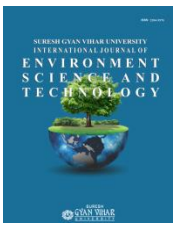

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*Research article*

# Problems and constraints of unorganized dairy farms in Jaipur region of Rajasthan

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***Keywords***
Constraints
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## Abstract

The present study was undertaken to identify the various constraints and problem faced by dairy owners or dairy farmers present in Jaipur region of Rajasthan. The primary data were collected from 50 unorganized dairy farms of 5 districts namely Alwar, Dausa, Jaipur, Jhunjhnu and Sikar. The study was revealed that about 34 percent dairy owner facing constraints in housing and. Further the majority of dairy owners about 78 percent were not adopting the scientific feeding parameters due to poor technical knowledge and lack of training, unawareness, poor resources, and non availability of green fodder as not available throughout the year in majority of dairies in the study area. The management of dry fodder for milch animals was also found as a big issue particularly in rainy season in the study area. The feeding of feed supplements and mineral mixture not fully adopted among dairies due to the poor resources and lack of total awareness of the importance of these practices in the study area. About 66 percent expressed their un-ability to discard and culled out unproductive cows and buffaloes from their stocks because of religious and social bindings on them also adversely affect in their profitability from dairying business in the study area. Other major problems were identified poor storage and cooling facilities (82 %), high cost of milking machine and maintenance (78%) poor price of milk (68%). In conclusion, dairy owners should be encouraged to get trained about scientific managerial practices to maintain the sound health of animals.

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## Introduction

Dairying in a country like India hardly needs emphasizing. India has vast resources of livestock, which play an important role in the national economy and also in the socio-economic development of millions of rural households. India has one of the largest stocks of cattle and buffaloes: more than 50 % of the world's buffaloes and 20 % of its cattle. Dairy sector in India provided regular employment about 11 million people in subsiding status, which together contributes 8% work force (Ministry of Agriculture, 2012). In general with the chronic shortage of feed and fodder coupled with their nutritive values and poor fertility of dairy animals has resulted in the poor productivity. In India due to poor animal productivity is a major reason that the dairy owners in general do not adopt improved scientific dairy management practices as the desired level. Keeping the above problems in view, the present study was taken up with the specific objectives to identify the constraints faced by the dairy owners in operating dairy farms.

In Rajasthan animal husbandry is a major economic activity of the rural peoples, especially in the arid and semi-arid regions of Rajasthan. With the development in the field of livestock unemployment and poverty has been reduced to a great extent in the rural areas of Rajasthan. The state collects a GDP of about 8% alone from livestock. NDDB report 2018-19 reveals that 12.71% (22.42MT) of total milk production came from Rajasthan (National Dairy Development Board, 2019). The composition of lactating animal stock has shifted towards greater domination of the buffaloes and crossbred cows and gradual disappearance of local /indigenous cows. The buffalo population was increases 71.10 percent from 1992 to 2012 whereas, cow both local /indigenous cow population was increases about 24.51 percent only in the Jaipur region in year 1992 to 2012.The cows stock largely consists of local/ indigenous cows before 2003 in the state and region but share of cross bred cow increases drastically and population of local/ indigenous cows declined due to poor production performance of our local cows. In spite of increase in number of milch animals and total milk production over the years, productivity of milch animals is not very encouraging in the state. To enhance the production potential of milch animals the only way is to ensure make availability of developed technologies and improved managerial skills for mass adoption and to build the required infrastructural facilities vital and necessary for adoption and use of new upcoming at down the line. The problems and constraints perceived by the dairy owners should be taken into consideration while formulation of strategies and policies for upliftment of dairy enterprises in the region and state. Keeping this in view, the present study was conducted to ascertain the specific and common problems and constraints perceived by dairy owners in above mentioned five districts so that the findings could be used in upliftment of dairy enterprise in the region and state even with the existence of various hurdles and constraints the Indian dairy enterprises grown gradually and maintaining sustainable and consistent growth since after the white revolution in country (Kadirvel, 2002).

