



**MANAGEMENT OF ANIMAL HUSBANDRY PRACTICES BY
FARM WOMEN IN BHILWARA REGION**

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ABSTRACT

Agriculture is the basis of our rural economy and livestock is the back bone of Indian agriculture. In India, Animal husbandry has been an integral part of human civilization. Possession of livestock was a symbol of progress and prosperity of which could be quoted from Vedas and Purans. Women's role is significant not just for the number of tasks they perform but also for their traditional role in integrating agriculture with animal husbandry. Women realise the contribution animals make to crop yield, due to which they are ready to undergo the drudgery of walking miles to get the fodder, making quantities of hay and utilising crop residues for their animals. Women know which leaves and grasses are best for fodder, which can help milch cattle, which plants have veterinary uses. The whole technique of haymaking from 'paral' (rice stalks), madira, mandua stalks and building haystacks or 'lutha' to tide over the crisis months especially long winters, are within the domain of women's expertise. The present study for analysis of women work in animal husbandry has been conducted in 5 Panchayat Samities of Bhilwara district of Rajasthan. Two villages from each PS thus ten Villages selected for research. Primary collection the actual working in village show the former/manager of Animal-Husbandry practices.

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INTRODUCTION

Agriculture and livestock rearing are inter-dependent as livestock keeping provides supplementary occupation and income round the year; whereas agricultural by-products are used by the livestock. Animals are sources of food, fiber, power, manures, hides, skins, bones etc. Livestock sector plays an important role in Indian economy. Besides being an integral part of day-to-day lives, their contribution to national income is valuable. The contribution of agriculture sector fell from 46.4 to 36.8 per cent from 1980-81 to 1998-99 while the contribution of animal husbandry sector as per cent of agriculture went up from 18.63 to 26.4 per cent during this period.

India is the largest livestock holding country in the world and its present livestock exceed 512.1 million based on an annual growth rate of more than 1.5 per cent per annum from the last official livestock. Whereas India constitutes less than 3 percent of the world's total land area, it supports 55 percent of the world's buffaloes, 16 per cent of the world's sheep. India ranks first in total bovine and caprine and sixth in ovine population of the world. Animal husbandry in rural areas is in general

considered as a job of farm women. Livestock plays a multi-faceted role in providing draught power for the farm, manure for crops, and energy for cooking and food for household consumption as well as the market. In animal husbandry women have a multiple role. With regional difference, women take care of animal production, care of animals, grazing, and fodder collection, cleaning of animal sheds to processing milk and livestock products. In livestock management, indoors jobs like milking, feeding, cleaning etc. are done by women in 90 per cent of families while management of animals and fodder production are affected by men (Narayanan, 1997). Their activities vary widely ranging from chopping of fodder, milking and cleaning etc. They also perform various income generating activities like collected cow dung, firewood, honey etc. Women are more familiar with plant species that are useful in primary health care, edible greens and tubers. Though women are well aware of the plants used for veterinary medicine, men usually administer medicine.

Livestock are valuable assets of the rural poor and are critical in supporting their livelihoods particularly during unfavorable times. Mixed (Crop-livestock) farming system provides poor farmers with flexible asset regime and reduces risk and vulnerability. However, frequent droughts and the resultant fodder shortage affect livestock productivity. Better feed and fodder management to some extent, helps in overcoming these shortages. In India, about 70 per cent of the population

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is engaged in agriculture and rearing livestock, subsidiary to agriculture. There exists a symbiotic relationship in man-land livestock ecosystem. Livestock comprising mainly cattle has a complementary, supplementary and sustainable relationship with crops under mixed farming system prevalent in our country. Majority of families engaged in agriculture get employment only during the time of plugging, sowing, harvesting, threshing etc. under such conditions it is customary to rear livestock as a source of some extra income.

India ranks fourth in the world's livestock population. Women play significant role in rearing of livestock, and farm management, post harvesting of animal produce, storage, processing and marketing of all animal produce. Apart from this, they also spend considerable time in the household works including nurturing children, cooking, cleaning, fetching water and collecting fuel household welfare.

