

Women in Livestock Production Some Observations From Parts of Western India.

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ABSTRACT: The critical role of women in livestock production is now well realised in most parts of India. However, there seems to be confusion regarding concepts and approach with respect to research, development, extension and training as related to women in livestock production. The paper discusses the approach adopted in research and development planning on the subject and gross lacunae felt in this respect. The observations are based on the experiences in the field and participatory studies carried out over the last decade. The paper points out paucity of information from rainfed underdeveloped areas and under-privileged communities, where dependence on livestock is high and women shoulder major share of burden of work. Studies indicate that women have considerable

knowledge on animal behaviour and production characteristics. They have good information on feed resources in the area but continue to be neglected as resource of information. Women's perception on the usefulness of different livestock, constraints to production, quality of feeds etc. differ from men farmers and technical persons. There is need to understand and appreciate these aspects and modify the development and extension programmes taking the systems approach. The paper stresses need to change approach to extension and training for the benefit of women. The burden of work on women, high illiteracy, their aptitude and perceptions need be duly considered. Involvement of women in On-farm trials for developing technologies and recommendations for improved productivity, is stressed.

Key Words: Livestock Production, Women Involvement, Perceptions, Extension, Training, Indeginous Knowledge

Introduction

Livestock production is an integral part of farming systems in countries like India. It integrates well with most of the cropping systems. The contribution from livestock is high in rainfed and ecologically fragile areas and much of the western India has such conditions. Large part of Western India is in agro-ecological zones 13 and 14 where the rainfall is low with high variability. The area has very limited irrigation (about 20%) and crop failures are frequent. Livestock production is one of the means of risk coverage as decrease in livestock production is not as high as in crop production. This part of the country is characterized by existence of three distinct areas - arid and dessert in north and north west, plains in the middle and range of hills in eastern boundary - extending north south. The area has large small ruminant population (sheep and goat) which are growing much faster than large ruminants - the cattle and buffalo, whose population is almost static.

Livestock are owned by almost all farmers and a large majority of landless. The area has three distinct social groups - farmers, pastoralist and tribals. Farmers practice mixed farming - while for pastoralists main source of livelihood is livestock - most common are cattle, sheep and goat. Some partoralists breed buffalo and camel also. Tribals have small holdings and usually non-descript livestock and poultry. Subsistence farming is common Farmer community prefer buffalo in western region (Rangnekar, 1993), while majority of cattle, sheep and goat are with pastoralists.

Much of the livestock work is carried out by women, and now there is some recognition of the role of women, as is evident from series of seminars and publications of national and international agencies (FAO, 1991; ICAR 1988). However, not enough effort is done to study in detail the role of women from different areas and different socio-economic strata. Majority of the reports have been on work sharing and a few on decision making process and the studies have been carried out only in a few

pockets of the country. Limitations of these studies have been pointed out in some reports (FAO, 1990; - Rangnekar, et al., 1994). To plan effective training and extension programmes it is necessary to go much beyond work sharing and understand all related aspects particularly women's views, perceptions and priorities. This paper summarises observations gathered from some districts of Gujerat and Rajasthan and discusses the implications in development and research.

Methodology

Studies were undertaken in parts of Gujerat and Rajasthan states in western India. Observations were gathered from farmer families from 12 to 14 groups of villages in semi-arid and tribal areas of these two states. More than 800 families were involved so that all the major social groups from different economic strata are covered. Use of format - questionnaire was avoided, in view of the past experience that women are not free to discuss once they notice that some recording is done on paper. While list of reference points was kept information was gathered through a series of small group discussions, informal chats. In most cases kitchen talk was found very effective in removing inhibitions. Once the barrier was broken it was possible to tape record the discussion. It was noticed that linkage with development activity and taking up some programme simultaneously encourages women's participation in discussion. Involvement of men was also encouraged on some occasions so as to avoid development of doubts and also to compare differences in perceptions.

