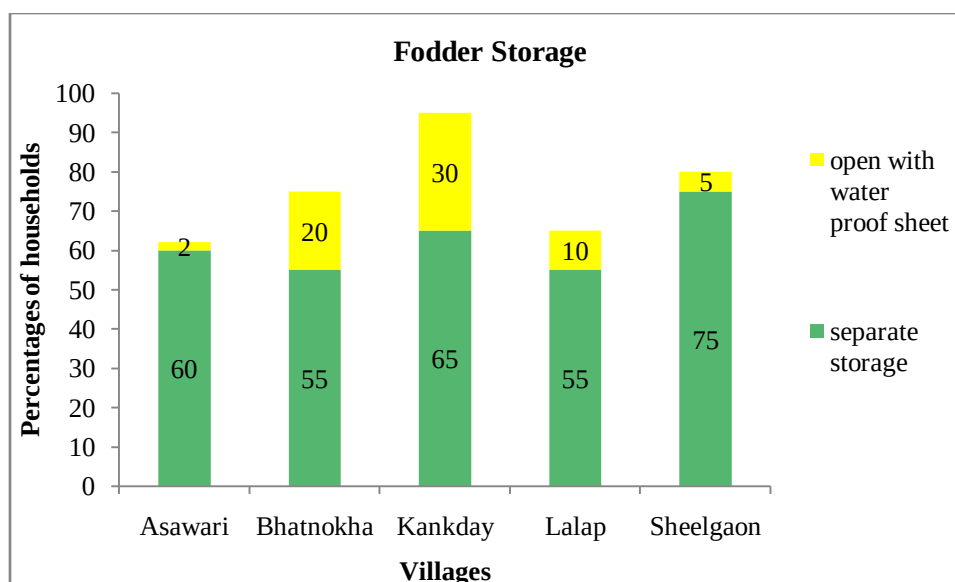


Fig. 13

- Out of total interviewed households in Asawari, 60 percent use a separate storage for fodder while proportion for Bhatnokha, Lalap, Kankday and Sheelgaon is 55, 65, 55 and 75 percent respectively.
- All the interviewed households are not using any preservation method for fodder.
- Besides separate room used for storage, keeping fodder in open with water proof sheet is also in practice. Asawari has 2 percent of total interviewed households which keep fodder in open while percentage of such households for Bhatnokha, Kankday, Lalap and Sheelgaon is 20, 30, 10 and 5 percent correspondingly.

XIII. Readymade Animal Feed

Fig. 14 provides information, in percentages, on the use of animal feed by interviewed persons for their livestock

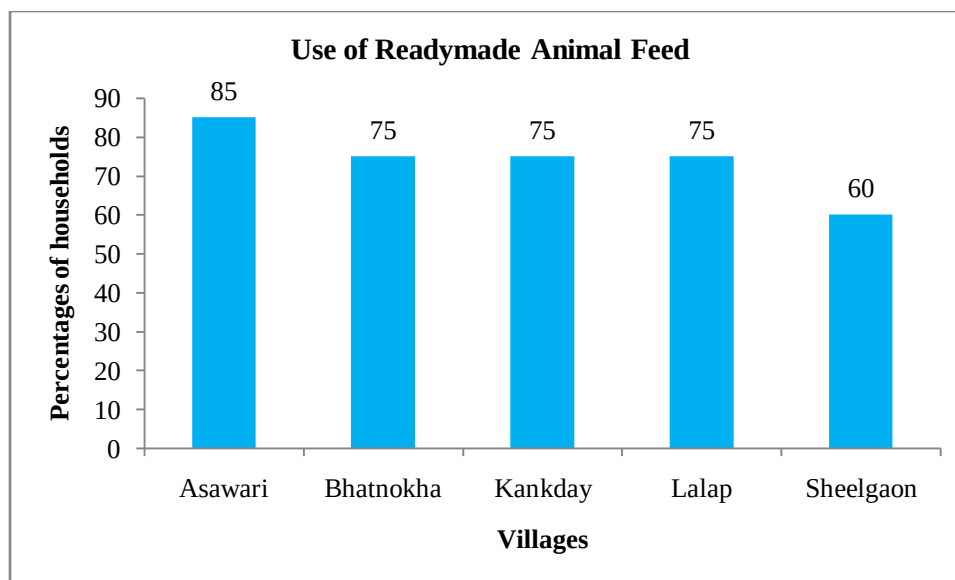


Fig. 14

- Seventy-five percent of total interviewed households in Bhatnokha, Kankday and Lalap use readymade animal feed whereas Asawari and Sheelgaon have 85 and 60 percent interviewed households using readymade animal feed. Animal feed is majorly used during the milking period of livestock to improve the quantity and quality of milk.

XIV. Key Activities of Daily Routine

Following Fig. presents the details (in percentages) on main activities in which interviewees are engaged on daily basis