**Materials and Methods**

1. Selection of the study area: The present study was conducted in Jaipur Region of Rajasthan. The all five districts of Jaipur region namely: Alwar, Dausa, Jaipur, Jhunjhnu and Sikar were selected for collection of primary data.
2. Sampling procedure: For selection of dairy farms, 10 dairy farms having more than 20 milch animals from each district were randomly selected within the radius of 30 Kilometre from district head quarter.
3. Selection of the Dairy Farms: For collection of primary data, all 50 dairy owners were considered as a respondent.
4. Collection and analysis of the data: The basic instrument used for the study was the well structured interview schedule. The questions related to different constraints faced by the dairy owners while adopting animal husbandry practices was collected and analyzed in terms of percentage.

**Results and Discussion**

Problems and constraints faced by dairy owners in adoption of scientific management practices in efficient dairy farm operation; the following major constraints were identified under the following heads as given in (**Table 1**).

1. Constraints in common management practices
2. Constraints among feeding practices
3. Constraints among reproduction practices
4. Constraints in diseases and health care management practices
5. Economic and financial constraints
6. Obstacles in Milking, Storage, marketing and Distribution

It was observed that about 34 percent dairy owners of the total selected dairy farms (50) were facing the problems of housing system for not having sufficient space for housing construction as per the scientific manner due to unawareness about standard scientific parameters. About common constraints 18 percent dairy owners expressed their unwillingness in adopting the dehorning of animals especially for buffalo due to use of horns as a specific identification feature. However, proper training on dairy management skills about 38 percent dairy owners not performing the grooming practices for their animals. The other major constraints were find trimming of hooves and lack of training on dairy management skills due to perform the hooves trimming, however majority (88 percent) dairy owners not followed this scientific management practice due to lack of proper skills and knowledge of scientific management practices.

| S. No. | Components | Number of Dairy Owners | Percentage |
|---|---|---|---|
| **A.** | **Constraints in common management practices** | | |
| 1 | Constraints in housing management | 17 | 34 |
| 2 | Dehorning | 09 | 18 |
| 3 | Tattooing or marking | 6 | 12 |
| 4 | Grooming | 19 | 38 |
| 5 | Hooves trimming | 44 | 88 |
| 6 | Lack of training on dairy management skills. | 39 | 78 |
| **B.** | **Constraints among feeding practices** | | |
| 1 | Constraints about good quality dry fodder in rainy season. | 19 | 38 |
| 2 | Constraints about quality green fodder in summer and | 23 | 46 |

| | | | |
|---|---|---|---|
| | winter season. | | |
| 3 | Lack of information about nutritional requirements | 43 | 86 |
| 4 | Shortage of cheaper concentrate mix | 28 | 56 |
| 5 | Shortage of cheaper feed additives and supplements | 32 | 64 |
| **C.** | **Constraints among reproduction practices** | | |
| 1 | Lack of knowledge of improved breed(good productive animal) of cattle and buffalo | 33 | 66 |
| 2 | Shortage of exotic/cross bred cow | 41 | 82 |
| 3 | High cost to exotic/cross bred cow | 44 | 88 |
| 4 | Shortage of pure and improved breed of buffalo | 29 | 58 |
| 5 | Low and poor conception rate via A.I. services | 32 | 64 |
| 6 | Heat detection a bigger threat in buffaloes | 28 | 56 |
| 7 | Problem in disposal of male calves | 46 | 92 |
| 8 | Problem in disposal of unproductive, unfit and old cow and buffalo | 33 | 66 |
| 9 | High mortality of male calves in exotic and cross breed animals | 38 | 76 |
| **D.** | **Constraints in diseases and health care management practices** | | |
| 1 | Shortage of proper and timely vaccination facilities in villages against diseases | 4 | 8 |
| 2 | Lack of proper veterinarian services for timely treatment of diseased animals | 8 | 16 |
| 3 | Poor nutritional and feeding practices | 28 | 56 |
| 4 | Shortage of medicinal aid at village level | 6 | 12 |
| 5 | Shortage of skilled and cheap labour for various operations | 33 | 66 |
| 6 | Incidence of reproductive disorders (Anoestrus, Prolapse, Metritis, Endo-metrtis, Pyometra, Retention of placenta, Early embryonic mortality, Dystokia, Abortions etc.) | 22 | 44 |
| 7 | Repeat breeding and infertility | 29 | 58 |
| **E** | **Economic and financial constraints** | | |
| 1 | High-cost land and cattle shed construction | 34 | 68 |
| 2 | High cost of milch animals | 33 | 66 |
| 3 | High cost of qualitative concentrate feed | 28 | 56 |
| 4 | High cost of interest on loan.(Money lender) | 28 | 56 |
| 5 | Lack of loan and insurance facilities at village level | 6 | 12 |
| **F** | **Obstacles regarding Milking , Storage, marketing and Distribution** | | |
| 1 | Milking practices (Methods) | 33 | 66 |
| 2 | Lack of trained milker | 17 | 34 |
| 3 | High cost of milking machine and maintenance | 39 | 78 |
| 4 | Poor storage and cooling facilities | 41 | 82 |
| 5 | Non-remunerative price of milk | 34 | 68 |
| 6 | Irregular collection of milk and poor herd average | 36 | 72 |
| 7 | Poor transportation and distribution facilities | 6 | 12 |