Results and Discussions

Work sharing

Studies in parts of Rajasthan and Gujerat indicate variation in work sharing due to socio-economic strata, Table 1 summarises some of the results indicating variation in work sharing. It can be seen that amongst rich and of higher social order the involvement of women is minimal while amongst tribal families women have to carry out all type of jobs - including marketing. Women are generally engaged with indoor jobs like cleaning, milking, feeding, care of young ones but these are most critical for livestock production. The men have involvement in fodder production, sale and purchase of animals, feed fodder. Social factors probably contributed to this arrangement but it has resulted in

women remaining behind the scene - sometimes described as hidden or invisible hands (Mitra 1987). Amongst pastoralists there is more even sharing of work probably because the livestock production is the main source of livelihood. The main responsibility of women is to take care of newborn particularly for sheep and goat. Rangnekar and (Rangnekar, 1992).

Perceptions of women

The perceptions of women with regard to choice of animal need be properly understood. Discussions indicated that women prefer livestock which are easy to handle, which would not be very choosy about feed, which have less disease problems, dairy animals producing high fat milk are preferred. It was seen that women have somewhat different perceptions about different aspects of livestock management which influence adoption of technology.

Regarding breeding and health problems women give priority to aspects which affect day to day production and thus metabolic diseases are a high priority. Adoption of vaccination is slow unless they have seen losses due to a particular disease. Clean milk production has very little appeal unless it fetches better price. Higher level of feeding during growing stage for faster growth and early maturity is not easily adopted since it means investment during unproductive stage and they are not sure of returns. However, providing extra supplements like oil, juagery, grains, oil cake during early lactation is an accepted practice since the results are evident immediately.

Women's perceptions about nutritive value and choice of feed are also related to visible effects, availability and need for cash spending. Feed fodder which is palatable, promotes high intake, increases fat percentage in milk, improves condition and shine of the coat of animal is ranked high. Laboratory evaluation in terms of protein, by pass protein, metabolisable energy etc has very little meaning. They do not have much faith in compounded feeds, even if these are high quality and made in the factories of farmers' cooperative, as revealed in the surveys. It was seen that even in some of the districts, with well developed programmes, 75% of women added feed material of their choice to compounded feed, though in most cases these material are costly. Some times material like grains are added. Market price of the grain may be high but farmers do not bother since these are farm produce.

Table 1 Observation on work sharing and decision making by income base grouping.^a

Study aspects			
	Poor	Medium	Rich
Management			
Cleaning	W100	W100	O100
Feeding	W 80	W 80	O 90
Watering	W100	W 90	O100
Milking	W 80	W 90	O100
Grazing	W 80	W 90	O100
Mangg. Bullocks	N.A.	M 90	O100
Breeding/Health			
Taking to Dispensary or calling Vt.	M 75	M 60	O 80
Adm. Medicine	W 80	W100	O100
A.I. or N.S.	W 90	W 90	O100
Assistance Calving	M 90	M 80	O100
Fodder			
Cultivation	N.A.	M 90	O100
Harvest/Bringing	W 80	W 60	O100
Sale/Purchase			
Sale Milk/Product	W 60	W 90	O100
Sale Animal	M 90	M 90	O 80
Purchase Animal	M 90	M 90	O 80
Collecting Money	M 90	M 60	O 80
Decision Making			
Disposal of Milk	W 80	W100	W 50
Sale of Animal	W 40	W 65	M 90
Purchase of Animal	W 80	W 80	M 80
Breeding	N.A.	W 80	M 80
Vaccination	N.A.	W 80	M 90
Type of feed	N.A.	W 80	M 90
Type of fodder	N.A.	M 80	M 90

^a The figure indicate share in percentage basis. . . Abreviation used - W for womwn, M for men, O for others (usually hired labour), NA - not applicable. Source : Rangnekar (1992)

However, farmers would be concerned if they have to pay cash for purchase of the material.

Observations were also gathered on experiences and views of women on the livestock services available in rural areas. It was noticed that most women prefer that services for insemination, vaccination be available on the farm or at least at village level. Hence they preferred the pattern adopted by the BAIF, an NGO which has a large livestock development activity. The second preference was for services offered by the farmer's cooperative at the society centre. The centralised system of the state Govt is inconvenient since the animal is required to be taken several kilometres and they depend on men and many times there is delay. With regard to vaccination, the women indicated that the programme is very inconvenient since they are required to keep the animal several hours at the aid centre.

