

## KNOWLEDGE OF DAIRY FARMERS ABOUT PERIPARTURIENT DISEASES IN BOVINE

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### ABSTRACT

*The periparturient diseases of the dairy cow are a manifestation of the cow's inability to cope with the metabolic demands of high production and they continue to be a cause of economic loss to the dairy industry and an animal welfare concern. The present study was conducted in 4 talukas of Anand district of Gujarat. Total 20 villages were selected from each taluka and 10 dairy farmers were selected randomly from each village for the study. Data were collected through pre-structured interview schedule. The overall knowledge of dairy farmers about periparturient diseases was found 72.91 per cent. Chronologically, knowledge of individual periparturient diseases was the observed highest in Prolapsed (90.66 per cent) followed by Downer's cow syndrome (90.37 per cent). Nearly two-third (66.0 per cent) of the dairy farmers had high level of knowledge about periparturient diseases All twelve independent variables showed a positive and highly significant relationship with the dairy farmers' knowledge concerning periparturient diseases.*

**Keywords:** knowledge, dairy farmers, periparturient

### INTRODUCTION

Animal production is determined by four pillars of animal husbandry i.e. breeding, feeding, health care and management techniques. Animal productivity and reproduction have a significant impact on milk production economics. It is critical that animal reproductive efficiency be maximized in order to improve animal output. Various metabolic, productive and reproductive problems affect dairy cows during the periparturient phase. The periparturient diseases of the dairy cow are a manifestation of the cow's inability to cope with the metabolic demands of high production and they continue to be a cause of economic loss to the dairy industry and an animal welfare concern (Mulligan and Doherty, 2008).

Quite a few numbers of studies have been conducted abroad in the aspects of farmers about knowledge about periparturient diseases. Much can be done by education and in particular by increasing the awareness of different health professionals and facilitating communication and collaboration between veterinary, public health and agricultural personnel. However, no such research has been conducted in Gujarat state that could provide a clear picture about the knowledge by dairy farmers. This fact motivated the researcher to carry out an investigation on "Knowledge

of dairy farmers about periparturient diseases in bovine in Anand district".

### OBJECTIVE

To study the knowledge of dairy farmers about periparturient diseases in bovine

### METHODOLOGY

The present study was undertaken in Anand district which is operational area of Kamdhenu University. Four talukas viz. Anand, Borsad, Petlad and Sojitra were selected randomly. Five villages from each taluka were selected randomly. Ten dairy farmers were selected randomly with herd size of more than 10 animals (5 adults) from each of the selected villages. In all, 200 dairy farmers were selected to serve as the dairy farmers for the study.

For measuring the knowledge of the dairy farmers about periparturient diseases, the procedure developed by Jha and Singh (1970) was used with due modification. The dairy farmers were asked to indicate their answer about that question and scoring was done in which right answer was assigned 1 score while wrong answer was assigned 0 score. Knowledge index of an individual dairy farmer was calculated by using following formula.

$$\text{Knowledge Index} = \frac{\text{Obtained knowledge score of dairy farmers}}{\text{Maximum possible knowledge score of dairy farmers}} \times 100$$

Based on the mean knowledge score of dairy farmer; the knowledge of dairy farmers were characterized under five different categories likewise; very low, low, medium, high and very high. Frequency and percentage of dairy farmers was calculated. To determine the level of knowledge of dairy farmers about each disease, mean per cent score was worked out and ranked accordingly. A statistical method of Karl Pearson's coefficient correlation (r) was used to calculate the relationship between the profile of dairy farmers and their level of knowledge of periparturient diseases.

## RESULTS AND DISCUSSION

### Knowledge index of dairy farmers about Individual periparturient diseases

Based on the findings received from the level of knowledge of the given periparturient diseases, overall knowledge index of individual periparturient diseases was calculated which is depicted in the Table 1 as follows.

**Table 1: Overall knowledge index of periparturient disease** (n=200)

Sr. No.	Components	Per cent
1	<b>Prolapse</b>	90.66
2	<b>Dystocia</b>	88.37
3	<b>Torsion</b>	85.33
4	<b>R.O.P.</b>	84.63
5	<b>Milk fever</b>	79.88
6	<b>Metritis</b>	84.33
7	<b>Grass tetany</b>	13.57
8	<b>Ketosis</b>	26.40
9	<b>Downer's cow syndrome</b>	90.37
10	<b>Mastitis</b>	85.54
<b>Overall knowledge</b>		<b>72.91</b>

It is evident from the Table 1 that the overall knowledge of dairy farmers about periparturient diseases was found 72.91 per cent. Chronologically, knowledge of individual periparturient diseases was also calculated where the highest level of knowledge in dairy farmers was observed in descending order as Prolapse (90.66%) followed by Downer's cow syndrome (90.37%), Dystocia (88.37%), Mastitis (85.54%), Torsion (85.33%), R.O.P. (84.63%), Metritis (84.33%), Milk fever (79.88%), Ketosis (26.40%) and Grass tetany (13.57%). Thus, it can be said that dairy farmers had highest knowledge about prolapse and least level of knowledge about ketosis. These findings are in accordance with Kumssa *et al.* (2019), Diniso & Jaja (2021) and McFarlane *et al.* (2021).

