Blending of results of informal experimentation and age-old experiences gained by the livestock owners has resulted in adoption of many practices, which are commonly known as Indigenous knowledge (IK) or Traditional Wisdom. Keeping in view the importance of various features of farmers’ knowledge about livestock, the present study was conducted in the eastern part of Azamgarh district of Uttar Pradesh among Yadav community by using the anthropological approach of participant study. Surveys included individuals and wise men other than farmers.

From the study it has been observed that, when farmers purchase the milching animals, they evaluate some important parts of body such as head, jaw, teeth, eyes, horn, tail, legs, hooves, neck, thighs, teats, udder, hump, dewlap, skin and spots on body parts and mammary glands of animals. With the help of special sound making, mucus secretion from vaginal tract and duration and quality of milk, farmers take sound decision for knowing heat period of female animals. In case of low sterility, farmers give special treatment to induce heat. Leaves of manpatta, beets of pigeon, and shoot of kareel (new growing shoot of a bamboo) are used to induce heat period in female animals. The wisdom of farmers regarding livestock has rationality and it is transmitted from one place to other through indigenous media. On account of these findings it is concluded that farmers’ knowledge for selecting milching and non-milching animals is inherited over generations and developed by indigenous initiatives and is based on logic which matches the needs and social custom of farmers.

**Keywords:** Traditional wisdom, sustainable development, livestock

*There is a wide spread revival of studies on indigenous knowledge system with different synonyms namely, Local technical knowledge, Indigenous technical knowledge, Local knowledge, Ethnoscience, Village Science, Traditional wisdom and informal research and development. Indigenous knowledge means: “The sum total of knowledge and practices which are based on people’s accumulated experiences in dealing with situations and problems in various aspects*
of life and such knowledge and practices are special to a particular culture. Presently when the world is facing great ecological challenges, formal R&D can benefit in developing alternative technologies using the traditional wisdom that has sustained life on the earth over centuries. Thus it becomes important to study and isolate the elements and concepts of sustainability in indigenous knowledge system and to integrate them into the modern practices of resource management.

The earlier studies started with documenting the traditional practices of a particular locality. In the same order few studies on livestock have been conducted for documenting traditional practices and to understand their rationality.

It is imperative to document the traditional wisdom in a systematic way. Keeping in view the importance of traditional wisdom of farmers, present study is an attempt in the direction of documenting and understanding the farmers' practices and their diffusion channel in the area of livestock management in the eastern part of Azamgarh district of Uttar Pradesh.

Materials and Methods

The present study combines the survey and anthropological approach. Surveys included individual and group discussions with different respondents i.e. the wise men and farmers of Yadav community. Anthropological approach aimed at unraveling the social, cultural and related aspects of indigenous practices. In the study, the wise men of Yadav community, knowledgeable in animal husbandry, have been selected purposively for group discussion, identification, documentation and characterization of farmers' practices. Ranking approach with the help of group of farmers has been adopted for the identification of indigenous channels utilized by Yadav community for diffusion and sharing of their experience and practices with each other. The farmers were asked to assign percentage to each channel according to their use and importance. Using this procedure ranks have been allotted to each channel. The rationality of farmers' practices was tested by a group of three animal scientists on account of their experience and expertise in the field of livestock management.

Results and Discussion

While documenting the indigenous knowledge, the following practices have been identified, analyzed and documented. The documented practices are as follows:

1. Indigenous knowledge for selection of milching animals

The Yadav community considered the following characteristics while purchasing milching animals:

1.1 The jaws of animals should be smooth or thin skinned and strong.
1.2 Head should be proportionate with the size of body.
1.3 Eyes should be big and bright and forehead should be wide.
1.4 In case of buffaloes wide and small rounded horn kept in mind.
1.5 Black tail; its length should be up to the knee.
1.6 Legs should be small in proportion to the body shape and size.
1.7 Neck should be lean and thighs should be heavy.
1.8 If we see from the backside of animals, thighs should be wide and between wide thighs, udder should occupy more space with equal size and number of teats.
1.9 All the four teats should be equal in size and length and arranged in square. If animals are lacking one of the teats it is not good for milking purpose.
1.10 Under the part of stomach (i.e. both side of the udder), mammary glands (Dudharu nasen) should be big, curved and branched.
1.11 At the time of milking the line of milking should be continuous like thread.
1.12 White eyes, white spots on head and udder are considered bad character. While, when five white spots occur simultaneously on the head, it is considered good for milking capacity.
1.13 The muscle-like tuber (called Bahenga in local language) between the root of tail and anus is not desirable and that type of animal should not be purchased.
1.14 Milching as well as non-milching animals having diseased hind legs (called Tans and Tanka in local language) are not preferred.
1.15 The milching animals should not have the habit of back leg jumping at the time of milking. It is called Latmarui in local language.

