

## ADOPTION OF PACKAGE OF PRACTICES FOR DAIRY ANIMALS

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### ABSTRACT

*Animal husbandry plays a significant role for uplifting rural community in India. Dairying is considered as a “treasure” of the Indian rural economy. It provides gainful employment to a vast majority of rural households. Successful animal husbandry depends of adoption of package of practices. The present study were carried out to study the adoption of different package of practices for dairy animals. The study revealed that adoption of package of practices in dairy animals like general livestock management, feed and water management, calf rearing, breeding, clean milk production and health management were low and there are some gaps in adoption of scientific livestock management practices. Deworming, full hand milking, washing of the teats after milking, feeding of silage, urea treated straw and chaffed green and dry fodder, insurance of dairy animals, participation in animal husbandry training camps, treatment camps and agricultural fairs, record keeping are important practices to be adopted by dairy farmers.*

**Keywords:** adoption, package of practices and dairy animals

### INTRODUCTION

Animal Husbandry and Dairying play an important role in the national economy and in the socio-economic development of the country. The livestock sector alone contributes nearly 25.6% of Value of Output at current prices of total value of output in Agriculture, Fishing & Forestry sector and an overall contribution of Livestock Sector in total GDP is nearly 4.11% at current prices during 2012-13. (Livestock Census, 2012). These sectors also play a significant role in supplementing family income and generating gainful employment in the rural sector, particularly, among the landless laborers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people. Milk producers of Ahmadabad district of Gujarat state follow the ancestral system of milk production. Majority of Animal keeper are small, marginal and landless farmers. Considering these facts present study was under taken to know the adoption of no cost and low cost dairy practices by formulating above objectives.

### OBJECTIVES

(1) To study the selected characteristics of dairy farmers.

(2) To study the adoption of dairy practices by the dairy farmers

### METHODOLOGY

Out of nine talukas of Ahmadabad district, four talukas namely Bavla, Sanand, Ahmadabad city taluka and Dholka were selected randomly. For the selection of villages two villages Rupal and Juda randomly selected from Bavla and Sanandtaluka having dairy cooperative society and two villages Saijpur and Lana randomly selected from Ahmadabad and Dholka taluka having no dairy cooperative society. A list of dairy farmers was obtained from VLWs and Chairman / Secretary of dairy cooperatives. From those four villages twenty five (25) dairy farmers from each village were selected randomly, thus total one hundred (100) dairy farmers were selected as respondents for the study.

Pertaining to the study an interview schedule was developed according to the objectives with the help of Professors of Agricultural and Veterinary colleges of Anand Agricultural University, Anand. The data were collected through the personal interview of selected dairy farmers. The data were tabulated and analyzed to draw the meaningful conclusion.

**RESULTS AND DISCUSSION****Table 1 : Distribution of the respondents according to their characteristics**

n=100

No.	Characteristic	Category	No.	Person
1	Age	Young age (Up to 35 year)	37	37.00
		Middle age (35 to 50 year)	44	44.00
		Old age(Above 50 year)	19	19.00
2	Education	Illiterate	30	30.00
		Up to Primary level	32	32.00
		Up to Secondary level	27	27.00
		Up to HSC level	03	03.00
		Graduate and above	08	08.00
3	Types of Family	Nuclear family	49	49.00
		Joint family	51	51.00
4	Size of Family	Up to 5 member	40	40.00
		More than 5 member	60	60.00
5	Occupation	Only Livestock farming	24	24.00
		Livestock farming with Agriculture	45	45.00
		Livestock farming and Agriculture along with farm laboring	02	02.00
		Livestock farming and services	15	15.00
		Livestock farming with other business	14	14.00
6	Land holding	Landless	37	37.00
		Up to 1 ha.	30	30.00
		Above 1 to 2 ha.	16	16.00
		Above 2 ha.	17	17.00
7	Animal possession	Up to 5 animal	28	28.00
		More than 5 animals	72	72.00
		Only cow keepers	03	03.00
		Only buffalo keepers	59	59.00
		Cow and Buffalo keepers	38	38.00
8	Annual Income	Up to ₹ 50,000	34	34.00
		Above ₹ 50,000 to ₹ 1,00,000	30	30.00
		Above ₹ 1,00,000 to 2,00,000	20	20.00
		Above ₹ 2,00,000	16	16.00
9	Social participations	Milk Co-operative society	43	43.00
		Credit co-operative society	08	08.00
		Village Panchayat	02	02.00
		Self-help-group	26	26.00
		ATMA project (FIG)	00	00.00
		Irrigation cooperative society	00	00.00
10	Extension Contact	Low (up to 0.37)	65	65.00
		Medium (0.37 to 3.31)	15	15.00
		High (Above 3.31)	20	20.00
		Mean=1.84, SD=2.94)		

It is concluded from Table 1 that more than two fifth (44.00 per cent) of the respondents were from middle age group and livestock farming with agriculture as their occupation. Three fifth (60.00 per cent) of the respondents were illiterate to primary level of education and had more than five member in their family. It is also found that 37.00 per cent landless respondents were engage in livestock raising occupation. Nearly three fourth (72.00 per cent) of the respondents had more than five animal and nearly three fifth (59.00 per cent) were keeping only buffaloes. More than two third (64.00 per cent) of the respondents had annual income up to one lack rupees. Less than half (43.00 per cent) of the respondents were the members of milk cooperative society. More than two third (65.00 per cent) of the respondents had low level of extension contacts.

