

EXTENT OF ADOPTION OF IMPROVED ANIMAL HUSBANDRY PRACTICES BY DAIRY FARMERS IN KADAPA DISTRICT OF ANDHRA PRADESH

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Abstract: The present study was carried out to assess the extent of adoption of improved animal husbandry practices by dairy farmers in Kadapa District of Andhra Pradesh. Simple random sampling method was used to select 120 dairy farmers as respondents. The findings revealed that Reproductive practices like artificial insemination at proper time of heat with semen of good bull was regularly adopted by 78.00 per cent of the dairy farmers, regarding nutritional practices provision of ad libitum clean and fresh water was regularly adopted by 88.30 per cent of dairy farmers, washing of hands and udder before milking was the management practices regularly adopted by 93.33 per cent of the farmers. To control disease, prompt reporting of outbreak of a contagious disease to the local veterinarian was adopted by 78.33 per cent of the dairy farmers. Marketing practice like obtaining loans from nationalised banks instead of private money lender to purchase inputs for dairy farming was continuously adopted by 60.00 per cent of the farmers.

Keywords: Adoption- Animal Husbandry- Dairy farmers-Practices.

Introduction

India is the leading country in the world in terms of milk production (155.5 million tonnes of milk in 2015-16) contributing about 18.50 per cent of the total world's milk production (State of Indian Agriculture, 2015-16). The recent advances in animal husbandry technologies have demonstrated potential for maximization of milk productivity. However, expected number of the farmers still does not fully adopt animal husbandry related innovations. The overall contribution of Livestock Sector in total GDP is nearly 4.11% at current prices during 2012-13 (GOI, 19th Livestock Census, 2012). India's milk production alone accounts for 18.5 per cent of world production, achieving an annual output of 146.3 million tonnes during 2014-15. Whereas, the Food and Agriculture Organization (FAO) has reported a 3.1 per cent increase in world milk production from 765 million tonnes in 2013 to 789 million tonnes in 2014. The per capita availability of milk in India has increased from 176 grams per day in 1990-91 to

322 grams per day by 2014-15. It is more than the world average of 294 grams per day during 2013 (Economic Survey, 2015-16). This represents a sustained growth in availability of milk and milk products for the growing population. Dairying has become an important secondary source of income for millions of rural households engaged in agriculture. Hence, we should plan for sustaining high milk production as well as increasing productivity of animals. Animal husbandry services in our country rendered by number of Government and Nongovernment organizations through their extension workers at national, state, district, block and village levels through various livestock development programmes and projects which help dairy farmers to adopt the animal husbandry practices. In rural areas of Kadapa district, the agricultural production and animal husbandry are mainly in the hands of the farming community, who maintain one or two dairy animals. Due to limited resources available with the farming community, expected improvement is yet to achieve by them in the milk production per animal. The availability of latest scientific knowledge and information has not yet help achieve an expected level of adoption of improved animal husbandry practices. Keeping this in mind the study was conducted with the objective to study the “*Extent of adoption of improved animal husbandry practices by dairy farmers of Kadapa district.*”

Materials and methods

The study was conducted in Kadapa district of Andhra Pradesh, by selecting 4 villages because of the presence of more number of dairy farmers in those areas. Nakkaladinne, Gopavaram, Kamanuru and Yerraguntla were the villages selected for the study. After the selection of the villages, a village wise list of dairy farmers was prepared and 30 dairy farmers from each village were randomly selected with the help of simple random sampling methods. Thus, the total sample consisted of 120 dairy farmers as respondents. The extent of adoption of major animal husbandry practices was measured in terms of reproductive, nutritional, management, disease control and marketing practices followed by the respondents. Data was collected by an interview schedule developed during the study. The respondents were asked to give opinion about the use of improved animal husbandry practices (adoption) on three point continuum *viz*.; regular adoption, sometime adoption and no adoption and scores of 2, 1 and 0 were assigned, respectively. Extent of adoption was calculated on the basis of these scores.

Results and discussion

Extent of Adoption of Improved Animal Husbandry Practices

Reproduction practices: Table 1 reveals that reproduction practices like artificial insemination in dairy animals at proper time of heat with semen of good bull were adopted continuously by 78.00 per cent of the farmers. Diagnosis of pregnancy of dairy animal between 60 and 90 days after service and proper treatment to the animals through veterinarian for repeat breeders, metritis, endometritis and anoestrus was adopted by 69.00 and 73.33 per cent of the dairy farmers, respectively. Present research finding point toward that majority (78.00%) of the dairy farmers had adopted artificial insemination in their dairy animals. This finding is in line with Yadav and Yadav (1994).

Nutritional Practices: The findings in Table 1 reveals that in case of nutritional practices like feeding of colostrums to newborn calves within half an hour of birth, feeding of chopped fodders and balanced concentrate mixture with supplementation of mineral mixture on the basis of milk production, ad libitum clean and fresh water to animals and high yielding varieties (HYV) of fodder seeds were adopted continuously by 80.00, 70.00, 88.33 and 51.67 per cent of the dairy farmers, respectively. This finding is in line with Yadav and Yadav (1994) and Patel (1998).

