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## Traditional livestock practices used by the livestock farmer of Kandi area of Hoshiarpur District of Punjab

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### Abstract

A survey was conducted in the Kandi area of Hoshiarpur District of Punjab to gather information regarding the traditional practices followed by the farmers of Kandi area. A total of 115 farmers were surveyed for this study and data was collected from them in a prepared questionnaire. In the study it was found that farmers are still using common practices such as feeding of Jaggery to the recently parturated animals, feeding of vegetable oils for treatment of simple bloats, where as there are still some myths such as feeding colostrums to new born calves only after expulsion of placenta and phobia for rectal palpation for pregnancy diagnosis. Similarly many other practices were surveyed during the study.

**Keywords:** Traditional practices, Kandi area, dairy farmers, Punjab

### 1. Introduction

In Punjab livestock exist, as an allied enterprise to the agriculture from the time of yore. Earlier livestock were kept for dual purpose i.e male animals for draft purposes and female animals for milk. At that time diagnostic treatment facilities are not like today so farmers tried their own indigenous knowledge for the various ailments of livestock. Once their method proves efficient in ameliorating the disease, it was adopted by other through seeing or hearing mode and become a practice and followed by others. (Ghosh and Sahoo, 2011 <sup>[1]</sup> and Shubeena *et al.*, 2018) <sup>[2]</sup>. Their indigenous knowledge of that time are still in prevalent as it is passed from one generation to next generation by seeing of through seeing and learning, telling and folklore. (Devaki and Mathialagan, 2015) <sup>[3]</sup> So based on these an attempt was made to collect these indigenous/traditional practices of the livestock farmers of the kandi area of Hoshiarpur district of Punjab.

### 2. Materials and Methods

There are twenty two districts in the Punjab state, out of which Hoshiarpur is the only disadvantaged district in the state of Punjab. The major part of the district is comprised of *Kandi* tract (sub-mountainous area on the shivalik foothills). Though agriculture is still the main occupation but is not like plain, as most of the terrain is hilly and out of reach of the natural or underground water, so all crops sown are dependent on the rainfall which the area receives while during the rainy season. So people also harbors the cattle, buffaloes, goat and poultry for their sustainability, and all the livestock are kept on natural grasses and leaves of the various trees and rarely on green fodder which is sown by very less farmers of the area. The present study was conducted in two Blocks (Bhunga and Talwara) of District Hoshiarpur. A total of one hundred and fifteen farmers were selected randomly from different villages of the blocks, and information regarding the various traditional practices being followed by them was collected from them through a previously prepared questionnaire, and the information was collected personally from them. Practices among the blocks were almost similar but they were quite different from the plain area of Punjab.

### 3. Result and Discussion

The various traditional practices/knowledge collected are given in Table 1 which will be discussed under different subheadings.

#### 3.1 Feeding Gur/Shaker to Ruminants

A total of around 72 per cent of the farmers were found feeding Jaggery to their animals during different phases, such as after parturition, during offfeed conditions and also some

times for feeding medicines orally along with jaggery. As small amount of it is always helpful in digestion as little amount of glucose is required in the rumen for the production of amino acids from protein by the rumen microorganism. Propionic acid producing bacteria also require small amount of sugar for their growth. Similarly it is also incorporated in the ration of high yielding animals to meet their energy requirement which is otherwise difficult to meet with. Similar results were also reported by Subramanyeswari and Chander (2013) [4] and Shubeena *et al.* (2018) [2] who in their respective studies reported feeding of gur and wheat for increasing milk production in dairy animals. (Table. 1)

**Table 1:** Traditional practices followed by the farmers of Kandi area

S.no.	Name of Practice	Total no. (n=115)	Percent (%)
1.	Feeding gur/shaker to ruminants	83	72.17
2.	Feeding the forages/straw after concentrate	18	15.65
3.	Feeding concentrate after soaking in water	38	33.04
4.	Bathing the animal after mating	63	54.78
5.	Not allowing the animal to sit after AI/Mating	55	47.82
6.	Phobia for AI/rectal palpation for pregnancy diagnosis	64	55.65
7.	Injecting the progesterone (Thanda Tikka) after AI	38	33.04
8.	Feeding the vegetable oil	67	58.26
9.	Milking the animal/colostrums feeding after expulsion of placenta	88	76.52
10.	Salt rubbing in mouth	0	0
11.	Wallowing of the buffaloes	0	0
12.	Tying the weight on the placenta	19	16.52
13.	Application of spirit/alcohol on the prolapsed mass	0	0
14.	Washing with Coldwater/sugar water	34	29.56
15.	Citrus juice in case of mastitis	61	53.04
16.	Use of boiled oil in case of tail gangrene	0	0