Women's role in fodder production was remarkable. The importance of feed and fodder in livestock production hardly needs to be emphasized. Three major sources of fodder supply are crop residual, cultivated fodder and fodder from common property resources like forests, permanent pastures and grazing land. A significant portion of crop residue, particularly paddy and wheat straw, is being wasted. Emphasis will be given on enrichment of straw/Stover, preparation of hay/silage to overcome fodder scarcities during the lean season, conversion of fodder into feed block to facilitate transport of fodder from surplus areas, establishment of fodder banks and promotion of chaff cutters.

Women are also well aware of the traditional techniques and methods of preparing highly energetic concentrates comprising coarse millets, lentils and vegetables. These homemade concentrates are fed to animals for enhancing milk yield, provide them energy especially during arduous activities such as ploughing etc. Besides, cattle and goats are traditionally fed a very healthy and nutritious home-made concentrate after the delivery and in the days following it. Since most of the land is small and fragmented with hardly any space for growing fodder trees, the significance of homemade concentrates and thereby traditional crop residues become all the more important.

Most *pashu vaid*s are women and they have a good understanding of animal diseases and what treatment to accord. They usually give a prompt and free of cost treatment to the ailing animals. This enables the farmers to plough their fields on time and to make good manure. Being sufficiently knowledgeable and proficient, these women are preferred over allopathic doctors in most of the villages. The demand for their services has definitely gone down in the past few years. Though they are still popular, the increasing belief in the allopathic medicine has affected these traditional curative methods.

In India rural women have a major place in agrarian scenario. Majority of the rural farm women are actively involved in the various operations related to mixed farming system existing in India. Women and men participate as a family unit on the farms. Men perform major share of work quantitatively on agriculture side whereas on the animal husbandry side women in conduct most of the management operations additional to their household activities. Has also reported that there is distinct sphere of participation between male and female in farm and dairy sectors, the men planned and women

implemented the activity. Most time consuming activity of the farm women was cattle management. Women accounted for 93 per cent of total employment in dairy production (World Bank, 2011). Depending upon the economic status, women perform the tasks of collecting fodder, collecting and processing dung. Women also prepare cooking fuel by mixing dung with twigs and crop residues. Though women play a significant role in livestock management and production, women's control over livestock and its products is negligible. The vast majority of the dairy cooperative membership is assumed by men, leaving only 14 per cent to women.

Women have major share of work in animal husbandry and dairy. This is highlighted by the fact that there are 75 million women in dairy as against 15 million men. Similarly the women engaged in animal husbandry accounts for 20 million as against only 1.5 million men. The work role profile of farm women is that they put in 14 to 18 hours of manual work daily on farming operations, livestock raising, collecting and caring fodder and fuel. In core spirit of rural life, women are homemakers, farmers and cattle managers.

Animal husbandry technology and technology transfer both terms are center point of development. Technology transfer is closely related to increasing dairy productivity. Farm women are the grass root of dairy production but she is known about new technology and the result is in fronts of us.

Table 1 Average Annual growth rate of Milk Production

Year	Milk (in Million Tonnes)
2011-12	127.9
2012-13	132.4
2013-14	137.7
2014-15	146.3
2015-16	155.5

Source : Animal husbandry and dairying (www.nddb.org)

Review of Literature

Singh *et al.* (1994) found that on an average 242 men equivalent days, MED, were used in dairy farming system, of which about 81 days of labour were contribute by female labour was mainly found on large and medium farms, while it was negligible on marginal and small farms. The contribution of female labour to total labour use was the highest on the landless labour households where no male or female labour was hired. The average contribution of female labour on same households was about 33 per cent. It was also noted that contribution of female was 100 per cent in preparation of milk product following by cleaning animals and cattle shed, chaffing fodder, bringing grass from the fields, feeding. However, contribution of female labour on small holdings was reported to be higher than the males in almost all the dairy farming operations, except that in bringing fodder and grass from fields. Sihag (1995) pointed out that women were actively participating in activities like distribution of fodder, shed cleaning, booming and bathing of animals, handling of milk etc. Roy and Chand (1998) reported that dairy activities were classified into 5 field viz. breeding, feeding, health care, management and miscellaneous activities field wise over all higher physical participation of farm women than men in these activities was seen. In miscellaneous activities there were significantly higher scores of men than of women. But in the