### Overall knowledge of dairy farmers about periparturient diseases

All the items of knowledge pertaining to individual diseases like Prolapse, Dystocia, Torsion, R.O.P., Milk fever, Metritis, Grass tetany, Ketosis, Downer's cow syndrome and Mastitis were clubbed together to assess overall knowledge of dairy farmers about periparturient diseases. The overall knowledge index was worked out and on the basis of that, the dairy farmers were grouped into arbitrary method with five categories as depicted in the Table 2.

**Table 2: Overall knowledge of dairy farmers according to about periparturient diseases** (n=200)

Sr. No.	Category	Frequency	Per cent
1	<b>Very low</b> (up to 20.00 per cent)	00	00.00
2	<b>Low</b> (20.01 to 40.00 per cent)	02	01.00
3	<b>Medium</b> (40.01 to 60.00 per cent)	10	05.00
4	<b>High</b> (60.01 to 80.00 per cent)	132	66.00
5	<b>Very high</b> (above 80.00 per cent)	56	28.00

The data in Table 2 depicted that exact nearly two-third (66.00%) of the dairy farmers had high level of knowledge about periparturient diseases followed by 28.00, 5.00 and 1.00 per cent of them had very high, medium and low level of knowledge about periparturient diseases. From the above finding, it may be concluded that the majority of dairy farmers had high level of overall knowledge about periparturient diseases. Results were contrary to Rajput *et al.* (2016) and Ashoo *et al.* (2020).

### Relationship between the profile of dairy farmers and their level of knowledge of periparturient diseases

The action of an individual farmer is governed by personal profile involved in the situation. It may be stated that the level of knowledge of periparturient diseases differ from their characteristics. Hence, considering the importance of these characters and review of past research studies, an attempt has been made in this investigation to ascertain the relationship if any, between personal profile of dairy farmers for their level of knowledge of periparturient diseases. A statistical method of Karl Pearson's coefficient correlation (r) was used to calculate the relationship between the profile of dairy farmers and their level of knowledge of periparturient diseases.

**Table 3: Relationship between profile of dairy farmers and their level of knowledge about periparturient diseases** (n=200)

Sr. No.	Name of variables	Correlation coefficients ('r' value)
X <sub>1</sub>	Age	0.350**
X <sub>2</sub>	Education	0.332**
X <sub>3</sub>	Experience in dairy farming	0.517**
X <sub>4</sub>	Herd size	0.343**
X <sub>5</sub>	Social participation	0.510**
X <sub>6</sub>	Land holding	0.207**
X <sub>7</sub>	Annual income	0.347**
X <sub>8</sub>	Extension contact	0.479**
X <sub>9</sub>	Social media exposure	0.291**
X <sub>10</sub>	Economic motivation	0.508**
X <sub>11</sub>	Scientific orientation	0.607**
X <sub>12</sub>	Risk orientation	0.457**

\*Significant at 0.05 level of probability

\*\* Significant at 0.01 level of probability

<sup>NS</sup> Non-significant

Out of total twelve independent personal profile; all the variables had established a positive and highly significant relationship with the level of knowledge of dairy farmers about periparturient diseases. It was in accordance with results of De *et al.* (2014), Gautam *et al.* (2015), Kushram (2017), Ahuja (2019) and Vaidya *et al.* (2020).

**CONCLUSION**

Thus, from the above results, it may be concluded that overall knowledge of dairy farmers about periparturient diseases was found 72.91 per cent. Chronologically, knowledge of individual periparturient diseases was the was observed in descending order as Prolapsed (90.66%) followed by Downer’s cow syndrome (90.37%), Dystocia (88.37%) and so on. Nearly two-third (66.00%) of the dairy farmers had high level of knowledge about periparturient diseases followed by 28.00, 5.00 and 1.00 per cent with very high, medium and low level of knowledge about periparturient diseases. Out of twelve independent variables, all of had established a positive and highly significant relationship with the level of knowledge of dairy farmers about periparturient diseases.

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