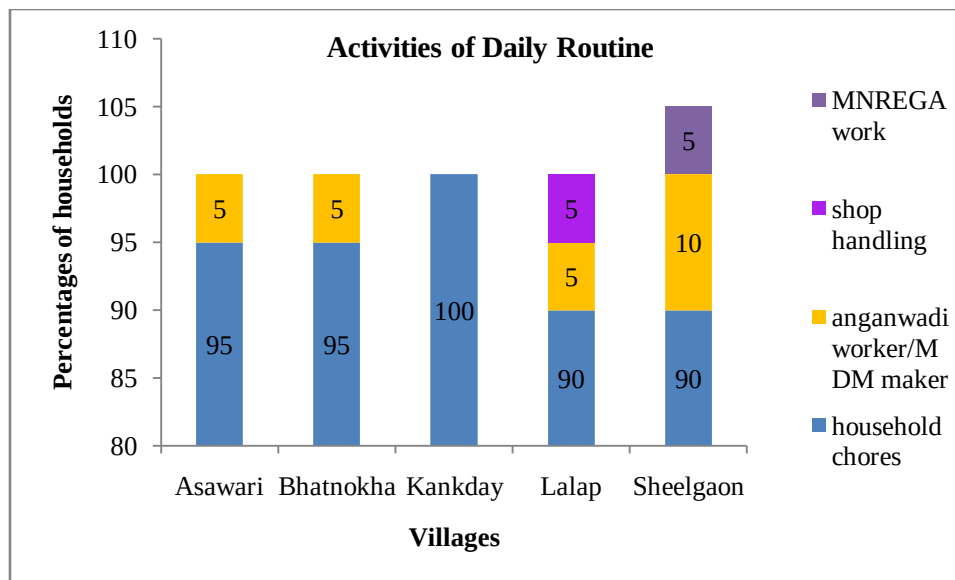


Fig. 15

- Performing household chores is the main activity in which majority of interviewed women is engaged. Asawari and Bhatnokha have 95 percent of total interviewees whereas Lalap and Sheelgaon have 90 percent of total interviewees engaged in household chores. In Kankday all the interviewees do household chores as a main activity.
- Availability of women interviewees at household indicates that there is available man power to manage if an income generation is initiated.
- There is one respondent in Lalap who manages a shop whereas except Kankday rest of the four villages has one or two female interviewees working as an anganwadi worker and mid-day meal maker.
- Sheelgaon has one interviewee who also works in MNREGA besides household chores as main activity.
- During interview women showed interest to be part of an income generation activity like dairy, stitching, pickle making, *mangodi* and *papad* making.

XV. Assistance by Husbands in Household Works

Fig. 16 provides information (in percentages) on views of interviewees whether they are assisted by their husbands in performing household based works

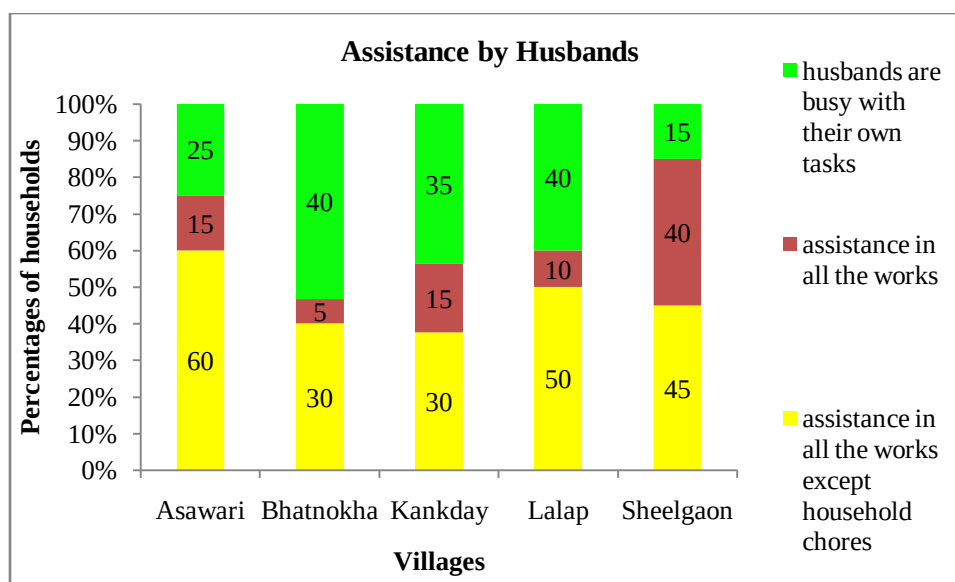


Fig. 16

- In Asawari, 60 percent of total interviewees mentioned that they are assisted by their husbands in all the works except household chores. Proportion of women interviewees for this point in Lalap is 50 percent of total interviewees whereas 30 percent each for Bhatnokha and Kankday and 45 percent for Sheelgaon.
- Percentage of interviewees who mentioned that their husbands support in all types of works is 15 for Asawari whereas 5, 15, 10 and 40 for Bhatnokha, Kankday, Lalap and Sheelgaon respectively.
- Contradicting to the fact that women interviewees are supported by their husbands, there is proportion of women who believes that male members are busy in their own task and there is no support provided by them. Out of total interviewees in Asawari 25 percent responded that their husbands are not supportive. Percentage for this point for Bhatnokha, Kankday, Lalap and Sheelgaon is 40, 35, 40 and 15 correspondingly.
- In all the villages it is visible that proportion of husbands who are supportive is higher than those who are not supportive to their wives. It indicates that if some income generation activity is initiated in village there are high chances that husbands are going to support their wives.

XVI. Value to Opinion of Women

Fig. 17 presents (in percentages) whether husbands of interviewed women respect their opinion or not

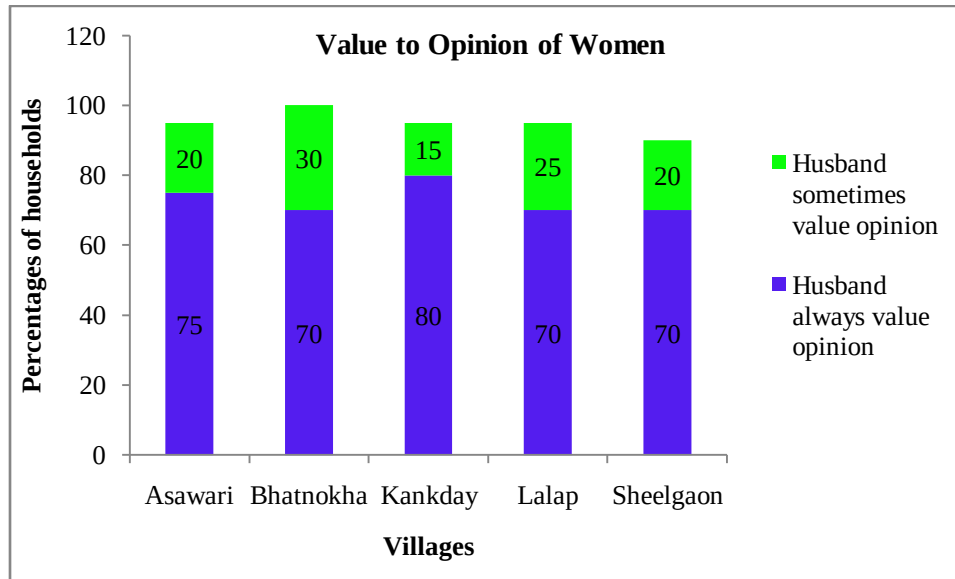


Fig. 17

- Seventy percent of total respondents in Bhatnokha, Lalap and Sheelgaon responded that their husbands value their opinion. Asawari and Kankday have 75 and 80 percent of total women interviewees who responded in the same manner as above.
- Proportion of women out of total interviewees who responded that their husbands sometimes give importance to their views is 20, 30, 15, 25 and 20 percent for Asawari, Bhatnokha, Kankday, Lalap and Sheelgaon respectively.
- Fig. presents that husbands of majority of interviewees respect their views and it offers an opportunity to initiate an income generation activity intends to empower women.