fields of breeding, feeding, management women had significantly higher participation scores than men. In health care there was no significant difference in participation of men and women. Devi (1999) mentioned the time spent by women in animal husbandry activities, which was found to be (96.3) hours. While, for men it was 548.6 hours per year. Nanavat (2000) revealed in her study that in most of the households, it is women who care for and milk the cattle while men sell the milk. Sharma (2001), in a study on “role performance of farm women in agriculture and dairy husbandry” revealed that the variable namely age, education, caste, size of lane holding and socio-economic status were non-significantly correlated with role performance of farm women.

Sankhala and Sharma (2001) said that most important role performance was in “inter cultivation” MS 2.86, “pre sowing activities and sowing” was also considered as an important role being performed by women was (MS 2.72). “Harvest and post harvest activities” role performed by women was given third rank with mean scores of (2.62) followed by “management of cattle” and feeding of farm animals, respectively. The least important roles performed by farm women in agriculture and dairy husbandry happened to be marketing (1.15), health care of animals (1.86) and decision-making roles (12.18 per cent).

Sharma *et al.* (2002), revealed that total number of human labour required for up keep of animals was (149.06) days per animals out of which, only (10) per cent were devoted by male and remaining (90 per cent) by female members. Fodder collection, cleaning of cattle shed and milking operations were almost the role responsibility of the women in the area.

Ghuman *et al.* (2006) study on “Rural women as a dairy manager”, in this study to examine the farm and extent of participation of farm women in the various operations of animal husbandry has revealed that rural women were fully involved in majority of the operations either as manual workers or as supervisors.

Research Methodology

Bhilwara district of Rajasthan has been selected for the study. The researcher is belongs to this district and familiar with the women of the study and local dialect, which help in collection of data, building of rapport so the Bhilwara district is purposely selected for the study. 5 Panchayat Samities was purposely selected on the basis of highest number of female population. Under each Panchayat Samiti, for the purpose of selection of women contribution in animal husbandry, two villages from each Panchayat Samiti were selected on random basis. Thus 10 villages from five Panchayat Samities were selected for the present study.30 farm women were selected randomly as respondents for this investigation. Thus, in all 300 farm women was selected as the respondents for the study. Hindi language use for preparation of survey schedules and local dialect was used for Personal interview.

Techniques Of Analysis

After collecting data it is necessary to analyze them with the help of statistic to arrive at proper and adequate conclusion. The data were processed; tabulated and analyzed using frequency and percentage.

Objective of The Study

1. To find out the participation of farm women in animal husbandry.
2. To find out the times spent in animal husbandry activities by farm women.

Measurement The Participation Of Farm

Women In Animal Husbandry

In order to know participation's of the respondents in animal husbandry. The different activities were clubbed into fourteen major components viz. procurement of fodders, cutting the fodder, prepare food, grazing the animals, care of animals, cleaning of cattle, cattle shed management, drinking water of animal, feeding of animals, care of animals at the time of calving and after calving, selling of cow dung cakes, storage of fodder and buy fodders for animal. The maximum score obtainable score for participations in animal husbandry were 28. The respondents were distributed into three categories based on equal intervals. (Table 2)

Table 2 Distributions of respondents by their overall participation in animal husbandry activities

S.No	Participation Categories	Score Range
1.	Lower	Less than 10
2.	Middle	10 - 20
3.	Higher	Above 20

Analysis The Participation Of Farm Women In Animal Husbandry Practices

Agriculture is the main and animal husbandry is subsidiary occupation, women play a vital role and majority in animal husbandry. Despite the fact that we are having about 1/5th of the total livestock. The women in livestock farming are involved in various operations like feeding, breeding, management, health care and marketing of animal including green fodder production. They also perform various income generating activities like collecting cow dung, firewood, honey etc. the actual farm operation and participation of farm women very with place, system of production and socio economic status.