Regarding health control and animal treatment special effort was made to gather women's perceptions and experiences since it was noticed that adoption of health control measures is poor. It was found that about 80% of women were not convinced of usefulness of regular vaccination and deworming. Extension efforts in this regard were lacking. They take the animals for vaccination only after occurrence of outbreak. In many cases fixed schedule of vaccinations is followed and some diseases may not have occurred several decades. Another important reason put forth by women is the side effects observed after vaccination e.g. swelling, fever, loss of milk. The women seem to be more concerned with side effects and were not sure whether vaccination is useful in the long term. Regarding animal treatment they find services of the veterinarian and modern drugs expensive - for the interior villages the services of veterinarian are difficult to get. Hence it was found that they prefer to contact local healer and use traditional medicine first. However a totally different picture was seen in a district which has well developed dairy cooperative and veterinary service. The animal owners were too dependant on veterinary services and too much money spent on veterinary aid, and a kind of dependency syndrome developed.

Indigenous knowledge of women and traditional practices

Women have gained considerable experience and also knowledge on some aspects in view of the fact that they are maintaining livestock under

unfavourable, resource poor conditions since ages. The experience is invaluable with regard to managing animals to the best advantage of the whole farm system. However, their experience and knowledge has been usually ignored and they remain the hidden or invisible hands in production (Mitra 1987). It is generally seen that with commercialisation of the production and introduction of high technology women get marginalised (George 1991) Women's perceptions, priorities, experience and knowledge is rarely considered in planning of research and development and senior scientists like Swaminathan (1990) have drawn attention to this aspect and stressed need for studying and considering women's perspective.

While some effort has been made in crop production to look into women perspectives while developing technology or recommendations but such initiatives/approaches are sadly lacking in animal production.

In India the Indian Council of Agriculture Research organised a workshop on agric. technologies for women (ICAR 1988). There was only one paper in livestock production field, even though everybody agrees that women play major role in livestock production. The sole paper describes various technologies which were developed through usual research programmes and hardly any indication of attempt at developing and testing technologies with women perspective and involvement.

Attempts were made to learn from women strategies developed by them to maintain livestock production under unfavourable conditions. It was seen that women have good knowledge of local feed resources and have identified several creepers, weeds, bushes, trees, crop by products useful for animal feeding. Many of these plant species are claimed to be beneficial for livestock production, reported to improve breeding performance, milk yield and fat percentage etc. Table 2 summarises information gathered after ratifying the claims by discussing with several women farmers and extension workers. Some of the results were reported in an earlier seminar in Indonesia (Rangnekar 1994). Detailed study of such information and feeding systems would be very useful to develop location and system specific recommendations. It is suggested that women should be involved to develop recommendations and such approach is likely to be accepted faster.

Women have very good knowledge regarding each animals behaviour, production characteristics, feed preferences, tolerance for some feeds or otherwise, besides being able to identify animal individually even in a big flock. It is a common practice for women to prepare feed mixtures - wet or dry, vary the ingredients, reduce or increase the bulk (by adding straw or bran) according to the liking of the animal. Material like guar meal, linseed cake, neem cake are selectively added. Use of pods of *Prosopis juliflora* or *Prosopis cineraria* is made for goat and buffalo. Similarly weeds commonly found in winter crops like *Cressia* species or aquatic weeds like *Rouppia* grass are fed to buffaloes only. Use of Mahua cake in some tribal areas is another good example of their understanding of adjusting feedings, taking into consideration anti nutritional factors. The cake is obtained after extraction of oil from seed of a plant *Bassia latifolia*, which is common in tribal areas of Gujarat, Rajasthan, Madhya Pradesh - states and is known to be toxic. Technical persons do not recommend it for feeding. However, it is commonly fed in some tribal villages. It is mixed

with other material like corn cobs, brans, grains, pods, salt etc. and cooked before feeding and no toxicity is reported. It is interesting to study whether absence of toxicity is due to processing or limited quantity used or adaptation of animal system.

