



# Scientific Dairy Management Practices Followed by Dairy Farmers in South-Western Punjab

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## ABSTRACT

The survey was carried out to identify the present adoption status of scientific dairy practices in South-Western Punjab. To undertake this work, 60 (20 small, 20 medium and 20 large) dairy farmers in Mansa and Sangrur districts were selected where dairy farming was highly concentrated. Overall 28.33 per cent farmers acquired dairy entrepreneurial development training programme whereas 33.33 per cent farmers have taken loan from various financial institutions for establishment of dairy farms. Total 61.66 per cent farmers show the adoption of vaccination for common diseases like H.S., F.M.D. and B.Q., whereas only 26.66 per cent farmers analyzed the feed/fodder samples. Most of the farmers (76.66 %) use mineral mixture and salt for increasing the production and productivity of their animals. Total 26.6 per cent farmers prepared and use the silage whereas only 23.33 per cent farmers use urea for the treatment of wheat straw to use in summer during lean period of green fodder. Overall 63.33 per cent dairy owners know the proper practice of full hand milking practice. Majority of the respondents had also not adopted the correct practice of disposal of animal waste.

**Key words:** Adoption, Constraint, Feeding, Breeding, Production, Management.

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## INTRODUCTION

Punjab is predominantly dependent on agricultural economy with about 75 per cent rural population. The size of average land holding is very small. Moreover, the agricultural production has reached its plateau and there is not much scope of further improvement unless we increase the soil fertility and water resources which are costly inputs. Income from arable farming alone is hardly efficient to maintain the livelihood of farmers and their families. Therefore, some alternative arrangements shall have to be made to canalize the energy of educated youth or rural work force for earning their livelihood. Under such circumstances there is tremendous scope to increase dairy farming with existing arable farming. Sharma *et al* (2013) reported that the major problems of the small dairy farmers were cow dung management while for semi commercial and commercial farmers mastitis was the major problem. Training in the area of feed management was the top priority for domestic and

semi commercial farmers. Similarly, Sharma (2015) observed that poor knowledge about the nutritive value of feed ingredients (86.5%), high cost of raw feed ingredients (28%), shortage of skilled and committed labour (32.5%) were found to be major bottlenecks regarding adoption of cattle feed formulation technology at the dairy farm. Further, Sharma *et al* (2020) showed that for making the dairy farming a profitable market, farmers must follow the recommendations of the research institutes and take maximum care so that productivity as well as profitability can be sustained.

The economic contribution of livestock seems to be quite substantial; the farmers raising cattle and buffaloes are yet ignorant of scientific management practices. In addition, the dairy industry is continuously plagued with various problems which could undermine its viability. Most of the problems have been traced to breeding, marketing and input supplied over which the producer has very little control. The identification and recognitions of

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**Table1. Blockwise selection of dairy farms for collection of data.**

Sr. No.	District	Block	Cluster of villages	No. of farmers		
				Small	Medium	Large
1.	Sangrur	Dhuri	Maanwala, Saron, Dhura	05	05	05
		Lehragaga	Khanori, Bhundar Bhaini, Nawagaon	05	05	05
2.	Mansa	Mansa	Bhani Bagha, Burj Dilwan and Khaila Kalan	05	05	05
		Sardulgarh	Khera Khurd, Karandi and Sangha	05	05	05

these problems is essential to formulate adequate measures to circumvent the crisis befalling the dairy industry. Therefore, the present survey work has been designed and undertaken to identify the present management status in adoption of various scientific methods practices of dairy farming in Sangrur district of Punjab.

### MATERIALS AND METHOD

To undertake this work Mansa and Sangrur districts were selected. Two blocks in each district situated at different locations were selected to undertake this work. Like-wise, a cluster of villages in each block was selected where dairy farming was highly concentrated. Total 60 dairy farmers (20 small farmers having upto 05 milch animals + 20 medium farmers having 06 to 10 milch animals + 20 large farmers having more than 10 milch animals) from each cluster were selected at random for survey and collection of data as detailed given below in Table 1.

#### Collection of data

By reviewing the literature and through discussions with university experts and extension personnel, a questionnaire was prepared. The responds of dairy farmers were collected on a two point response category *viz.*, agree and disagree. The data collection commenced from the beginning of the January, 2019 and was carried through the end of November, 2019. The frequencies of each constraint were worked out as mentioned in percentages in Table 2.

#### General existed management practices of dairy farms

Overall 28.33 per cent farmers acquired dairy entrepreneurial development training programme

before or after starting the dairy farms whereas total 33.33 per cent farmers have taken loan from various financial institutions for establishment of dairy farms. Total 61.66 per cent farmers show the adoption of vaccination against common diseases like H.S., F.M.D. and B.Q. whereas only 26.66 per cent farmers analyzed the feed/fodder. Regarding feeding of pregnant buffalo, it was encouraging to note that all the respondents were feeding special ration *viz.*, *gur sarbat*, barley *chokar* and sesame (*Til* oil) after calving to the buffalo. Most of the large farmers (76.66 per cent) use mineral mixture and salt for increasing the production and productivity of their animals.