XVII. Interest in Income Generation

Fig. 18 and 19 give details (in percentages) about interest of interviewees in starting an income generation activity and the preferred mode of working

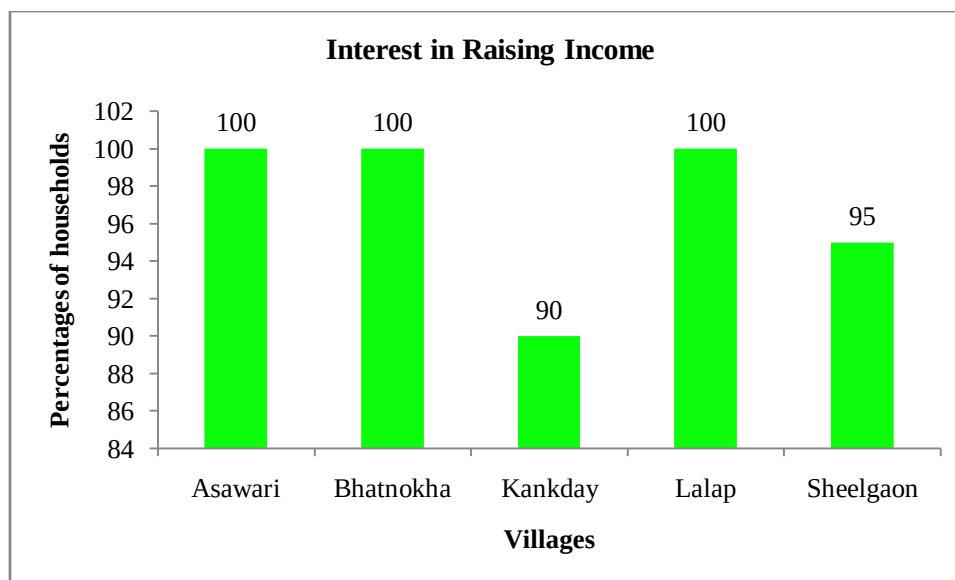


Fig. 18

- Most of the interviewees (97 percent) are interested to raise their income. In Asawari, Bhatnokha and Lalap all the interviewees want to raise their income level.

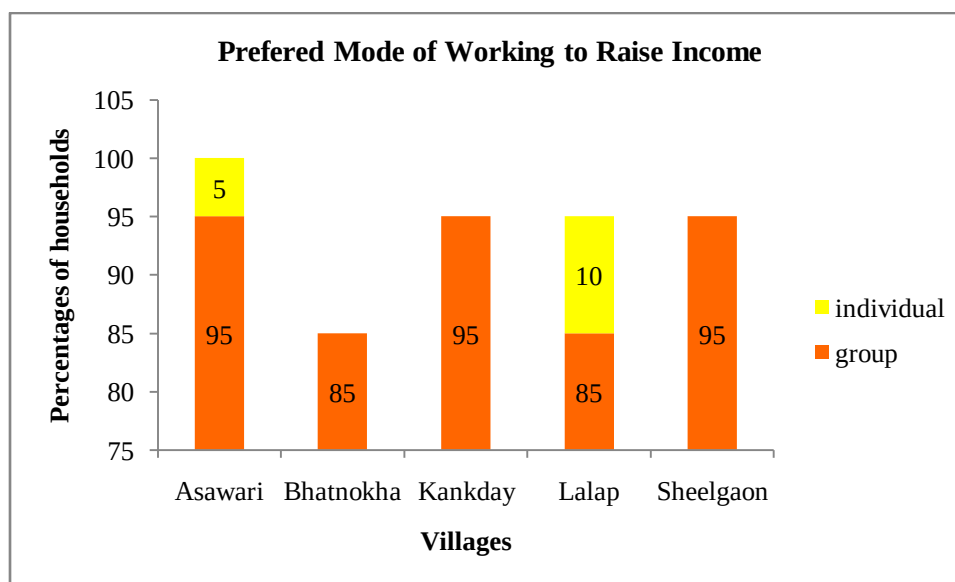


Fig. 19

- In all the villages the most preferred mode of working to raise income level is a group (91 percent). Negligible proportion (3 percent) of interviewees across all the villages wants to do individually.

XVIII. Awareness about Dairy

Fig. 20 shows the proportion (in percentages) of interviewees who are aware of dairy work

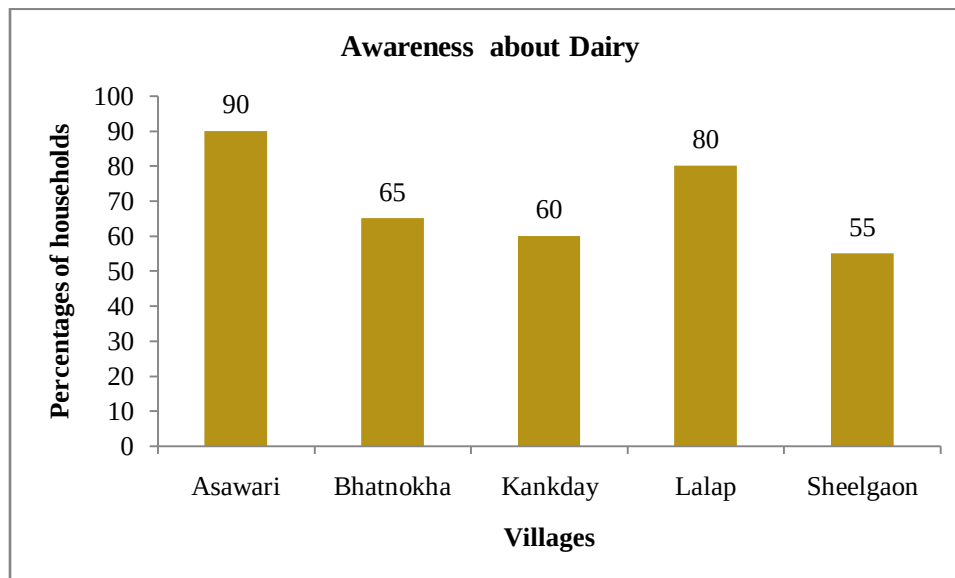


Fig. 20

- Seventy percent of total interviewees are aware of dairy work whereas 25 percent are not. Remaining interviewees have not responded about the same. Of all Asawari (90 percent) and Lalap (80 percent) has highest number of aware interviewees.
- It is favorable indication to start women dairy project as most of the interviewed women are aware of dairy work.