Table 1. Constraints faced by dairy owner's in Jaipur region

Dairy owners facing huge challenge for ensuring the availability various feeding stuffs to their livestock and study concluded that about 46 percent dairy owners depraving of green fodder availability especially during summer and winter seasons in the study area. Whereas about 38 percent of dairy owners finding difficulties in managing dry fodder specially during rainy season due to poor resources excessive raining in the adjoining states from where they were purchasing dry fodder and poor stock management. In Punjab problem of green fodder and dry fodder problem was estimated about 50 and 40 percent respectively (S.S. Dhindsa, 2014). It was further reveals that dairy owners were mostly having very poor knowledge about nutritional parameters of livestock feeding in the region. Therefore due to lack of technical information about feeding standards for various livestock species also a major reason of malnutrition and existence of various metabolic and other deficiency related causes in the livestock of the region. Thus, that ended with imbalance feeding to their livestock.

About 56 percent dairy owners recorded poor resources and unawareness in finding cheaper concentrate mix for their livestock this finding was similar to constraints estimated on feeding was 56.44 percent in Nagpur(A.P.Patil, 2009), whereas about 64 percent dairy owners facing the issue of feed supplements and additives to compound their feedstuffs to improve the nutritive value of feedstuffs fed to livestock due to unawareness and poor financial situation along with non availability of these additives and supplements at cheaper rates in the existing market to the dairy owners in the study area. Further, about 66 percent dairy owners were not aware about the improved breeds and resource of acquiring them so under this poor situation they were domesticating several non descript Indian breeds of cow and buffaloes of Indian origin, Further it was recorded that 32 percent of total dairy owners facing shortages in availability of cross bred and exotic breeds in the region. However 88 percent dairy owners pointed out their un-ability to domesticate these milch animals due to the high cost of these productive animals. Whereas 64 percent of dairy owners facing poor conception rate via artificial insemination therefore repeat breeding is very common among the cross breed and exotic cows in the study area thus affecting the overall profitability of dairy owners in the region due to increasing of calving intervals.

The heat detection was a very common problem reported by 56 percent of dairy owners having buffaloes at their farms because of in general salient heat manifestation by the buffaloes. Thus, it was adversely affecting the planning to obtain a calf in a year in the dairy farm of the study area. The another major problem was disposal of male calves and more than 92 percent dairy owners pointed out during study that timely disposal of male calves become a major threats for them and they were just sending either in society openly or if somehow possible sending them in Gaushalas running by various NGOs or with the help of various units of Govt. About 66 percent also expressed their un-ability to discard and culled out unproductive cows and buffaloes dairy owners from their stocks because of religious and social bindings on them also adversely affect in their profitability from

dairying business in the study area. High mortality among cross breed and exotic males calves were recorded in about 76 dairies in the study area because of poor management attention on these useless animals by dairy owners.