Overall Participation of Farm Women in Animal Husbandry Practices

On the basis of overall participation of the respondents in animal husbandry practices, they were categorized into three categories viz. low, medium and high. The results are presented in table 3.

Table 3 Distribution of farm women (respondents) by their extent of participation in animal husbandry activities

S.No	Categories	Percentage
1.	Low	11.42
2.	Medium	24.80
3.	High	63.76

The data presented in table 3 reveal that majority of the respondents 64.00 per cent fell in the category of high level of participation whereas, 25.00 per cent and 11.00 per cent respondent belonged to medium and low level of participation, respectively.

Component- wise Participation of Farm Women

In order to have in-depth knowledge regarding the women's involvement in various animal husbandry practices component viz. participation of the respondent was assessed the information pertaining to which is given in table 4.

A perusal of the table reveals that the farm women participate in all the fourteen activities of animal husbandry. The activities like - bringing fodder from field, chaffing the fodder, prepare feed for animal, milking and preparation of cow dung cakes were also performed independently by nearly 80-90 per cent of the respondents. However, in the activities like health care of animals, selling of milk and buy fodder for animals, participation of farm women was found to be less as the male member mainly performed these.

Table 4 Distribution of farm women (respondents) by their participation in animal husbandry activities

S.No	Practices	Independentl y percentage	Jointly percentage	No participation percentage
1	Bringing fodder from field	87.00	13.00	00.00
2	Chaffing the fodder	80.33	19.67	00.00
3	Prepare feed for animal	16.67	3.33	00.00
4	Grazing animals	67.67	32.33	00.00
5	Health care of animals	40.00	58.00	2.00
6	Offering water for animals	62.67	37.33	00.00
7	Bathing the animals	57.00	40.67	2.33
8	Cleaning the utensils used for milking	99.33	0.67	00.00
9	Milking	71.67	28.33	00.00
10	Selling of milk	30.67	7.33	62.00
11	Look after of animals	49.67	49.67	0.67
12	Buy fodder for animals	1.00	6.00	93.00
13	Storage of fodder	50.00	50.00	00.00
14	Collection of cow dung and prepare of cow dung cakes	99.00	1.00	00.00

Critical examination of the table reveals that majority of the women, 90 per cent are not selling and buying fodder. These are the male dominated tasks. The reason behind it was that almost all the families were male dominated, where decision makers and the head of the family was male member. Similarly male member of the family mainly performed procurement of inputs for like selling and buy fodder.

Bringing Fodder from Field

Regarding bringing fodder from field 87 per cent and chaffing the fodder 80.33 per cent, it was found that majority of the respondents were involved in individually

Prepare Feed for Animals

With respect to prepare feed for animals 96.67 per cent, cleaning of utensils for milking 99.33 per cent, collection of cow dung and prepare of cow dung cakes 99 per cent respondent performed these tasks individually. This is human tendency that works were not for men but for women and it has become a traditional custom of the society.

Health Care of Animals

It was found that activities like 49.67 per cent health care of animals, 40 per cent look after of animals and storage of fodder 50 per cent in also good involvement of the respondents. In these activities women were involved either independently or jointly with family member.

Grazing Animals

With regard to grazing animals 67.67 per cent, offering water of animals 62.67 per cent and bathing animals 57.00 per cent performed by the respondent independently.

Buy Fodder for Animals

In the activity like buying fodder for animals, there is very less involvement of farm women, only 1 per cent.

Selling of Milk

Very less involvement of the farm women is also in selling of milk, 30.67 per cent because this activity is male dominated.

