



Constraints Faced by Dairy Farmers in Adoption of Animal Welfare Practices in Uttar Pradesh

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Authors' contributions

This work was carried out in collaboration among all authors. Author JG designed the study, performed the statistical analysis and wrote the first draft of the manuscript. Author KM managed the literature searches of the study and checked the first draft. Author SS was the major advisor and chairperson of the Research Advisory Committee Members who guided in publication of this research paper. All authors read and approved the final manuscript.

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ABSTRACT

Animal welfare assumes much significance in the era of dairy commercialization both for health of the animals as well as to improve the farm productivity. Although animal welfare scores, scales and modules have been developed and implemented at developed countries, the outreach of animal welfare and awareness about the same has not been given due importance in developing countries including India. In this context, the present research study was designed to make an attempt to find out the extent of adoption of animal welfare practices by the dairy farmers at field level. The study was undertaken in the Central plain zone of Uttar Pradesh State. Four districts (Hardoi, Auraiya, Allahabad and Kaushambi) were selected purposively based on highest and lowest bovine population and milk production. One block from each district and from each block two villages and from each village 15 farmer-respondents were selected randomly. A total of 120 respondents were finally approached for the primary data collection. The salient findings revealed that, lack of complete know-how about GDMPs/AWPs, lack of incentives, policy and programme support besides non-availability of timely veterinary services were the major constraints expressed by

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respondents. The present study concludes that, there is strong need to sensitize and train the extension personnel's/veterinarians about the animal welfare practices and strengthen the dairy extension services among various stakeholders involved in dairying.

Keywords: Animal welfare; constraints practices; dairy cattle; India.

1. INTRODUCTION

The livestock sector plays an important role in India's socio-economic development and constitutes an important segment of the rural economy. Dairy industry provides livelihood to millions of farmers besides ensuring supply of quality milk and milk products to people in urban and rural areas. India enjoys the pride of being the world's largest milk producer, accounting for more than 22 percent of world's total milk production and the world's largest consumer of dairy products as well. However, the growing concern for animal welfare in the present context has put lot of emphasis worldwide. According to OIE (World Organization for Animal Health), an animal is in a good state of welfare if it is healthy, comfortable, well nourished, safe, able to express innate behavior, and if it is not suffering from unpleasant states such as pain, fear, and distress [1]. IDF (2008) in the guidelines states that animal welfare is mainly concerned with the 'five freedoms' which described the basic needs. This consists free from thirst, hunger and malnutrition, free from discomfort, free from pain, injury and diseases, free from fear and distress, and able to engage in normal patterns of animal behavior [2]. Hence, both failure to cope with the environment and difficulty in coping are indicators of poor animal welfare [3]. However, past studies have highlighted several constraints in dairy farming with respect to animal welfare. Inderpreet et al. (2011) in their study in Central zone of Punjab revealed that more than 90.00 percent of dairy farmers believed that high cost of feed and fodder, low price of crossbred cow milk, problem of disposal of old animals and problem of repeat breeding in buffaloes and crossbred cows as major constraints in dairy farming [4]. Similarly, an analysis of constraints faced by the dairy farmers in Nagpur district revealed that majority of the respondents were facing shortage of green fodder (45.33%) followed by lack of clean water (41.33). Referring to the financial constraints, delay in milk payment (78.22%), inadequate money and lack of loan facility (63.11%) and high cost of concentrates (56.44%) were the major perceived constraints. As regards technical constraints, inadequate knowledge of diseases and their prevention and

control (68.00%), non-availability of veterinary services (56.89%) were the constraints perceived by majority of respondents [5]. A case study on small holder dairying in India conducted by Birthal et al. (2008) concluded that feed scarcity was the major problem for small farmers which were the limiting factor for improving livestock productivity [6]. Mohi and Bhatti (2006) stated that the lack of knowledge about balanced ration and high cost of concentrate were the major constraints [7]. Further, Krichner et al. (2014) reported that presence of injuries, discomfort of the lying areas of the cows, mutilations, poor human-animal relationship and insufficient water provision were some of the weak points identified in the dairy farms [8]. For, the present study, Uttar Pradesh was purposively selected as it happened to be the highest milk producing state with 29.05 million tonnes of milk during 2018-19, thereby occupying the first place in milk production in the country [9]. Further, in the case of livestock population Uttar Pradesh is one of the largest states in the country with a large livestock population of 68.71 million [10]. The state comprises nine agro-climatic zones, among which, Central plain zone has been selected based on highest bovine population as well as highest milk production among all the zones of the State. With this point in view, an attempt was made to elicit various constraints faced by dairy farmers in adoption of animal welfare practices in Uttar Pradesh.