**Table: 2 Adoption status of respondents about livestock management**

n=100

Sr. No.	Improved Practices	Ad-opted	Left after adop-tion	Not ad-opted
<b>1</b>	<b>General livestock management practices</b>			
1	Provided enough space, proper ventilation and sufficient sun light to each animal	96	00	04
2	Provided hard, well slopped and non-slippery floor in cattle shed	44	00	56
3	Provided manger in cattle shed	58	00	42
4	Cleaned cattle shed regularly	96	00	04
5	Made manure pit away from cattle shed and human residence	85	00	15
6	Covered the roof of cattle shed with dry fodder in summer	66	00	34
7	Provided tree shed around the cattle shed	75	00	25
8	Sprayed pesticide at regular interval in animal shed to control ecto-parasites.	14	00	86
9	Bathed dairy animals every day in summer	46	00	54
10	Groomed dairy animals during bath regularly	06	00	94
11	Consulted veterinary doctor while purchasing the dairy animals	06	00	94
12	Kept record of feeding, calving and sale of milk	02	00	98
13	Participated in animal husbandry training camps, animal treatment camps and agricultural fairs.	05	00	95

14	Preferred loan to purchase the dairy animals from nationalize bank instead of private money lenders	08	00	92
15	Insured precious dairy animals	06	00	94
<b>2</b>	<b>Feed and water management practices</b>			
1	Cultivated fodder crop using high yielding varieties	15	00	85
2	Fed at list 10 kg green fodder to milch animals	56	00	44
3	Fed <i>ad lib</i> dry fodder to milch animals	72	00	28
4	Fed chaffed green and dry fodder	04	00	96
5	Fed urea treated straw	00	00	100
6	Fed the silage	00	00	100
7	Supplemented 30 to 40 gm/day mineral mixture/common salts	20	00	80
8	Provided concentrate according to milk production	40	00	60
9	Provided enough fresh and clean drinking water according to season (80 to 100 litre/day/ animal)	69	00	31
<b>3</b>	<b>Calf rearing practices</b>			
1	Cut and disinfection of navel cord with sterilized knife and tincture iodine	12	00	88
2	Cleaned nostrils and mouth immediately after birth	94	00	06
3	Fed colostrums to calf within 0.5 to 1.5 hrs. of birth	98	00	02
4	Fed concentrate to calf	48	00	52
5	Follow dehorning	03	00	97
6	Regular deworming to the calf according to advice of veterinarian	07	00	93
7	Regular vaccination to the calf	08	00	92
<b>4</b>	<b>Breeding practices</b>			
1	Followed timely A.I after heat detection (10 – 12 hrs.)	14	00	86
2	Followed pregnancy diagnosis after 60days of A.I./N.S	03	00	97
3	Breeding after 60 days of calving.	03	00	97
<b>5</b>	<b>Clean milk production practices</b>			
1	Cleaning and washing the floor before milking	35	00	65
2	Washing and drying the hand before milking	60	00	40
3	Washed the udder and teats before milking.	94	00	06
4	Washed the teats after milking.	03	00	97

5	Followed full hand milking	06	00	94
6	Using facemask and trimming the nail	24	00	76
7	Used properly cleaned utensils for milk collection	94	00	06
8	Used dome shaped, narrow mouth stainlesssteel utensils for milking	30	00	70
9	Removal of 1st 2 to 3 strips of milk from each teat to reduce bacterial load in milk.	70	00	30
10	Quick and complete milking in noise free environment.	73	00	27
11	Milking the sick and under treatment animals at last and kept their milk separate	59	00	41
12	Followed regularity of milking operation in terms of time interval, place and person.	86	00	14
13	Filter the milk with clean, dry cloth and tightly covered container and kept in cool place	86	00	14
14	Sale the milk immediately	94	00	06
<b>6</b>	<b>Health management practices</b>			
1	Followed regular vaccination against contagious disease like FMD, HS4 Brucellosis.	65	04	31
2	Regular deworming of the herd	07	00	93
3	Informed immediately to nearest veterinary hospital at the time of outbreak of contagious disease.	04	02	94
4	Identified, isolated and treated the sick animals as early as possible	28	02	70
5	Isolated sick animals from herd.	40	00	60
6	Dry the milch animals before 60 days of parturition.	87	00	13
7	Removal of carcass carefully and properly	87	00	13