Management practices: The Table 1 reveals that continuous adoption was observed in majority of the dairy farmers. Management practices like washing of hands and udder before milking, maintenance of cleanliness, comfort and ventilation in animal houses or sheds, use of sterilized scissors/knife for cutting of naval cord and application of tincture iodine on the naval cord and full hand method of milking were adopted continuously by 93.33, 88.33, 62.50 and 80.00 per cent of dairy farmers.

Disease control Practices: From the data presented in Table 1 it reveals that disease control practices viz. timely and regular vaccination against common contagious diseases such as Food and Mouth Disease (FMD) and Haemorrhagic septicaemia (HS)/Black Quarter (BQ), prompt reporting of outbreak of contagious disease to the local veterinarian and timely treatment of sick animals by veterinary doctor were adopted continuously by 75.00, 78.33 and 74.17 per cent of the dairy farmer. At the same time it is also striking to note that important disease control practice like keeping sick animals in isolation from the healthy animals was not at all adopted by (43.33%) of the dairy farmers. The present finding is supported by Gour (2002).

Marketing practices: Marketing practices are also as important, as other practices of animal husbandry. But some of the marketing practice like purchasing of animals from reliable sources after following scientific method of scoring/weightage on production was adopted by (45.00%) of the dairy farmer as revealed in Table 1. While, nearly (35.00%) of them were not adopted proper purchasing procedure of animals after veterinary check-up. Other important practices viz. obtaining loans from nationalised banks instead of private money lender to purchase inputs for dairy farming was continuously adopted by (60.00%) of the dairy farmers and (48.33%) of them were continuously adopting systematic procedure of selling of animals with necessary records of milk production, parity, service period and vaccination. This finding is in conformity with this result of Gour (2002).

Conclusion

From the study it can be concluded that almost more than half of the dairy farmers had medium level of adoption of improved animal husbandry practices. The probable reasons for above finding might be due to the economic condition and staffing of positivism in terms of change agency contact, scientific orientation, risk orientation, knowledge and Information and Communication Tools (ICT) exposure up to desired level.

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Table 1: Distribution of the dairy farmers according to extent of adoption (N=120)

| Practices | RA | SA | NA |
|--|----------------|---------------|---------------|
| Reproduction practices | | | |
| Artificial Insemination done at proper time of heat with semen of good bull | 94 (78.00) | 14 (12.00) | 12 (10.00) |
| Having pregnancy diagnosis done between 60 to 90 days after service | 82 (69.00) | 12 (10.00) | 26 (21.00) |
| Treatment of repeat breeders, metritis, endometritis and anoestrus cases by a veterinarian | 88 (73.33) | 13 (10.83) | 19 (15.83) |
| Nutritional practices | | | |
| Feeding of colostrums to newborn calves within half an hour of birth | 96 (80.00) | 08 (6.66) | 16 (13.33) |
| Feeding of chopped fodders and balanced concentrate mixture with supplementation of mineral mixture on the basis of milk production | 84 (70.00) | 22 (18.33) | 14 (11.66) |
| Provision of ad libitum clean and fresh water to animals | 106 (88.33) | 10 (8.33) | 04 (3.33) |
| Use of High Yielding Variety of fodder seeds | 62 (51.67) | 22 (18.33) | 36 (30.00) |
| Management practices | | | |
| Washing of hands and udder before milking | 112 (93.33) | 06 (05.00) | 02 (1.66) |
| Maintenance of cleanliness during milking and comfort in animal houses/sheds (cleaning of manger and removal of dung daily) and good ventilation | 106 (88.33) | 04 (3.33) | 10 (8.33) |
| Use of sterilized scissors/knife for cutting naval cord and application of tincture iodine on the naval cord/painting of naval cord | 75 (62.50) | 25 (20.83) | 20 (16.67) |
| Full hand method of milking | 96 (80.00) | 18 (15.00) | 06 (5.00) |
| Disease control practices | | | |
| Timely and regular vaccination against common contagious diseases, | 90 | 16 | 14 |

| | | | |
|---|---------------|---------------|---------------|
| such as FMD and HS/BQ | (75.00) | (14.00) | (11.00) |
| Prompt reporting of outbreak of a contagious disease to the local veterinarian | 94 (78.00) | 16 (14.00) | 10 (08.00) |
| Timely treatment of sick animals by veterinary doctor | 89 (74.16) | 19 (15.83) | 12 (10.00) |
| Isolation of sick animals from the healthy ones in a separate house/shed/ place | 44 (36.66) | 24 (20.00) | 52 (43.33) |
| Marketing practices | RA | SA | NA |
| Purchasing animals from reliable source, after done scoring / weightage on production | 54 (45.00) | 24 (20.00) | 42 (35.00) |
| Purchasing animals after veterinary check up | 42 (35.00) | 20 (16.67) | 58 (48.33) |
| Obtaining loans from nationalized banks instead of village money lender | 72 (60.00) | 16 (13.33) | 32 (26.66) |
| Sale of animals with necessary record of milk production, parity, service period and vaccination etc. | 58 (48.33) | 14 (11.66) | 48 (40.00) |

All the above figures in parenthesis indicate percentage

RA-Regular adoption, **SA**- Sometime adoption, **NA**- No adoption