XIX. Livestock Care

Fig. 21 provides details (in percentages) about the persons in families of interviewees who are concerned with care of livestock

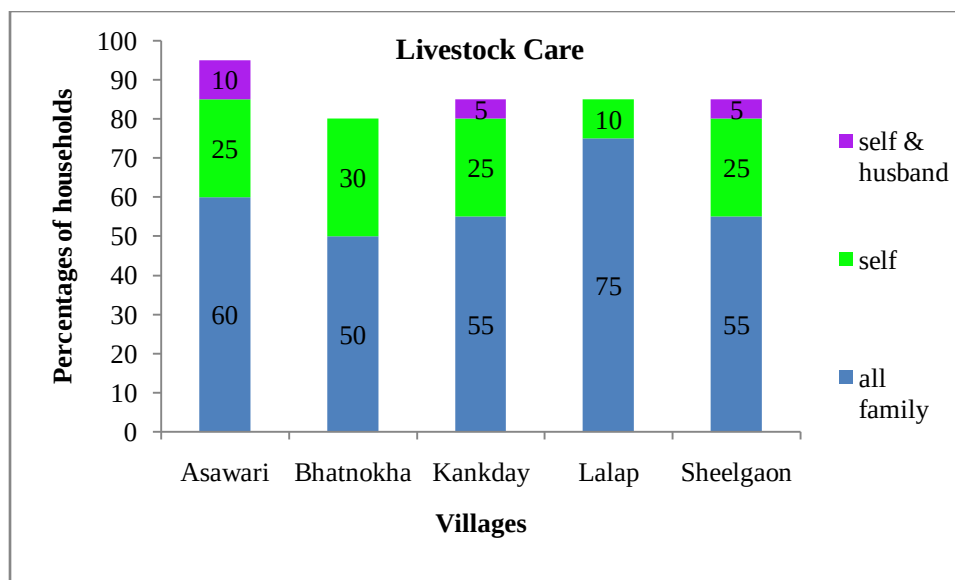


Fig. 21

- 59 percent of total interviewees mentioned that all family members support in taking care of livestock whereas 23 percent responded that they themselves look after livestock. Negligible percent (4 percent) of interviewees shared that livestock care is done by themselves and their husbands.

XX. Interest in Starting a Dairy

Fig. 22 shows the details (in percentages) on willingness of interviewees for starting a dairy

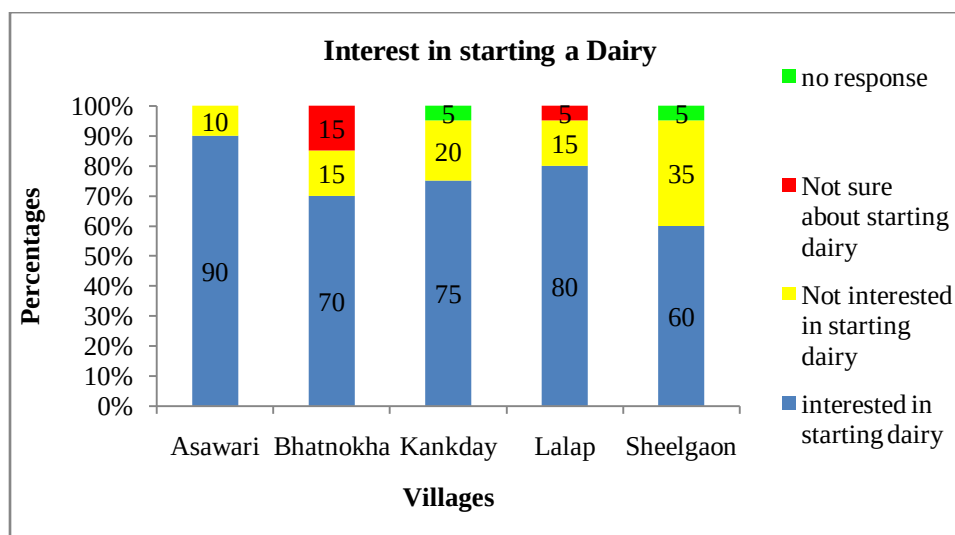


Fig. 22

- Out of total interviewees across all five villages 75 percent are interested to start a dairy while 19 percent not. Four percent are not sure about their decision.

XXI. Preferred Working Mode for Starting a Dairy

Fig. 23 presents (in percentages) interviewees' preferred mode of working for starting a dairy

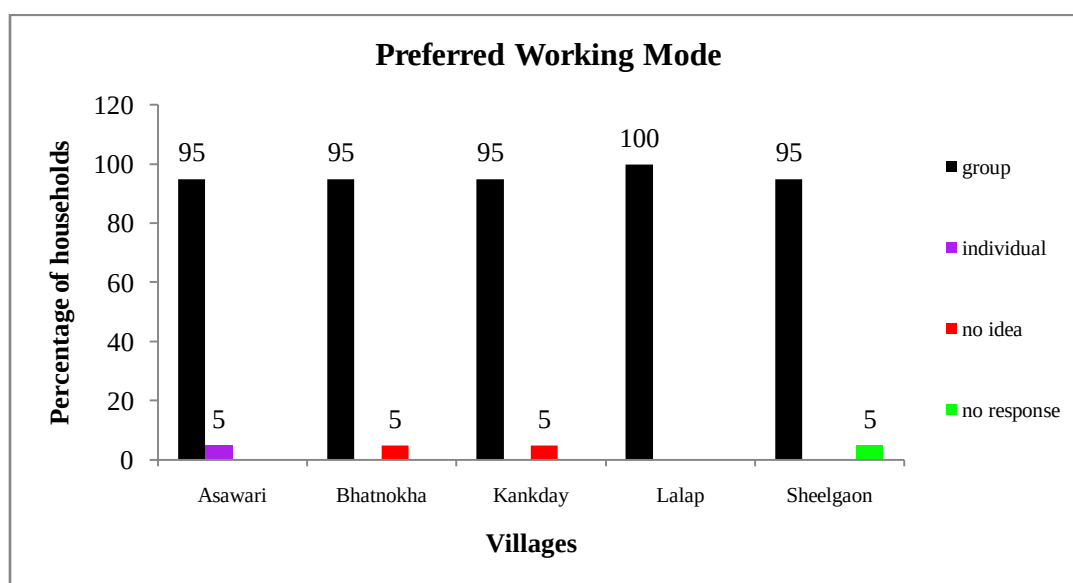


Fig. 23

- Working in group is the most preferred (96 percent) mode of working as per interviewees for starting a dairy. It supports the need of women dairy cooperatives.