Total 26.6 per cent farmers prepared and use the silage whereas only 23.33 per cent farmers use urea for the treatment of wheat straw to use in summer at the time of scarcity of green fodder. Overall 63.33 per cent dairy owners know the correct practice of full hand milking practice but some of them are not adopting the practice as they are not feeling easy in milking by this practice. Majority of the respondents had also not adopted the correct practice of disposal of animal waste.

### RESULTS AND DISCUSSION

The higher adoption by large dairy keepers in all the practices of management *viz.*, feeding, health care and clean milk production was due to their better knowledge regarding these practices. As all the respondents fed green and dry fodder and majority used concentrate feed to the milch animals, however, majority did not supply the green fodder and concentrate in required quantity. This could be attributed to lack of green fodder

## Scientific Dairy Management Practices

**Table 2. General existed management practices of dairy farms (in percent).**

Sr. No.	Particulars	Small Farmers	Medium Farmers	Large Farmers	Overall
1.	Acquired any dairy entrepreneurial development training programme	35.00 (07)	30.00 (06)	20.00 (04)	28.33 (17)
2.	Acquired any loan from any financial institutions	20.00 (04)	35.00 (07)	45.00 (09)	33.33 (20)
3.	Routine vaccination against diseases	40.00 (08)	50.00 (10)	95.00 (19)	61.66 (37)
4.	Preparation of balanced ration at domestic level	00.00 (00)	25.00 (05)	80.00 (16)	35.00 (21)
5.	Adoption of deworming, castration and weaning	20.00 (04)	40.00 (08)	75.00 (15)	45.00 (27)
6.	Feed/fodder sample analyzed	05.00 (01)	25.00 (05)	50.00 (10)	26.66 (16)
7.	Use of mineral mixture/salt	55.00 (11)	75.00 (15)	100.00 (20)	76.66 (46)
8.	Treatment of wheat straw with urea	00.00 (00)	35.00 (07)	35.00 (07)	23.33 (14)
9.	Production of green fodder	50.00 (10)	90.00 (18)	100.00 (20)	80.00 (48)
10.	Preparation and use of silage	00.00 (00)	30.00 (06)	50.00 (10)	26.66 (16)
11.	Gur sarbat, barley/wheat/oat chokar and or mixed boiled ration of wheat/maize/rice/cotton etc. with oil and mineral mixture/salt after calving to the animals	100.00 (20)	100.00 (20)	100.00 (20)	100.00 (60)
12.	Adoption of A.I. facility for upgrading of breeds	45.00 (09)	65.00 (13)	70.00 (14)	60.00 (36)
13.	Establishment of bio-gas plant/farm yard manure (FYM) pit disposal of animal dung/waste	00.00 (00)	20.00 (04)	40.00 (08)	20.00 (12)
14.	Correct practice of full hand milking	55.00 (11)	65.00 (13)	70.00 (14)	63.33 (38)

Figures in parenthesis indicate number of dairy farms in each category i.e. small, medium and large

and poor economic condition of the respondents. Use of mineral mixture and salt for animal feeding was not common practice but many of large dairy farmers were using it on regular basis. Similarly, majority of the respondents did not adopt the

practice of treatment of dry fodder with urea to improve its nutritive value. This was due to lack of adequate knowledge among farmers regarding this aspect. Regarding feeding of pregnant animals it was encouraging to note that all the respondents

were feeding supplementary feed viz., gur sarbat, barley/wheat/oat chokar and or mixed boiled ration of wheat/maize/rice/cotton etc. with oil and mineral mixture/salt after calving to the animals. On the basis of findings, it could be concluded that the respondents especially the medium and small category of cattle/buffalo keepers did not adopt the recommended/scientific method of animal feeding. Similar findings have been reported by Awasthi (2000), Bhattu *et al* (2015), Intodia (2001), Manhas and Sharma (2008), Singh *et al* (2013) and Tanwar and Kumar (2017) who concluded that the buffalo keepers were not following the scientific practices in case of feeding the buffalo.

Regarding extent of adoption of management practices it was found that respondents had poor adoption of practices like castration, weaning, deworming and vaccination against common diseases like H.S., F.M.D. and B.Q. Regarding Artificial Insemination facility for upgrading of breeds the adoption percentage was found to be low because the buffalo keepers usually possessed local non-descript breeds followed by natural service to their buffaloes with local sire. Majority of the respondents had also not adopted the correct practice of full hand milking and disposal of animal dung/waste.

### CONCLUSION

There was difference in adoption levels between different categories of respondents with regard to routine vaccination against diseases, preparation of balanced ration at domestic level, adoption of deworming, castration and weaning, analysis of feed/fodder samples, use of mineral mixture/salt, treatment of dry fodder with urea, preparation and use of silage, correct practice of full hand milking and establishment of bio-gas plant for proper use of dung. The overall extent of adoption in general was found to be highest in large herd owners followed by medium and small. In order to increase cattle and buffalo production and productivity, it is essential to provide input services (breeding, feeding and health) at the farmers' door step and

create awareness among the livestock farmers about the latest technologies through a strong Animal Husbandry extension network system. The priority should be given to study the problems of small and medium farms and animal extension models for effective transfer of technology can be developed at farmer fields.

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