Assessment of Constraints Faced by Dairy Farmers and Livestock Development Officers in Managing Reproductive Disorders in Parbhani District of Maharashtra, India

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ABSTRACT

A research survey was conducted during March to May 2019, assessing the constraints that are regularly faced by 200 dairy farmers while managing the reproductive disorders. The same research was conducted on 20 Livestock Development Officers (Veterinary Officers) while treating the cases of reproductive disorders in Parbhani district of Maharashtra state. It was found that unavailability of veterinary hospitals in nearby areas, high cost of concentrates and late maturity shown by non-descript local breeds available to farmers were the most relevant technical, financial & economic constraints faced by dairy farmers, respectively while inadequacy of high cost instruments and diagnostic tools were the most prevalent constraints before the Livestock Development Officers.

Keywords: Constraints, Dairy farmers, Livestock development officers and Reproductive disorders

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Introduction

Dairy farming is considered as an important mean that can alleviate the poverty and also has remained one of the most important components in the traditional farming system of the country (Yankam, 2016). However, the business in India stands as the best example of production by masses rather than mass production (Srivastava, 2015).

Milk production and productivity were, both, enhanced by various means including ensuring the introduction of improved and balanced feed, availability of veterinary services, artificial insemination (AI) and farmers’ education regarding clean milk production and reproductive disorders (Meeta Punjabi, 2009).

Reproductive health may be considered as the back–bone of dairy industry; but some reproductive disorders have been found to be major reasons for decreased reproductive
efficiency of dairy animals (Abdisa, 2018). Reproductive disorders in dairy animals like anoestrus, repeat breeding, dystocia, retention of placenta and prolapse affect profitability of the herd by lowering milk production (short term drop) and total number of calves produced, by increasing expenditure in term of veterinary service charge and medicine cost, increased culling rate and increasing inter-calving period. Profitability of the dairy herd, good heat detection and conception rate are influenced by an important factor i.e. reproductive performance (Grohn and Rajala – Schultz, 2000).

Constraints can be implied here to quote the problems or hindrance faced by dairy farmers while adopting day-to-day animal husbandry practices in their dairy enterprises. If these constraints are identified, they are helpful to bridge the gap between dairy technology and its adoption by dairy farmers (Rathod et al., 2014). The present study was conducted to identify the constraints faced by dairy farmers and Livestock Development Officers while managing the reproductive disorders at farm or at Veterinary Dispensary.

Materials and Methods

The current study was conducted in four Talukas (viz. Manwat, Parbhani, Purna and Jintur) to record responses from farmers by personal interview method. Two hundred (200) dairy farmers with minimum three dairy animals and minimum of three years of experience in dairy business, were selected as respondents. The responses of twenty (20) Livestock Development Officers (LDO/ VO) were recorded from all over the district. Thirteen most frequently faced constraints were asked to dairy farmers and fifteen most frequently faced constraints by LDOs selected by pre – testing the data on the basis of pilot studies and prior discussion with subject experts. A three-point (3) frequency continuum was used to record the responses e.g. 3 for ‘most relevant’, 2 for ‘relevant’ and 1 for ‘non relevant’ options. The recorded responses were then analyzed by using frequency and percentage. The constraints were ranked according to the frequency recorded.

Results and Discussion

The data recorded while interviewing dairy respondents was categorized into three categories i.e. Technical constraints, Economic constraints and Situational constraints while, responses recorded by LDOs were listed according to frequency.

The present study revealed following results:

Technical constraints

Most of the dairy respondents (51.5%) farmers have reported unavailability of veterinary hospitals in nearby is the most relevant technical constraint. Unavailability of A. I. services (22%) was ranked 2nd technical constraint. Similarly, unavailability of veterinarians in emergency (12.5%), poor knowledge of farmers regarding signs and symptoms of reproductive disorders (5.5%), lack of farmers’ knowledge regarding identification of heat signs in cattle or buffaloes (2%).

The pre-quoted technical constraints were ranked in respective order as 3rd, 4th and 5th. It was an encouraging thing to note that majority (95.5%) dairy farmers never took their dairy animals to village quacks for the treatment on reproductive disorders hence it was ranked as the last (6th) in the constraint list. Observations are in conformity with results found with researcher Sharma et al., (2010).
Table 1: Constraints faced by dairy farmers to manage reproductive disorders

| Sr. No. | Constraints                                                                 | Most relevant | Less relevant | Non relevant | Total | Rank |
|---------|-----------------------------------------------------------------------------|---------------|---------------|--------------|-------|------|
| A. Technical constraints                                                                                             |
| 01      | Unavailability of veterinary hospitals nearby                                | 103 (51.5%)   | 52 (26.0%)    | 45 (22.5%)   | 200   | I    |
| 02      | Unavailability of A.I. services                                              | 44 (22.0%)    | 101 (50.5%)   | 55 (27.5%)   | 200   | II   |
| 03      | Unavailability of veterinarians in emergency                                 | 25 (12.5%)    | 129 (64.5%)   | 46 (23.0%)   | 200   | III  |
| 04      | Poor knowledge regarding signs and symptoms of reproductive disorders       | 11 (5.5%)     | 63 (31.5%)    | 126 (63.0%)  | 200   | IV   |
| 05      | Lack of knowledge regarding identification of heat signs                    | 04 (2.0%)     | 105 (52.5%)   | 91 (45.5%)   | 200   | V    |
| 06      | Treatment by village quacks                                                  | 0 (0.0%)      | 09 (4.5%)     | 191 (95.5%)  | 200   | VI   |
| B. Financial constraints                                                                                             |
| 07      | High cost of concentrates/ feed                                              | 149 (74.5%)   | 48 (24.0%)    | 03 (1.5%)    | 200   | I    |
| 08      | High treatment costs                                                        | 144 (72.0%)   | 49 (24.5%)    | 07 (3.5%)    | 200   | II   |
| 09      | High cost of medicines and vaccines                                          | 107 (53.5%)   | 84 (42.0%)    | 90 (4.5%)    | 200   | III  |
| C. Situational constraints                                                                                           |
| 10      | Late maturity shown by non-descript local breeds                             | 124 (62.0%)   | 67 (33.5%)    | 09 (4.5%)    | 200   | I    |
| 11      | Shortage of green fodder                                                     | 60 (30%)      | 92 (46%)      | 48 (24%)     | 200   | II   |
| 12      | Lack of emergency veterinary services                                        | 40 (20.0%)    | 145 (72.5%)   | 15 (7.5%)    | 200   | III  |
| 13      | Lack of communication facilities in remote areas                             | 34 (17%)      | 144 (72%)     | 22 (11%)     | 200   | IV   |
Table 2 Constraints faced by Veterinary Officers to manage reproductive disorders