Times Spent In Animal Husbandry Activities By Farm Women

Women have big contribution in development and in-situ conservation of animal breed. During the course of this study it has been found that women spent more than 8 working hours of the day in several activities, related to animal husbandry. It occupies almost 50 per cent of their working time over 10 per cent of their counterparts, i. e. men. Cottage milk products preparation and their processing tasks maximum time, i.e. 30 per cent, performing the animal husbandry jobs preceded by cleaning of sheds, incurring, 27 per cent of time and fodder harvesting and processing, thereafter consuming 20 per cent of their time was reported to be spent on management and calf rearing after birth, respectively. The landless respondents have more contribution over the cultivators in animal husbandry practices confirming the earlier findings of **Pandey (2003)** who reported that women spent 5 to 7 hours a day in buffalo production.

Table 5 Time spent in activities related to animal husbandry by farm women

Hour	Peak period	Per cent	Slack period	Per cent
1-2	30	10.00	30	10.00
2-3	132	44.00	66	22.00
3-4	62	20.67	126	42.00
4-5	50	16.67	50	16.67
5-6	18	6.00	20	6.67
No participation	8	2.67	8	2.67

Perusal of table shows that time spent in animal husbandry practices was much more in slack period as compared to peak period. Majority of the respondents work for 2-3 hours in cattle sheds during peak period but in slack period when few work in field women spent 3-4 hours with animals work.

Table 6 Mean hour spent in different activities during peak and slack period by farm women

Activity	Peak period	Slack period
Agriculture	7.10	4.58
Animal husbandry	3.16	3.20
Total	10.26	7.78

Perusal of table 6 shows that average time spent in agriculture was much more in peak period as compared to slack period. While average time spent in animal husbandry was much more in slack period as compared to peak period. On an average woman worked for 11 hours in peak period and 7- 8 hours in slack period in agriculture and animal husbandry activities.

The finding related to participation of farm women in animal husbandry activities revealed that majority of the respondents were involved in the activities like bringing fodder from field, chaffing the fodder, prepare feed for animal, milking, preparation of cow dung cakes were also performed independently by majority of the respondent, whereas the activities like selling of milk and buy fodder for animals least participation of the women was observed as the tasks were mainly performed by the male member of the family. In some the activities viz. storage of fodder, health care of animals and look after of animal's joint participation of men and women was observed.

Rangenekar (1992) reported that change in livestock production system could only be brought through involvement of women.

Findings

- (i) Majority of the respondents 64.00 per cent fell in the category of high level on participation whereas, 25.00 per cent and 11.00 per cent respondent belonged to medium and low level of participation in animal husbandry practices, respectively
- (ii) Farm women were performed extensively involves in the activities of animal husbandry i.e. bringing fodder from field, chaffing the fodder, prepare feed for animal, milking and preparation of cow dung cakes were also performed independently by nearly 80 -90 per cent of the respondents.
- (iii) Purchasing of fodder was out of their purchasing power. Fodder was managed with in available resource. Care of sick animals (49.67 per cent) was being done jointly with men. Grazing the animals (67.67 per cent) was being done more
- (iv) As the entire management of livestock is being done by the farm women, they participated in its management, irrespectively, of the area.
- (v) Time spent in animal husbandry practices was much more in slack period as compared to peak period. Majority of the respondents work for 2 – 3 hours in cattle sheds during peak period but in slack period when few work in field women spent 3 – 4 hours with animals work.

CONCLUSION AND SUGGESTION

Finding further indicates that besides shouldering almost entire workload of household activities responsibility in animal husbandry. Women worked in the field for more hours more than the men folk do. This amount to heavy work load being carried out by women. There is a need to make men – folk aware of this aspect so that they may be more conscious of it and try to relieve them of such heavy workload. There is a need to increase women access to knowledge regarding new technology, credit and marketing and they should come up from the world of illiteracy and backwardness. The findings of this study further, reveal that the farm women in India are eager to change equally as compared to western, but the facilities and incentives impose limitations. The main reason for their inability to adopt the new technology and not discontinuance is on account of limited possibilities. The farm women have often said that yes, they little know about the technology, they had used it and they are convinced but because of the lack of adequate finance and high cost of the input in the market forced us to take decision to leave the use of the new farm practices.

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