The result of the study further revealed that about 16 percent dairy owners complains about non availability of timely and cheaper veterinarian's services at their door steps and about 56 percent of the total dairy owners reported about the poor veterinary and medicinal aids at village level in the region. The reproductive disorders like Wise; Retention of placenta (ROP), endometritis, metritis, pyometra, trichomoniasis, early mortality and late abortions and dystocia was a bigger challenge for about 44 percent of the dairy owners and thus adversely affect on business of dairying in the region. However, a study in Fateh sahib, Punjab worked out that 77.91 and 81.32 percent cows and buffaloes were suffering from various reproductive disorders(S.S. Dhindsa, 2014). Similarly, consequences of repeat breeding were bigger constraints as reported by about 58 percent dairy owners. The financial threats were the common factor recorded in the region and in the previous studies the repeat breeding constraints was noticed in between 17.01 to 40.032 percent in cattle and buffaloes (Singla, 1994),(Prajapati, Ghodasara, Joshi, & Prajapati, 2005), (Selvaraju, Veerapandian, & Kathiresan, 2005) and (Taraphder, 2002).

About 68 percent of dairy owners failing in constructing cattle sheds and providing open space to their animals as per the scientific parameters because of poor financial conditions. Further, 66 percent dairy owners expressed their constraints about financially inability to purchase the productive exotic and cross bred cow along with popular breeds like murrah and surti of buffaloes in the region. The start – up in dairy sector were also found to be more difficult because of non availability of cheaper feed ingredient as recorded in the region by about 66 percent dairy owners. However about 56 percent dairy owners were still in the traps of money lenders and found difficulties in availing lucrative loan facilities at lower interest rate in the rural mass of the study area. However, only 12 percent dairy owner's complaints about the non availability of insurance to their livestock in the region this reveals that reasonable insurance facilities was available at ground level to their livestock. Regarding problem in milking storage of milk about 82 percent dairy owners expressed lack of availability of bulk cooler facilities at village level. However, about 66 percent dairy owners expressed their inability to eradicate use of Knuckling methods by their milkers for milking their animals damaging the teat orifice and internal structure of teat glands thus responsible for inviting mastitis and other teat and udder related complications to their animals. Further they expressed the conveniences of their milker in spite of using full hand milking as a practice of milking.

Study further, reveals that about 34 percent dairy owners facing the scarcity of trained milker in the region thus they had no options to continue with those whom were available in their nearby. The cost, operational installation and maintenance cost of milking machine was keeping away from about 78 percent dairy owners from availing and adopting machine milking as a option for milking of their animals. However, about 82 percent of dairy owners still facing the situation of storage facilities like bulk coolers at their door steps compelling them to sell immediately

to the middlemen at lower prices which affecting the profitability of dairy owners in dairying business. About 68 percent dairy owners shown their anguish on remuneration prices of milk from various sources either by cooperative milk federations and others wholesale purchasers. Failing in managing herd average due to fluctuation in milk collection from their animals about 72 percent dairy owners found themselves unable to maintain the supply to their customers. Thus, adversely affecting the business in large in the study area. Further it was recorded that only 12 percent of total dairy owners facing the obstacles in milk distribution due to poor transport existence in their area.

**Conclusion**

As regards common management practices constraints in dairy enterprise, most of the dairy owners expressed their constraints as in adoption of proper housing of their livestock and similarly expressed their problem in adoption of other related so common practices due land, trained labour scarcity and poor resources. However, constraints in feeding practices in the study area huge dairy owners not adopting and full filling the nutritional requirement of milch animals due the lack of information and resource scarcity in the region. Similarly, the dairy owners mostly facing constrains in adoption of establish reproduction practices, diseases and health care management practices, economic and financial needs and obstacles in milking, storage, marketing and distribution in the study area.

**Suggestion and Implications**

1. Under the extension plan there should be a special provision to impart frequent technical training and new developed researches to dairy farmers in the study area and abroad with which they are concerned in their day-to-day life based upon judicious assessment and developed their skills to faced threats arises such as animal health care and disease control, care and management of animal, reproduction and breeding and management of animal, feeding and management of animal and clean milk production etc.
2. There is imperative need to established at least one A.I. centre (well equipped) at Gram panchayat level to provide regular and timely A.I. services as per the need.
3. To in hence the population of pure breed indigenous cow since even for cross breeding required good quality pure breeds at a large level grading–up breeding plans needs to be undertaken at a mass level through proper accountability by incentivizing and motivating various agencies and NGO;s associated in cattle breeding and development programs.
4. Efforts should be made to supply of sufficient financial assistance to high yielding milch animals and to adoption of recommended management practices.

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**Conflicts of interest**

The authors declare that they have no conflict of interest.

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