### 3.2 Feeding the forages/straw after concentrate

Out of the total farmers questioned during the survey it was found that only 15.65 per cent of farmers were feeding the concentrate during the milking time and fed the forages/straw only after milking, their reason behind feeding concentrate was found to be that feeding concentrate during milking will increase milk production, but feeding the concentrate at the time of milking lower the rumen pH and also lower the production of acetic acid which in turn affect the fat percentage in next milking. Feeding the forages or straw before concentrate stimulate the saliva production and help in making the rumen condition less acidic and helps in acetic acid production (Underwood, 1992) [5]. So feeding the forages, straw should be done about 1-2 hour prior to concentrate feeding. (Table. 1)

### 3.3 Feeding concentrate after soaking in water

A total of thirty eight farmers were found feeding concentrate after soaking in water. As it has both advantage and disadvantages. Advantage is that soaking, soften the feed particles and also reduces the anti-nutritional factor present in the feed and dustiness of the feed (Banerjee, 1999) [6]. Similarly Singla *et al.* (2014) [7] in his study on Beetal goats have found highest concentration of Acetic and propinoic acid in concentrate soaked group as compared to control group. However on the other hand soaking reduces the production of

saliva by the animal which may lead to sub clinical acidosis. So it must be practiced judiciously as per the requirement depending upon the feed. (Table. 1)

### 3.4 Bathing the Animal after Mating

More than fifty per cent of the farmers (n=63) were found following this practice of bathing their animals or throwing 1-2 buckets of water on the back of animals after mating. Their logic behind this is that it brings the body temperature of animal down and helps in conceiving. But contrary to this bathing the animal for half hour before mating, promotes the conception rate by helping in reducing body temperature, reducing stress of animal and animal feels more in his comfort zone. (Nabenishi *et al.* 2011) [8]. (Table. 1)

### 3.5 Not allowing the animal to sit after AI/Mating

A total of fifty five farmers (47.82%) said they try that their animals do not sit immediately after mating, in order to avoid the back spillage of injected semen. But this is not true because semen is injected in cervix and uterus and more over uterus contractions further facilitates the sperms toward site of fertilization i.e. fallopian tube and the sperms are round the site of fertilization within 20-30 minutes. (Hawk, 1987) [9] (Table. 1)

### 3.6 Phobia for AI/rectal palpation for pregnancy diagnosis

A number of farmers (n=64) reported that they do not get their animals diagnosed for pregnancy through rectal palpation as they think it will result in termination of pregnancy if hand is inserted inside the animals. Similarly they have thought that

1. Calf born with AI is weaker and mostly male calves are born.
2. Buffalo do not conceive with AI.
3. After AI, animal does not comes into Heat after the calving
4. Offspring produced by AI produce less milk.
5. Buffaloes are difficult to take to AI centre.
6. It is considered as against Nature
7. AI calves dairy animal will yield poor quality milk.

So different people have different notion. But AI has no relationship with above mis-conceptions as AI is always done with sleeves and there is no chance of infection through hand and proper hygienic conditions are followed (Franco *et al.*, 1987 and Bekeele *et al.*, 2016) [10, 11]. (Table. 1)

### 3.7 Injecting the progesterone (Thanda Tikka) after AI

A total of thirty eight farmers reported that they have injected hormone to their animals after AI as they believe that after injection animal conceive and there are less chances for repeat. The scientific explanation is that progesterone injection after 1 week can supplement the progesterone which in turn helps in maintaining the pregnancy. But there is no need to give hormone at this time. In very rare case in which there is anovulation/delayed ovulation ovulatory hormone can be given with AI but before that it has to be sure regarding the same. However in some studies they have not found any beneficial result on the conception rate after injecting the hormone. (Arndt *et al.*, 2009 and Jimenez, 2013) [12, 13] (Table. 1)

### 3.8 Feeding the Vegetable Oil

This is done mostly in case of treatment of bloat in animals. A

total of 67 farmers were found supplementing their animals with various vegetable oils for the treatment of Simple bloat (Bailey, 2014) <sup>[14]</sup>. Similar to our study Subramanyeswari and Chander (2013) <sup>[4]</sup> in their study reported farmers using vegetable oils for treatment of bloat in animals. But feeding too much oil lead to digestive upset as it may coat the fiber and microbes. So it must be fed under prescribed limit. (Table. 1)