XXII. Reason for Livestock Mortality

Following Fig. presents (in percentages) the reasons given by interviewees for livestock mortality in their respective areas

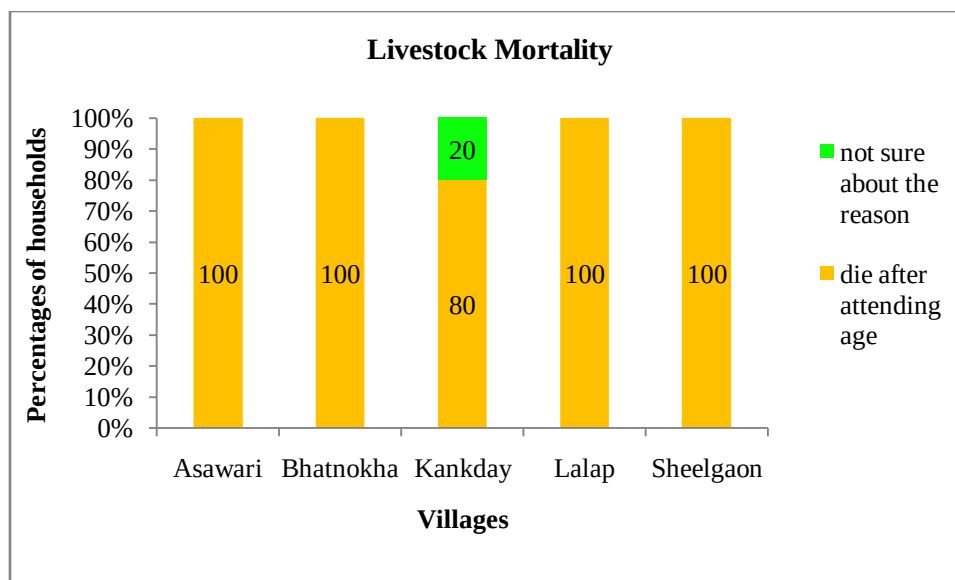


Fig. 24

- Majority of respondents (96 percent) pointed out that livestock die after attending age while 4 percent are not sure about the reason.

XXIII. Role of MNREGA and Pond Renovation

Fig. 25 shows the responses (in percentages) of interviewees about MNREGA and pond renovation work

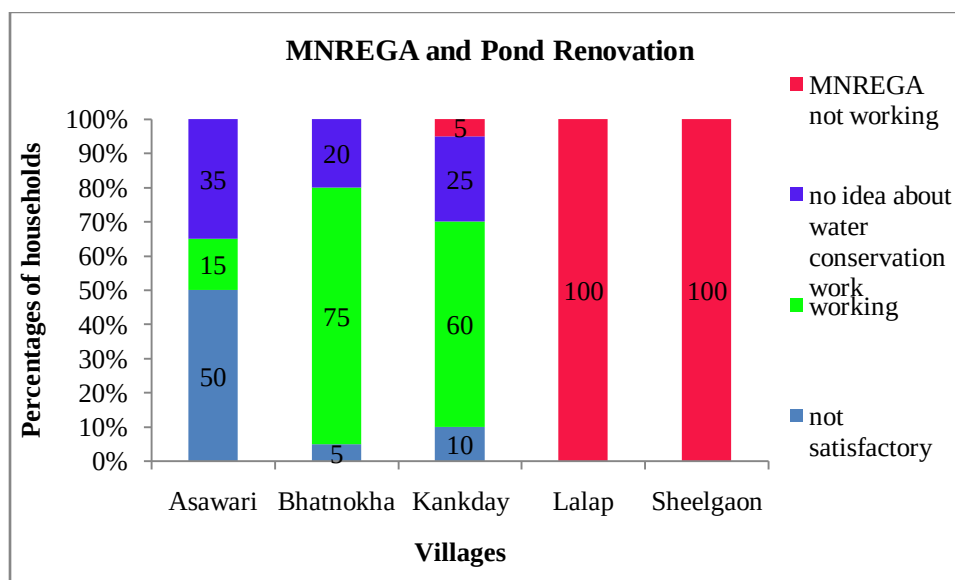


Fig. 25

- 41 percent interviewees shared that MNREGA is not working in their village while 30 percent mentioned about working but not elaborated about the work.
- 16 percent respondents not have an idea about water conservation work whereas 13 percent found the work unsatisfactory.

XXIV. Other Findings

- Own village is used as selling point by some of the interviewees of GEN and OBC category from Asawari, Bhatnokha, Lalap and Sheelgaon. The rate of selling milk is at the rate of Rs.22-25 per liter.
- Community pasture is present in all five surveyed villages.
- 97 percent of total interviewees have never tried to start an income generation activity in past.
- As per the interviewed females dairies located at Sankhwas and Aasop are the nearest to their respective villages.
- Natural source of water (pond) and tube wells are present in all five villages. Moreover, all 20 interviewed households of Asawari, 5 households of Bhatnokha and 2 households of Sheelgaon have government supply (twice in a month)
- The rate of supply of water by private tanker is Rs. 400 per tanker in Asawari village whereas Rs. 300, Rs. 200, Rs. 150 and Rs. 100 per tanker in Kankday, Lalap, Bhatnokha, Sheelgaon and Kankday respectively.