Traditional practices followed vary from region to region and socio-economic groups. Many of the practices appear to be very appropriate for existing situations and many even appear technically sound, feeding oil and protein and energy rich material soon after calving - for a few days is an extensively used practice. It seems logical to provide rich feed in early lactation. Cooking of some feed material before feeding - like pods of some trees, maize cobs, cotton seed etc. is another practice which is logical. Using protein rich tree leaves, crop residues like ground nut plants, leaves and pods of pulse crops as supplement to cereal straws is a good practice to enrich the feed. Some of these practices can be further improved for better results - a combination of traditional practice and a scientific knowledge can be very effective.

Tabel 2. Feed material identified as beneficial for livestock in parts of Gujarat and Rajasthan-by women.

Feed Material	Character	Animal Preferred for feeding	Benefit claimed
Pods of <i>Acasia</i> Sp	Rich in protein and energy	Buffalo goat	Improves milk prod
Pods of <i>Prosopis</i> species	Rich in protein and energy	Buffalo goat	Improves milk prod
Leaves of <i>Alangium</i> and <i>moringa</i> Sp	Rich and prod	Buffalo	Improves milk and fat p.c.
Leaves of <i>Azdirachta</i> and <i>buter</i> Sp	No special feature known	Cattle Goat	Improves milk and removes worm
Flowers of <i>Bassia Latifolia</i>	Rich in energy	Bullocks cows, goat	Improves stamina and milk
Weeds like <i>Crasia</i> Sp.	No. Special feature known	Buffalo	Improves fat p.c.
Aquatic weeds <i>Rouppia</i> grass	No special feature known	Buffalo	Improves milk and fat %
<i>Tinosperma cordifolia</i>	Known medicinal plant	Cattle buffalo	Improves milk induces heat

Women are also aware about traditional medicine and some minor ailments are treated by them - like bloat, abscess, foot rot etc. It is also a common practice to feed mixture of ginger powder, cumin, linseed oil along with jaggery, brans to freshly calved animal. The mixture is believed to help maintain the digestive system in order. Many women were aware of some forest trees seeds as effective in inducing oestrus in anoestrus animals.

Involvement of women in on-farm trials

Involvement of women in On-farm trials for testing and modification of technologies. It is strongly recommended that for on-farm trials on any aspect related to animal feeding women should be involved. While most are aware that feeding of animals is mainly handled by women specific attempt to involve them in demonstration or on farm trials in animal feeding are very few. Even rare is the attempt at participation of women in planning, recording and discussing results of the trials.

During on farm trials with urea treatment of cereal straw the women were quick to solve the problem of measuring straw, water and urea under field condition. Facilities for weighing are not available on small farms but assessment of weights is necessary to ensure desired proportions. Use of perforated oil can was an ingenious method devised by women to ensure uniform spraying. Adoption of urea treatment was quick wherever the women found it useful. It must also be mentioned that non-availability of time, or availability of grass, weeds or green fodder at low cost, or low market price of milk as some factors which are responsible for rejection of the technology - even if it is technically sound. Similar observations are reported by Rangnekar (1993).

Extension and training

Since last few years several organizations are arranging training for women in crop and livestock production, probably in view of emphasis at national and international level. In livestock field majority of the programmes are in dairy production. Observations gathered from about 400 women after repeated discussions are follows -

Information gathered from training has limited relevance to their problems. Some information is useful but much of it is not related to their conditions.

Skill acquiring is very limited as there is not much opportunity for practical work. Some trainers

do not have practical experience - milking was a good example.

Duration of training was too long in many cases - and many women who were desirous to join training were unable to do so. The timings also do not suit many women, in view of their household responsibility.

Lectures are too many and lengthy. Women are bad listeners and discussion form would be most preferred. Moreover language used by lecturers need change they should prefer easy to understand terminologies.

Literature and notes have very limited use, in view of illiteracy and lack of reading habit. Majority of women suggested that it would be desirable to have women trainers for better interaction.

Thus it can be seen that a radical change in approach to training and extension is needed. There are very few women trainers and extensionists and there is need for special effort in this direction.

Conclusion

In the end I wish to appeal to this gathering that considering the prevailing livestock production systems in Asian countries, improving skills and awareness amongst women is essential for desired results. Experience and knowledge of women in livestock management needs recognition and many traditional practices can form good base for further development. Women's perceptions and priorities need be given due cognisance in planning research, development, extension and training. Women's team of trainers and extensionists would be more effective and need be developed.

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