2. Identification of heat period
Farmers have special knowledge for judging the heat period of female animals which includes the following:
When buffaloes or cows come in heat period they have frequent urination, make special sound, and discharge vaginal mucus i.e. thread-like white fluid comes out from genital organs. If farmers keep their hand on middle part of back of the buffaloes, she will shrink her body. Buffaloes or cows suddenly reduce the milk yield; it is called Penhaw in local language. Male buffaloes run around female buffaloes.

3. Special treatment to bring animals to heat in case of low sterility
The farmers have developed their own indigenous treatments and use the following herbs and seeds for bringing the animals to heat period.
3.1 New growing shoot of bamboo (local name kareel) is fed to animal at the rate of 1.5-2.00 kg per day for three days.
3.2 The leaves of a plant called Manpatta are fed to the animal at dose of 250g per day for 3-4 days.
3.3 A paste of germinated seed of barley 1kg plus germinated seed of fenugreek (methee) 1kg is fed to animal 6 times in equal dose (approximately 330g) for 3 days.

4. Indigenous knowledge for selecting the bullocks
The farmers select the best bullocks for ploughing purpose on the basis of the following characters:
4.1 Small leg and small tail proportionate to body shape and size.
4.2 The tail of bullocks should be at $180^\circ$ angle at the time of dunging.
4.3 The horn should be small, straight and wide.
4.4 Galcambal (dewlap) should be small, the muscles below the anus should be small, black; and skin under hair should be brown.
4.5 The sight should be checked in the night by projecting light of torch, whether animals close their eyes or not.
4.6 When the animal is standing, it should stand equally on four legs by keeping equal weight. When it sits down, it should fold its fore right leg first.
4.7 The bullocks having nine teeth are considered best for ploughing purpose.
4.8 Snake-like sign on the hip is considered bad.
4.9 A powerful bullock for ploughing should have white eyelids on both sides.
4.10 Round hoofed bullock is considered best for ploughing.
4.11 Grain-like structure on the neck and hip (called Path Plutana; which causes blood secretion in high intensity of sunshine) is considered bad.
4.12 One straight and one fallen horn of bullock are called "Kantasuri" in local language and such type of bullock should not be purchased.
4.13 Falling of the hump on the left side is a bad character, while falling of hump on right side is a good character of a bullock for ploughing; it is called Chhatrapati in local language.

Rationality of farmers' wisdom

An effort was made to know the rationality of farmers' practices. After the identification, documentation and characterization of farmers' experiences and their wisdom, these were discussed in a group with veterinarians, during which it was observed that majority (more than 85%) of the identified practices of the farmers were in tune with the parameters of recommended scientific criteria and practices of livestock management.

From Table 1 it is clear that, in the group discussion when the farmers were asked to rate the most important to least important sources of information utilized for sharing and transferring their experience from one place to another, they have assigned maximum percentage to the proverbs as a source of information on livestock; it got first rank. Other sources

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Media/Source utilized by farmers</th>
<th>Percentage assigned by farmers</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proverbs</td>
<td>50</td>
<td>I</td>
</tr>
<tr>
<td>2</td>
<td>Folk song (Birha)</td>
<td>20</td>
<td>II</td>
</tr>
<tr>
<td>3</td>
<td>Festivals (Karah)</td>
<td>07</td>
<td>III</td>
</tr>
<tr>
<td>4</td>
<td>Lori (Folk song)</td>
<td>06</td>
<td>IV</td>
</tr>
<tr>
<td>5</td>
<td>Harikatha (Story telling)</td>
<td>06</td>
<td>IV</td>
</tr>
<tr>
<td>6</td>
<td>Folk music</td>
<td>05</td>
<td>V</td>
</tr>
<tr>
<td>7</td>
<td>Weekly market</td>
<td>03</td>
<td>VI</td>
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<td>8</td>
<td>Puppet shows</td>
<td>03</td>
<td>VI</td>
</tr>
</tbody>
</table>
of information on livestock were ranked as follows: folk songs (26%), Karah festivals (7%), Lori (6%), Harikatha (6%), folk music (5%), weekly market (3%) and puppet shows (3%).

Conclusion

Farmers' experiences and knowledge for selecting the milching and non-milching animals have been inherited over generations and developed by indigenous initiatives. Most of these livestock practices are time tested and based on the logic as envisaged in the modern livestock science. However, many experiences and practices are at variance with the practices recommended in the package. The livestock scientists should subject these experiences and practices to further research so that the target of sustainable development of livestock can be achieved. The information derived by analyzing the indigenous livestock practices would benefit the formal R&D in designing new experiments and trials. Recommending them to the farmers in similar agro-climatic conditions can follow identi-

ifying, documenting and analyzing all the indigenous practices.

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