Technological need assessment and capacity building of farm women in livestock rearing

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Introduction
It has been reflected that women farmers are engaged in the livestock rearing for additional income generation for their family. They provide 60 percent of the livestock farming labour. Contribution of woman folk in dairy production system, like in all other land-related activities, is enormous. She harvests fodder-yielding crops and gather fodder and bedding material from the forest areas, make hay and stack it, feed and look after the animals, cleans animal shed, milks the animal, processes and markets the milk, and does almost everything relating to smallholder dairy farming. Men’s role in dairy is limited. He participates only in the marketing of milk, looking after grazing and sick animals, and in providing service to dairy animals. Although much of work of livestock farming is carried out by women, they have very limited knowledge about new technologies which can enhance their knowledge, skills, practices and income. Most of extension programme are designed and implemented with an assumption that all farm managers and decision makers are men. Although the contribution of women farmer is higher in livestock rearing but with traditional practices and poor knowledge base, they are not able to manage their animals properly. Hence, the present study has been initiated with the following objectives:

1. To explore the technological needs of women farmers related to livestock rearing practices
2. To organize capacity building programmes for empowering farm women in livestock rearing practices.

Materials and Methods
The study was conducted in Jhansi district of Uttar Pradesh. Two blocks namely Babina and Baragaon has been selected using stratified random sampling from Jhansi district. Four villages namely Dhikoli and Domagor from Babina block and Ronija and Hastinapur from Baragaon block have been selected randomly. From each village 30 women farmers from small and marginal families involved in livestock rearing have been selected purposively for assessing their technological needs and organizing capacity building programmes for their empowerment. By this way total 120 women respondents have been selected for the study purpose.

Results and Discussion
Overall knowledge level of women farmers on improved livestock rearing practices: A knowledge test was developed to explore the technological needs of women farmers related to animal rearing practices in Jhansi district of Uttar Pradesh. Accordingly the knowledge of the respondents was measured. Data was collected from 120 women farmers belonging to four villages namely Ronija, Hastinapur, Dhikoli and Domagor. It is evident from the overall knowledge level of women farmers presented in fig. 1 that women farmers had minimum knowledge in fodder production systems/practices (8%) and feeding technologies (22.33%). This may be due to that they were only growing berseem local varieties for their animals during Rabi season. In Kharif, they feed straw + natural grasses + concentrate and in summer they feed straw+ concentrate (saani) to their animals and various feeding technologies like mineral mixture feeding, crop residue treatment, leaf meal, bailing, complete feed blocks, feed pellets, urea molasses mineral block, silage, were very new for them. Their knowledge about housing and sanitation (25%) and breeding technologies (32%) was also found very low because they use to keep their livestock in mixed, open shed with no proper drainage and not using spraying and white washing in animal shed. They were also having very poor knowledge about symptoms of heat, pregnancy and parturition, treatment of subclinical reproductive inefficiency, treatment of anestrus, artificial insemination, pregnancy diagnosis etc.

In case of health care (34%) and management (40.67%) also they possessed imperfect knowledge about measures for FMD, HS, BQ, mastitis, ecto parasites, isolating the sick animals, deworming and exact sign of diseases and their treatment along with marketing, banking, finance and credit facilities. They are the main responsible person who manages
all the domestic chores. Being illiterate and confined to four walls of the house, they have no knowledge about new technologies which can enhance their productivity and alleviate drudgery.

As women farmers possessed low to medium level of knowledge on all aspects of livestock rearing. Hence, an attempt has been made to evolve a technological framework with help of experts for empowering women farmers through improved livestock rearing practices. As per the technological framework developed, major three technology packages i.e. (1) package of practices of suitable varieties of fodder crops/perennial grasses, (2) fodder utilization techniques and (3) animal rearing practices have been selected for the capacity building of women farmers. The capacity building module has been developed as per the willingness of women farmers which includes following programmes:

1. Inter institutional training programme on “Improved fodder production and livestock rearing practices for women farmers”
2. Participatory production of perennial grasses by women farmers
3. Participatory seasonal fodder production by women farmers

Gain in knowledge of women farmers through capacity building programmes regarding livestock rearing practices

![Fig. 1: Overall knowledge level of women farmers about improved livestock rearing practices (%)](image)

It has been found that in case of fodder production technologies, women farmers were having minimum pre capacity building knowledge (8%) but after attending capacity building module related to package of practices of fodder crops and fodder production systems their knowledge has been increased up to 69 per cent regarding these technologies. In feeding technologies their pre knowledge (22%) was ranked as 5th but with the help of capacity module related to the feeding technologies like preparation of balanced ration, feeding to different categories of livestock, importance of clean water for drinking, conservation of fodder crops, fodder post harvest technologies, improvement of low grade roughages, importance of mineral mixture and its feeding, their post capacity building knowledge was increased up to 72 per cent. Their pre knowledge regarding the housing and sanitation (25%) was ranked 4th but capacity building module related to type of sheds, spraying of sheds against parasites, cleanliness of animals, sheds, utensils and workers, and clean milk production has increased their post capacity building knowledge up to 72 per cent. In Livestock management (27%) their pre knowledge level was ranked 3rd but after attending the capacity programmes their post capacity building knowledge level was increased up to 67. In case of breeding technologies their pre knowledge level (32%) was ranked 2nd but capacity module related to artificial insemination, timely examination and treatment of subclinical reproductive inefficiency, pregnancy diagnosis, symptoms of heat, pregnancy and parturition, care at the time of pregnancy and parturition, disposal of placenta, drying the livestock before parturition has increased their post capacity building knowledge up to 67 per cent. In case of livestock health care (34%) their pre knowledge level was ranked 1st but after attending the capacity programmes their post capacity building knowledge level was increased up to 87 per cent, respectively.
Fig. 2: Gain in knowledge of women farmers through capacity building programmes regarding livestock rearing practices

Conclusion
It can be concluded here that with the help of capacity building and developing appropriate literature related to improved animal rearing practices, the knowledge of farm women regarding improved animal rearing practices and their acceptability regarding selected technological options can improved.