2. MATERIALS AND METHODS

The study was undertaken in the Central plain zone of Uttar Pradesh State. Four districts (Hardoi, Auraiya, Allahabad and Kaushambi) were selected purposively based on highest and lowest bovine population and milk production. One block from each district and from each block two villages and from each village 15 farmer-respondents were selected randomly. Therefore, a total of 120 respondents were finally approached for the primary data collection. The data was collected from the primary and secondary sources through a well-structured questionnaire developed for the present study. Then, the data collected were tabulated and analyzed using Garret ranking technique to

interpret the results. By using this technique, the order of the merit given by the respondents was transformed into ranks by using the following formula:

$$\text{Percent position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where;

R_{ij} = Rank given for the i th variable by j th respondents

N_j = Number of variable ranked by j th respondents

The percent position was converted into scores as referring table given by Garret and Woodworth (1969) [11]. For each factor or problem, the average score was worked out to arrive at mean scores and thus based on the mean scores, the ranks were given and the most important factor was ranked first and the least important problem was ranked as the last.

3. RESULTS AND DISCUSSION

One of the objectives of this study deals with the constraints faced by farmers in adoption of dairy animal welfare practices. The number of constraints and practical difficulties confronted by farmers resulted in low adoption of the DAWPs. The farmers were personally interviewed with the help of semi-structured interview schedule to enlist the constraints faced by them in adoption of animal welfare practices. For this purpose Garret's ranking technique was used to rank the constraints. The major constraints were identified and prioritized in Table 1.

A perusal on Table 1 revealed that majority of the respondents had severity of the constraint,

profoundly with respect to the statement "Lack of complete know-how about GDMP/Animal Welfare Protocol" with the Garret mean score of 83 was ranked first among the constraints faced by dairy farmers in adoption of animal welfare practices. This might be due to the reason that most of the farmers were not able to access the extension support on continuous basis. The statement "Lack of incentive, policy and programme support for adoption of Animal welfare practices" was ranked 2nd of all constraints with a Garret score of 81, as there was no such types of programmes, policy and incentive which could facilitate and motivate farmers in adoption of animal welfare practices. The statement "Non availability of timely veterinary services at farmer's doorstep" was ranked 3rd among the constraints with the Garret mean score of 77. It might be due to limited access to veterinary dispensary with lack of proper transport facilities and distance. The statement "Inadequate credit support for dairying" was ranked 4th with the Garret mean score 72. It might be due to limited credit facilities and awareness about the govt. credit schemes related to dairying and animal husbandry. Also, due to excessive reliance on the moneylenders rather than banks due to complicated policies and paper work delays the process of disbursement of money required for dairy farming. Without credit facilities, it becomes difficult to meet the feeding, healthcare and infrastructure expenses incurred by the dairy farmers. The statement "Inadequate land for fodder cultivation and proper grazing field" was ranked 5th with Garret mean score 68. It might be due to limited possession and availability of land for fodder cultivation and grazing of dairy animals. Since, majority of the expenses in dairy farming was spent on feed and fodder. The statement "Inadequate trained/skilled manpower

Table 1. Constraints faced by the farmers in adoption of dairy animal welfare practices (n=120)

Sl. no.	Constraints	GMS	Rank
1.	Lack of complete know-how about GDMP/Animal Welfare Protocol	83	I
2.	Lack of incentive, policy and programme support for adoption of animal welfare practices	81	II
3.	Non-availability of timely veterinary services at farmer's doorstep	77	III
4.	Inadequate credit support for dairying	72	IV
5.	Inadequate land for fodder cultivation and proper grazing field	68	V
6.	Inadequate trained/skilled manpower for dairy herd management	63	VI
7.	Limited-access to quality inputs for dairying	61	VII

GMS=Garret Mean Score, GDMP=Good Dairy Management Practices

for dairy herd management” was ranked 6th with Garret score 63. This might be due to lack of training and extension facilities provided by the extension personnel regarding scientific dairy herd management in commercial dairy farming. Therefore, with provision of need based knowledge and skills could enhance the efficiency of the manpower. The statement “Limited-access to quality inputs for dairying” was ranked 7th with Garret score 61. It might be due to the inadequate availability and accessibility to quality inputs like feed, supplements, medicine etc. Lack of financial aid and untimely distribution of subsidized inputs from the government were also some of the major constraints observed. The findings of the present study were in conformity with the finding of Mandi et al. (2018) [12].

4. CONCLUSION

It can be concluded from the study that, in the case of constraints faced in adoption of dairy animal welfare practices, lack of complete know-how about GDMP/AWP, lack of incentives, policy and programme support and non-availability of timely veterinary services were the major constraints expressed by the respondents in order. The other constraints faced by the respondents includes; inadequate credit support for dairying, inadequate land for fodder cultivation and proper grazing field, inadequate trained/skilled manpower for dairy herd management and limited-access to quality inputs for dairying, in order. Hence, the present study also suggests that, extension support system of state animal husbandry department needs to be strengthened, by training the extension personnel/veterinarians for effective dissemination of Animal Welfare Protocol (AWP) among the farmers. Further, the government should also come with policies and programmes that facilitates and motivates the farmers in adoption of GDMPs with much emphasis on animal welfare.

CONSENT

As per international standard or university standard guideline participant consent has been collected and preserved by the authors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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