Section 6

SWOT Analysis for Starting a Dairy

Strength	Weakness
▪ Skilled manpower available and are involved in daily care of livestock ▪ Keeping livestock is a household practice ▪ Women participation in decision making ▪ Fodder is availability in plenty (as it is produced in own farms)	▪ Poor infrastructure for milk collection, chilling and transportation ▪ Poor personal hygiene of farmers and his family and ignorance of clean milk production also lead to poor quality milk ▪ Improper care during non-milking period of livestock ▪ Lack of community mobilization ▪ Non-availability of dairy experts ▪ Non-availability of veterinary services in nearby locations ▪ Lack of regular vaccination ▪ No insurance for cattle
Opportunity	Threat
▪ Huge demand of milk and milk products in unorganized retail ▪ Favorable response of respondents for starting a dairy ▪ Availability of surplus milk ▪ Unavailability of commercial selling points	▪ Dependency on monsoon for drinking water and agriculture ▪ Improper micro-planning affects management and sustainability of dairy project ▪ Quality related concerns: In case of inadequate fat content, no purchase of milk by dairies ▪ No incentive on clean milk production ▪ Scarcity of water

SWOT presented above is based on experience gained while working in targeted villages and detailed interaction with key informants and respondents during household survey exercise.

The strength and opportunities showed in above table set the ground to initiate women cooperative dairy and provides justification for sustainability of the project. At the same time it is important to consider the weakness and threats. Below written is the justification about points mentioned under these two heads towards starting the dairy project:

- Scarcity of water: People of targeted areas are coping with this problem for a number of years and continuing with the local situations. Even with this problem people manage to keep livestock for domestic purpose. Therefore, people know how to deal with this issue which is affecting their daily life.
- Improper care during non-milking period: This can be solved by proper orientation of people engaged in keeping livestock. Not caring livestock properly during non-milking period affects health and fertility. Proper care leads to improved milking period.
- Lack of mobilization: Mobilization exercise can be effectively organised by engaging skilled human resource who have received proper training and orientation.
- Inexperienced human resource: Regular training and orientation on the related issues can leads towards creating a cadre of expert human resource for the organization.
- Unavailability of veterinary services, lack of regular vaccination and absence of cattle insurance: Once the people are connected with a dairy, livestock are registered with it. The concerned dairy ensures regular visits of veterinary doctor for proper care and regular vaccination of livestock. Rajasthan Government has provision of insurance for registered livestock.
- Transportation facilities: As the concerned dairy is responsible for collection of milk from respective villages, thus poor transportation facilities are not going to impact much.

- Dependency on monsoon for drinking water and agriculture: This problem can be solved by creating awareness among people on water conservation methods and creating community based sources of water through rain water harvesting.
- Quality related concerns: Orientation of concerned people on working of dairy and required practices will help to solve this issue. People should be oriented that only the good quality milk is purchased by dairies and they will be paid according to the fat content. Increasing quantity of milk by mixing water is not going to raise their income level.
- Improper micro planning: Organization can manage this issue by planning strategically and opting effective strategies for the project implementation.

Section 7

Conclusion

- **Learning**

- Learnt community mobilization by using different means (Door-to-door contact, FGDs, interviews...)
- Developed understanding on rural structure of Rajasthan with reference to different indicators (social structure, economic status...)
- Gained experience on working of a dairy and role of dairy as an income generation alternative for marginalized population.

- **Implementation Plan**

Discussion held with four individual dairy owners in Merta Road to learn about the functioning of individual dairies. On the basis of discussion it is suggested that out of two options (cooperative and individual), Cooperative appears to be more suitable alternative. The choice of cooperatives is based on the preference of most of the interviewees during the household survey. Therefore, it is suggested to start the project by forming women dairy cooperatives in all five targeted villages to organize marginal milk producers in a better way. Additionally, other reasons for considering cooperative as an option are as follow:

- *Associated Benefits*

If marginal producers as member of village cooperatives connect to the Dairies like Saras, there are many benefits provided by these dairies. Benefits include regular vaccination and medical check of livestock, animal feed, scholarship, credit facility, etc. However, there is a view that producers connected to individual dairies can avail many facilities as these dairies provide high price for their milk. But as experienced in a visit to individual dairies at Merta Road, the price offered by these dairies to milk producers is almost the same what dairies like Saras offer. Also, it is felt that when milk

producers get the money they are not willing to spend it on regular vaccination and medical checkup and others. Money is utilized for other consumption purpose.

– *Expansion*

Organizing producers and expanding the project is easier when working through cooperatives. When doing expansion in case of individual dairies, dairy experts, additional human resource, proper infrastructure, logistic management and cooling plant (in case of unused surplus milk) is required. As discussed with dairy owners in Merta Road, nobody is interested to invest in such expansion. They want to limit themselves to retail mode of working. Milk producers come to their shop and sell whatever they have at the rate of Rs. 4.2 per fat. The fat can be separated from fat-containing milk/milk powder by Gerber method through the addition of sulphuric acid. The separation is made by using amyl alcohol and centrifugation. The fat content is read directly on a special calibrated butyrometer.

– *Leadership*

There may be an opinion that president of village dairy cooperatives may be biased in taking decisions and there is dissatisfaction among members. We can notice that this dissatisfaction is prevalent among members in case of almost all groups where one person leads the group. Even with the Sarpanch of a Gram panchayat, some groups of villagers are not satisfied. In many cases, individual dairies owners are not concerned about the rights of the producers. Dairy owners in Merta shared that whenever they go to villages many times they not carry a fat measuring machine and pay the producers on average basis.

– *Supply-Demand Relationship*

Dairies linked with village cooperatives generally have capacity to manage both supply and demand side. But as individual dairies mostly function in

retail mode, therefore, in case of increase in supply they are not attending the milk producers. As shared by dairy persons in Merta, sometimes due to excess availability of milk and less demand in a day, they even waste the unused milk as cooling plant is not available to preserve the milk to use it next day.

▪ **Strategy Plan**

- Dairy project will be started in all five targeted villages at the same time by forming women dairy cooperatives. Cooperatives to be registered under Rajasthan State Cooperative Society Act, 1958.
- Village based cooperatives will be connected to a group formed out of key members present in these cooperatives and this group will have complete responsibility of implementation, monitoring, quality control and expansion of the project.
- The functioning of these cooperatives will be monitored for a year and on the basis of learning from it decision on expansion to other villages will be taken accordingly.
- All these cooperatives will be connected to Dairies like Saras to avail the associated benefits and have an organised network to procure available surplus milk.
- Orientation sessions will be conducted for all members of women cooperative so that they get familiar with functioning of cooperatives, process and their rights.
- A day in a week will be fixed for all the members and key functionaries to discuss quality initiatives, share policy related information and other problems which hinder regular functioning of women cooperatives. A grievance box will also be placed at a location preferred by members to receive problems faced by members. On weekly basis, discussions will be conducted to solve the received problems.
- In all the targeted villages a messenger will be hired to have regular update on cooperatives and getting information on people's perception about these cooperatives.