Looking to the adoption of general livestock management practices data presented in Table-2 indicated that more than 96.00 per cent of the respondents were provided enough space, proper ventilation and sufficient sun light to each animal and cleaned cattle shed regularly. More than two fifth (44.00 per cent) of the respondents provided hard, well slopped non slippery floor in cattle shed and bathed dairy animals every day in summer (46.00 per cent). More than half of the respondents were provided manger (58.00 per cent) in cattle shed and covered the roof of cattle shed (66.00 per cent) with dry fodder in summer. Majority of the respondents made manure pit away from cattle shed and human residence

(85.00 per cent) and provided tree shed around the cattle shed (75.00 per cent).

Only 14.00 per cent respondents were sprayed pesticides at regular interval in animal shed to control ecto parasites. Less than 10 .00 per cent of the respondents were groomed dairy animals during bath, consulted veterinary doctor while purchasing the dairy animals, kept record of feeding, calving and sale of milk, participated in animal husbandry training camps, animal treatment camps and agricultural fairs, preferred to obtain loan from nationalize bank to purchase the dairy animals and insured dairy animals

Regarding adoption of feed and water management practices majority (72.00 per cent) of the respondents fed *ad lib* dry fodder to milch animals and more than 69.00 per cent of the respondents were provided enough fresh and clean drinking water according to season (80 to 100 litre/day/ animal). More than half (56.00 per cent) of the respondents were fed at least 10 kg green fodder to milch animals. Two forth of the respondents were provided concentrate according to milk production.20.00 per cent and 15.00 per cent of the respondents were supplemented 30 to 40 gm/day mineral mixture and/or common salts and cultivate fodder crop using high yielding varieties, respectively. Only4.00 per cent respondents were fed chaffed green and dry fodder and none of them were fed urea treated straw and silage to their animals.

As far as calf rearing practices were concern more than 98.00 per cent of the respondents were fed colostrums to calf within half to one and half hour of birth. 94.00 per cent were cleaned nostrils and mouth immediately after birth. Nearly half (48.00 per cent) of the respondents fed concentrate to calf. 12.00 per cent of respondents were cut and disinfected navel cord with sterilized knife and tincture iodine. Less than 10.00 per cent of the respondents were vaccinated and dewormed their calf regularly according to advice of veterinarian and followed the dehorning practices.

Regarding breeding practices, it was observed that more than 86.00 per cent of the respondents not followed timely A.I after heat detection. Few of them (3.00 per cent) followed pregnancy diagnosis after 60 days of A.I/N.S. and breeding after 60 days of calving.

Looking to the adoption of clean milk production practices, 94.00 per cent of respondents washed the udder and teats before milking, use properly cleaned utensils for milking, sale the milk immediately, 86.00 per

cent respondents followed regularity of milking operation in terms of time interval, place and person, filtered milk with clean, dry cloth and tightly covered container and kept in cool place, 70.00 per cent and above of the respondents were followed quick and complete milking in noise free environment and removed 1st 2 to 3 strips of milk from each teat to reduce bacterial load in milk. Nearly three fifth (59.00 per cent) of the respondents were washed and dried the hand before milking and milked the sick and under treatment animals at last and kept its milk separate. More than one third (35.00 per cent) of the respondents were cleaned and washed the floor before milking. 30.00 percent and 24.00 per cent of the respondents were used dome shaped stainlesssteel utensils for milking and used face mask and trimmed their nails, respectively. Only 6.00 per cent and 3.00 per cent of the respondents were followed full hand milking method and washed the teats after milking.

Regarding adoption of health management practices, majority (87.00 per cent) of the respondents removed carcasses carefully and properly and dried their milch animal before 60days of parturition. 65.00 per cent respondents followed regular vaccination against contagious diseases like FMD, HS, and Brucellosis. Two fifth (40.00 per cent) of the respondents were isolated sick animals from herd and 28.00 per cent of them were identified, isolated and treated the sick animals as early as possible. Only few (7.00 per cent) of them were dewormed to their herd regularly.

## **CONCLUSION**

Adoption of package of practices in dairy animals like

General livestock management, feed and water management, calf rearing, breeding, clean milk production and health management were low and there are some gaps in adoption of scientific livestock management practices. Deworming, full hand milking, washing of the teats after milking, feeding of silage, urea treated straw and chaffed green and dry fodder, insurance of dairy animals, participation in animal husbandry training camps, treatment camps and agricultural fairs, record keeping are important practices to be adopted by dairy farmers. Therefore there is a need of extension activity in research area to increase the adoption among the dairy farmers regarding above mentioned practices.

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