### 3.9 Milking the Animal/Colostrums Feeding After Expulsion of Placenta

It is a very common old practice/myth among the farmers that animal is not milked or colostrums is not fed to calves until there is expulsion of placenta, which is totally wrong. Out of the total farmers surveyed, most of the farmers (n=88) reported that they follow the same practice of waiting for expulsion of placenta before feeding the colostrums to new born calf. Scientifically milking/suckling of the calf leads to early expulsion of placenta as it helps in the secretion of oxytocin hormone which leads to expulsion of placenta and also feeding of colostrums to the new born calves within the first two hours of birth is very important as the colostrum is high in nutritive value and it contains antibodies IgG and IgM from the cow's immune system which gives the calf passive resistance against many infections. (Parsad and Kamboj, 2014) <sup>[15]</sup> (Table. 1)

### 3.10 Salt Rubbing in Mouth

Sometime animal goes off fed due to spine formation in the mouth and there is dribbling of saliva from mouth. In this type of case villagers often take a handful of salt and rub it in the mouth on all side. The logic behind this is that the salt prevents the further spines formation and smoothen the earlier one. In our study not even a single farmer reported about this practice, however Subramanyeswari and Chander (2013) <sup>[4]</sup> in their study reported farmers using Lime and Salt for the treatment of mouth ulcers. (Table. 1)

### 3.11 Wallowing of the Buffaloes

This practice was much prevalent in the older times when there were large number of ponds in the villages. Mostly in summer, the livestock owner allows their animal to remain in ponds/nearby river for the peak hot hours of the day. This helps the buffaloes to remain cool and is also scientifically advised to overcome the problems of silent oestrous and low milk production due to summer stress. But now as the common village ponds are decreasing so farmers in our study did not reported about this practice, but however it was advised to do the three-four times bathing of the animals in summer. (Table. 1)

### 3.12 Tying the Weight on the Placenta

This is practiced almost in every zone of Punjab. In the lure of early expulsion of placenta farmers often tied the discarded shoe or other material which put the pressure in down ward direction. But the heavy weight causes the breakage of placenta in between or it may damage the uterus tissue which can make the animal infertile for rest of his life. In our study a total of 19 farmers reported that they have used this practice in past, due to the lack of awareness regarding the same. So the best method is wait for 12-24 hour (which is the normal time) to get the placenta out. After that, consult the veterinarian. Similarly Shubeena *et al.* (2018) <sup>[2]</sup> in his study reported use of same practice by the farmers of his area. In a

number of various other studies, different authors have reported use of various traditional methods such as feeding of Turmeric, jaggery, luke warm water, cardamom and others for the early expulsion of placenta in their respective studies. (Singh, 2004 <sup>[16]</sup>, Das and Tripathi, 2009 <sup>[17]</sup> and Subramanyeswari and Chander, 2013) <sup>[4]</sup>. (Table. 1)

### 3.13 Application of Spirit/Alcohol on the Prolapsed Mass

In our study, this practice has not been used by any of the farmers. But however, applying the spirit/alcohol on the protruding mass of the prolapsed part will make the animal annoyed and animal will put more pressure on the rear side to get rid of it and ultimately problem of prolapse get aggravated. So it is always suggested to always consult the nearby veterinarian for the proper treatment of prolapsed part as any local treatment or any other method can make the animal infertile for rest of his life. (Table. 1)

### 3.14 Washing with Cold Water, Sugar Water

A total of 34 farmers (29.56%) were aware of the practice of applying of Cold/Sugar water on the prolapsed part and have used this practice in their dairy farming. The cold water causes the constriction of the blood vessels of the prolapsed part while the sugar and salt is believed to cause the decrease in swelling of the prolapsed part. Similarly Shubeena *et al.* (2018) <sup>[2]</sup> and Singh (2004) <sup>[16]</sup> in his study reported use of same practice by the farmers of his area for the management of prolapse. (Table. 1)

### 3.15 Citrus juice in case of Mastitis

During the study it was seen that more than fifty per cent (n=61) of the farmers were aware of the practice of feeding of lemons to the dairy animals as the initial home therapy for the treatment of mastitis. It has now scientifically (Balakrishnan *et al.*, 2017 <sup>[18]</sup>, Maramulla *et al.*, 2019) <sup>[19]</sup> proven that citrus juice/lemons when given orally changes the pH of the blood which lead to the death of mastitis causing organism and can cure the condition. However all cases do not respond to this method, severe cases requires antibiotic treatment. (Table. 1)

### 3.16 Use of Boiled oil in Case of tail Gangrene

Some of the dairy farmers in our study reported that they have heard about this method from their elders, but they never used this in their farming practice. In this method people often cut the infected portion of the tail with cutter and do the cauterization of remaining part of the tail by putting it in the hot oil as this will also stop the bleeding. (Table. 1)

## 4. Conclusion

In the present study, an attempt was done to collect the information regarding the traditional knowledge of dairy farmers regarding the livestock farming. Information for number of practices were collected from the farmers and proper knowledge was given to them regarding the false practices, which were being followed by them.

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