- Staff required for measurement of fat and payment disbursement in all the targeted villages will be hired from targeted villages only.

▪ **Recommendations**

On the basis of SWOT analysis and points mentioned in Strategy Plan it is clear that initiating women dairy cooperatives is a feasible alternative in the context of targeted villages and has sustainability if interventions are undertaken strategically. This project is in initial phase and appropriate interventions ensure effective implementation and right direction of the project. As experienced in the targeted villages it is suggested to include following interventions as part of the implementation plan:

– *Mobilization Drive*

It is felt that people of targeted villages are in favor of dairy project and want to raise their income level through it. Women showed great enthusiasm as it provides an opportunity to them. Effective mobilization is required to convince people of targeted villages. Following activities can be included as part of mobilization:

- ✓ Household to household contact to describe the concept and working of a dairy
- ✓ Discussion with influencing people and front line workers of various government departments so that they start promoting the idea.
- ✓ Gram Panchayat can take lead to organize people for this and share the idea in their regular meetings. It is effective to share the concept in Gram Sabha.
- ✓ Generating awareness about the schemes and associated benefits linked with starting a dairy.

– *Orientation and Exposure*

Staff responsible for implementation of the project, influencing people and identified volunteers from the targeted villages can visit the already functional

dairies to learn about their functioning and associated activities. It provides an exposure to the team for an effective start of the project. These people can help in formation of dairy cooperatives and orienting members on functioning of a dairy.

- *Training and Capacity Building*

Continuous training and capacity building of implementation team of the project is required to have a resource group. This group will assist in effective implementation of the dairy related intervention to achieve the desired results in definite time frame. It will also be responsible for designing capacity building program for the implementation team and members of women cooperatives.

- *Monitoring and Evaluation*

Regular monitoring of the project should be ensured for making the design and execution of the project more effective. Evaluation of the project from an external agency (dairy experts) on annual basis should also be taken into account to strengthen the project.

- *Demonstration and Advocacy*

Once the project starts working to achieve the desired results, it can be demonstrated to government and non-government organizations for scaling up. Advocacy is required to be conducted with the government to advocate for development of the targeted villages, budget allocation and availing benefits related to the project.

Section 8

References

Documents mentioned in the source head below were studied to develop an understanding about dairy farming in India and Rajasthan.

Source:

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Section 9

Annexure

Annexure 1

Interview Schedule

(Interview schedule to conduct the pre-survey for diary as an income generation activity)

District: _____ Block: _____ Village: _____

Family Details

Category :

Whether enrolled as a BPL household? :

S. No.	Name	Age	Sex	Education	Primary Occupation	Monthly Income	Secondary Occupation	Monthly Income

**questions to be asked from senior female member of the family*

Livestock

No. of livestock	
No. of milch animals	

Milk Production, Consumption, Surplus, Price and Sale

Total average milk production (per day)	
Total average milk consumption (per day)	
Total average milk surplus (per day)	
Selling price (per lt.)	
Selling point	

Veterinary Services and Vaccination

	Yes	No	location	distance
Whether veterinary doctor is available in village or nearby location?				

	Yes	No	vaccination schedule
Do livestock have vaccination?			

Fodder

Type or variety of fodder used	
Production source	
Storage	
Preservation method	
Use of readymade animal feed (<i>pashu ahar</i>)	
Community pasture	

Source of Water

	Yes	No	Details
Natural resources			
Tube well, hand pump...			
Government water supply			

Daily Routine

a. Daily routine (*include different tasks in which women are involved*)

Role in Decision Making

a. What are the works in which adult male members (including husband) of the family assist you?

b. Do the family members listen to your opinion while taking decisions? If yes, please explain.

Expectations in Life and Interest in Income Generation

a. What do you wish to do in your life?

b. Do you want to raise your income? If yes, what will you do for it?

c. What will be the working mode (individual or in group) to raise your income through your choice of activity and why?

d. Have you tried to start some income generation activity? If yes, please share the experience.

Starting a Diary and Related Information

a. How far is the nearest diary?

b. Have you heard about raising income through diary work? If yes, share your knowledge on this.

c. Who in your family look after livestock?

d. Are you interested in starting a diary? If yes, whether it will be in a group or individually?

e. Give reasons for choice of working mode-group or individual

f. Role of MNREGA in water conservation and pond renovation (2011-12)?

Annexure 2

Compile Sheet of Collected Data

Table 5

	Category wise covered interviewees/household				Family size					No. of BPL households	Primary Occupation	
	GEN	OBC	SC	Total	1-3	4-6	7-9	10-11	Total		No. of households in which at least one member is engaged in Agriculture	No. of households in which at least one member is engaged in Animal Husbandary
Asawari	6	6	8	20	2	11	7	0	20	5	12	0
Bhatnokha	6	7	7	20	1	12	5	2	20	1	15	3
Kankday	5	8	7	20	3	11	3	3	20	3	16	0
Lalap	6	7	7	20	1	14	5	0	20	0	14	0
Sheelgaon	6	7	7	20	3	16	1	0	20	3	15	1
Total	29	35	36	100	10	64	21	5	100	12	72	4

Table 6

	Total livestock							Total milch animals				Milk production							
	1-2	3-4	5-6	7-8	9-10	11-12	15-above	1-2	3-4	5-6	7-above	1-4	5-8	9-12	13-16	17-20	21-24	25-above	
Asawari	4	9	4	0	1	0	0	17	1	0	0	3	8	3	2	0	0	1	
Bhatnokha	5	6	1	1	2	0	2	12	1	1	1	0	7	3	3	1	0	0	
Kankday	12	4	1	0	0	0	0	14	0	0	0	5	5	3	1	0	0	0	
Lalap	6	7	3	1	1	0	0	15	2	0	0	1	7	4	1	1	0	1	
Sheelgaon	9	3	1	1	0	2	1	16	0	1	0	2	5	3	1	0	1	0	
Total	36	29	10	3	4	2	3	74	4	2	1	11	32	16	8	2	1	2	