| Sr. no. | Constraint                                                                 | Most relevant | Less relevant | Non relevant | Rank |
|---------|-----------------------------------------------------------------------------|---------------|---------------|--------------|------|
| 1       | Inadequacy of high cost, advanced diagnostic tools                          | 14 (70%)      | 06 (30%)      | 00 (0%)      | I    |
| 2       | Ignorance of farmers towards reproductive disorders                         | 14 (70%)      | 05 (25%)      | 01 (05%)     | II   |
| 3       | Inadequate staff                                                            | 13 (65%)      | 07 (35%)      | 00 (00%)     | III  |
| 4       | Large area covered under a single clinic                                    | 12 (60%)      | 07 (35%)      | 01 (05%)     | IV   |
| 5       | Farmers cannot afford cost of treatment                                     | 11 (55%)      | 07 (35%)      | 02 (10%)     | V    |
| 6       | Lack of infrastructure                                                      | 10 (50%)      | 07 (35%)      | 03 (15%)     | VI   |
| 7       | Use of bull or semen of bull affected by reproductive disorders             | 10 (50%)      | 05 (25%)      | 05 (25%)     | VII  |
| 8       | Farmers delay to bring animal to veterinary clinic                           | 09 (45%)      | 10 (50%)      | 01 (05%)     | VIII |
| 9       | Housing and quarter facilities are improper                                 | 09 (45%)      | 07 (35%)      | 04 (20%)     | IX   |
| 10      | Lack of follow up after treatment                                           | 08 (40%)      | 12 (60%)      | 00 (0%)      | X    |
| 11      | Farmers prefer livestock supervisors                                         | 08 (40%)      | 10 (50%)      | 02 (10%)     | XI   |
| 12      | Inadequate drug and vaccine supply                                           | 08 (40%)      | 09 (45%)      | 03 (15%)     | XII  |
| 13      | Farmers never provide complete true information                             | 07 (35%)      | 10 (50%)      | 03 (15%)     | XIII |
| 14      | Lack of additional incentives                                               | 07 (35%)      | 08 (40%)      | 05 (25%)     | XIV  |
| 15      | Poor feeding and management to the animals                                  | 04 (20%)      | 14 (70%)      | 02 (10%)     | XV   |

Financial constraints

Study on financial constraints revealed that high cost of concentrates/ feed was the most relevant financial constraint faced by about 2/3\textsuperscript{rd} dairy farmers hence it was ranked as the 1\textsuperscript{st} in the list of financial constraints. High treatment costs and high cost of medicines and vaccines were ranked as 2\textsuperscript{nd} and 3\textsuperscript{rd} most relevant financial constraint. There may be some of the reasons like lower annual/ monthly income that they are facing this constraint. These findings were in association with Patel et al., (2013).

Situational constraints

Considering the situational constraints, late maturity shown by non-descript local breeds available to farmers was recorded as the most
relevant situational constraint faced by most of the dairy farmers (62%). Shortage of green fodder (30%), lack of emergency veterinary services (20%) and lack of communication facilities in remote areas (17%) were ranked as 2nd, 3rd and 4th situational constraints according to their relevance.

These findings were in contrast with Chand (2011) and Rajput et al., (2018).

Constraints faced by livestock development officer

The observations mentioned below clearly indicate that the constraints regarding inadequacies of various diagnostic tools was the most relevant one faced by LDOs. This was followed by ignorance of farmers towards reproductive disorders, inadequate staff, large jurisdictional area covered under a single clinic, farmers could not afford the cost of treatment, lack of infrastructure, use of semen of bull affected by reproductive disorders, delay in bringing animals to veterinary clinic by farmers, improper housing and quarter facilities to incumbent officers. lack of follow up after treatment of reproductive disorders, preference of farmers to Livestock Supervisors over LDOs/ VOs, inadequate drug and vaccine supply, farmers never provide true information, lack of additional incentives and poor feeding and management practices by farmer were put according to the relevance. Singh (2001) revealed the similar findings in his study and hence in line with him.

In conclusion, Indian dairy industry stands at the top of the list of the leading dairy industry players; but problems like reproductive disorders causes more economic losses than anything else. Knowing the constraints and trying to improve them will definitely help to minimize the intensity of constraints. Establishing new veterinary dispensaries, allocating latest diagnostic tools, producing cost effective concentrates may help both farmers and LDOs to overcome these constraints.

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