Table 7

	Surplus milk						Selling milk		Availability of veterinary doctor	Regular vaccination	Type of fodder used		
	1-4	5-8	9-12	13-16	17-20	21-24	No. of households not selling milk in spite of surplus	No. of households selling surplus milk			Millet, fodder, til, falkati, khakla	Open farms	Pala, loom
Asawari	4	8	2	0	1	0	12	3	18	4	18	0	0
Bhatnokha	2	8	3	1	0	0	10	4	7	0	15	1	0
Kankday	3	5	1	0	0	0	9	0	4	0	15	0	3
Lalap	5	7	1	1	0	1	13	2	3	0	15	0	1
Sheelgaon	5	2	4	0	0	1	10	2	0	0	12	0	4
Total	19	30	11	2	1	2	54	11	32	4	75	1	8

Table 8

	Fodder Storage				Key activities of daily routine			
	Separate	Open (cover with water proof sheet)	No. of households using preservation method for fodder	No. of household using ready made animal feed	No. of interviewees who do household chores	No. of interviewees doing MNREGA work	No. of interviewees handling shop activities	No. of interviewees working as aaganwadi worker/MDM making worker
Asawari	12	5	0	17	19	0	0	1
Bhatnokha	11	4	0	15	19	0	0	1
Kankday	11	6	0	15	20	0	0	0
Lalap	13	2	0	15	18	0	1	1
Sheelgaon	15	1	0	12	18	1	0	2
Total	62	18	0	74	94	1	1	5

Table 9

	Assistance by husbands in household work					whether husbands value opinion of women			
	Helps in all work	Except household chores helps in all	Agriculture	Take care of animals	Men are busy in their own tasks	Yes	No	No Response	Sometimes
Asawari	3	12	0	0	5	15	0	1	4
Bhatnokha	1	6	1	2	8	14	0	0	6
Kankday	3	6	4	0	7	16	0	1	3
Lalap	2	10	0	0	8	14	1	0	5
Sheelgaon	8	9	1	0	3	14	0	2	4
Total	17	43	6	2	31	73	1	4	22

Table 10

	Interest in income generation					Awareness about dairy		
	No. of interviewees want to raise their income	Working mode				No. of interviewees aware about dairy work	No. of interviewees not aware about dairy work	No response
		Group	Individual	No Idea	NR			
Asawari	20	19	1	0	0	18	2	0
Bhatnokha	20	17	0	3	0	13	7	0
Kankday	18	19	0	0	1	12	6	1
Lalap	20	17	2	1	0	16	2	2
Sheelgaon	19	19	0	0	1	11	8	1
Total	97	91	3	4	2	70	25	4

Table 11

	Look after of livestock					Interest in starting dairy			
	All family	Self	Self & husband	NA	NR	No. of interviewees interested in starting dairy	No. of interviewees not interested in starting dairy	No. of interviewees not sure of starting dairy	Not applicable, No response
Asawari	12	5	2	1	0	18	2	0	0
Bhatnokha	10	6	0	3	1	14	3	3	0
Kankday	11	5	1	3	0	15	4	0	1
Lalap	15	2	0	2	1	16	3	1	0
Sheelgaon	11	5	1	3	0	12	7	0	1
Total	59	23	4	12	2	75	19	4	2

Table 12

	Preferred working mode for starting dairy				Reason for livestock mortality		Role of MNREGA and pond renovation			
	Group	Individual	No idea	No Response	die after attending age	Not sure about the reason	Not satisfactory	Working	No idea about water conservation work	MNREGA not working
Asawari	19	1	0	0	20	0	10	3	7	0
Bhatnokha	19	0	1	0	20	0	1	15	4	0
Kankday	19	0	1	0	16	4	2	12	5	1
Lalap	20	0	0	0	20	0	0	0	0	20
Sheelgaon	19	0	0	1	20	0	0	0	0	20
Total	96	1	2	1	96	4	13	30	16	41

Annexure 3

Details of Key Informants

- Asawari: Mr. Radhey Shayam, Ex. Bus Conductor, Ms. Ram Kanwar, AWW, Ms. Madi Devi, AWW, Ms. Manju Devi, Sahyogini, Mr. Ramratan, Ex. Sarpanch, Ms. Shobha Devi, Ms. Rameshwari Devi, Ms. Parma Devi and Mr. Nathuram.
- Bhatnokha: Ms. Devi Kanwar, AWW, Ms. Santosh Kanwar, AWW, Mr. Jhabbar Singh, Mr. Dungar Singh, Ms. Sarla, ANM, Mr. Vijay Kumar, Ms. Datar Kanwar and Mr. Ram Prashad (experienced in dairy)
- Kankday-Ms. Ram Pyari, Ward Member, Mr. Govind Ram, Ms. Ladu Devi, ASHA, Mr. Siyaram, Ms. Jawnrai and Mr. Bansiram.
- Lalap: Mr. Shaitanram, Mr. Deeparam, Ms. Pushp Kanwar, AWW, Mr. Rameshwar Mundra and Mr. Arjunram.
- Sheelgaon: Mr. Bansi Lal, Ex. Postmaster, Ms. Tara Devi, MDM worker, Ms. Sharda, AWW, Ms. Geeta Devi, AWW, Mr. Mahendra Singh, Gram Sevak and Ms. Mariam, ANM.

Annexure 4

Details of FGDs

1. Asawari:

- FGD with participation of Lady Supervisor, 24-25 AWWs and same number of Sahyogini from 8 villages
- Lohar, Meghwal and Chowkidar community
- Khatiyon Ka Bass
- Rajputon Ka Mohalla

2. Bhatnokha

- AWW's house with involvement of ANM, AWW and all caste women
- Meghwalon Ka Bass

3. Kankday

- House of Mr. Siyaram
- Chopal with participation of all castes

4. Lalap

- Deepam's house with participation of SC community
- Shaitanram's residence with participation of OBC community
- Mr. Rameshwar Mundra's house for Rajput and Baniya community

5. Sheelgaon

- At Chopal for OBC male members
- Meghwalon Ka Bass for women representatives
- MDM worker house for Brahmin community
