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Breeding management practices of dairy cows in Viluppuram district of Tamil Nadu



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Abstract

All the dairy farmers have knowledge about awareness about heat signs and practicing artificial insemination. Average number of inseminations/conception was 2.57. Length of oestrous cycle was 21.50 days and duration of oestrous was 16.20 hours. Service, dry period and calving interval were 3.8, 3.9 and 14.5 months respectively. 60.5 per cent of dairy farmers following pregnancy diagnosis and the mean were 3.20 months. Majority (54.1 per cent) of dairy farmers expressed repeat breeding as a common problem.

Keywords: Breeding management, dairy cows, artificial insemination

Introduction

Livestock production is an important source of income for the rural poor in India where 70% of the livestock is in the hands of small and marginal farmers and landless labourers', who own less than 30% of the land area. A sizeable percentage of livestock owners are below poverty line. Livestock rearing, is particularly tied' up with milk production and lends itself to small scale enterprises more effectively than the other agricultural enterprises, since this is a labour intensive effort uniformly distributed throughout the year. Animal husbandry has a large potential for providing gainful employment to rural women in their own households; as 70% of the workforce in dairying comprises of women.

Materials and Methods

Pilot study

The semi-structured interview schedule was designed to obtain data on the various parameters of the study. It was pre-tested among 20 dairy cattle owners. Based on the pilot study, some questions were modified, some deleted and some added.

The pilot study also gave an idea on the time taken to interview each respondent.

Sampling design and size

The sampling procedure followed for this study was random sampling and the sample size was 1000.

Method of breeding: It refers to the method of breeding like AI/ Natural service.

Average number of inseminations / conception: It refers to the number of inseminations required to make the animal pregnant.

Length of estrus cycle: It refers to the numbers of days the cow is in oestrous period.

Duration of oestrus: It refers to the duration heat/oestrus measured in hours.

Service period: It refers to number of days from the date of calving to subsequent service resulting in conception.

Dry period: It refers to number of days from the date of drying to the date of next calving.

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Results and Discussion

Awareness about heat signs

All the dairy farmers have awareness about heat signs. This finding is line with the findings of Reddy (2013) [6] who found that all the farmers were aware of heat detection in cows and Artificial Insemination.

Method of breeding

All the dairy farmers were using artificial insemination service to their cows as method of breeding in Villupuram District of Tamil Nadu. These researches also find there is a non-availability of breeding bull and absence of natural breeding. These findings are contradiction with Sandip Kumar *et al.*, (2014) [8] who found bulls which are mainly used for breeding were from road side and hence, no breeding record were maintained by the farmers only 10 per cent farmers used own bulls and about 7 per cent farmers used bulls for breeding reared by others and Shweta (2017) who found 57.50 per cent of dairy farmers following natural service and remaining 42.50 per cent following Artificial Inseminations.

Average number of inseminations /conception

The overall average number of inseminations /conception in dairy cows ranged from 1 to 4 numbers with a mean of 2.57 without any much variation in Villupuram District of Tamil Nadu. These findings are line with the findings of Sandip Kumar *et al.*, (2014) [8] who found more than 60 per cent farmers provide more than two services for pregnancy about 12 per cent farmers got their animals pregnant by one service. Reddy (2013) [6] who found on an average, 2.43 inseminations were required for each conception in dairy cattle.

Length of oestrous cycle (days)

The overall length of oestrous cycle in dairy cows ranged from 18 to 28 days with a mean of 21.50 days without any much variation in Villupuram District of Tamil Nadu. This finding is line with the findings of oestrous cycle length in indigenous cow was 17-24 days and exotic / crosses 21±3 days (Sastry, 2015) [9].

Duration of oestrous (hours)

The overall duration of oestrous in dairy cows ranged from 12 to 24 hours with a mean of 16.20 hours without any much variation in Villupuram District of Tamil Nadu. This finding are line with the findings of duration of oestrus in indigenous cow was 12-18 hours and exotic / crosses 12-18 hours (Sastry, 2015) [9].

Service period (in months)

The overall Service period in dairy cows ranged from 3.5 to 5.0 months with a mean of 3.8 months. In rural area ranged from 3.0 to 5.0 and mean was 3.9 months. In urban area ranged from 3.0 to 5.5 and mean were 3.70 months. These findings are line with the findings of Madke *et al.*, (2011) who found the reproductive performance of cattle in hot-dry, hot-humid and winter seasons under three systems viz. concrete flooring with both covered and open area (G1), concrete flooring with rubber mat bedding and thatched roof (G2) and concrete flooring with sand (during hot and hot dry season) and straw bedding (during winter) with thatched roof (G3). They reported that service period for group 3 animals was significantly lower in hot-dry and hot - humid seasons.

Dry period (in months)

The overall dry period in dairy cows ranged from 3.0 to 5.0 months with a mean of 3.9 months. This finding are line with the findings of Ramkumar and Rao (2001) [4] who found that the dry period in cross bred cattle of Pondicherry ranged from 3 to 4 months. Sabapara *et al.*, (2016) [7] who found that 73.5 and 26.5 per cent respondents adopted practice of drying off their dairy animals for less than two months and two months / more time before calving. Sabapara *et al.*, (2016) [7] who found 54 and 46% respondents adopted practice of drying off their dairy animals for less than two months and two month/ more time before calving, respectively in Surat district.

Pregnancy diagnosis

Out of 1000dairy farmers, 60.5 per cent of dairy farmers were using pregnancy diagnosis. In this 61.1 and 57.5 per cent in rural and urban areas respectively. Pregnancy diagnosis in dairy cows ranged from 3.0 to 5.0 months with a mean of 3.2 months. In rural area ranged from 3.0 to 5.0 and mean was 3.3 months. In urban area ranged from 3.0 to 4.5 and mean were 3.1 months. These findings are line with the findings of Divekar (2016) [1] who found that dairy farmers 75.00% of dairy farmers went for pregnancy diagnosis of their animals between 60 to 90 days of service in Gujarat. Shweta (2017) who found that pregnancy diagnosis of cattle was practiced by 51.87 per cent of dairy farmers in Rajasthan. But these findings are contradiction with the finding of Rathore (2010) [5] who found that 4.25% cattle keepers followed pregnancy diagnosis in Rajasthan.

Calving interval (in months)

The overall calving interval in dairy cows ranged from 13.5 to 20.0 months with a mean of 14.5 months. These findings are line with the findings of Sastry *et al.*, (1993) who found that calving interval was less than 470 days in 67 per cent of the animals in Pondicherry. Natchimuthu (2002) [3] who found that the mean calving interval in cows increased from 410 days in 1990 to 435 days in 2000.

Reproductive problems and diseases encountered

Majority (54.1 per cent) of dairy farmers reported repeat breeding as a major problem. Same problem was recorded in Urban and rurals in Villupuram District of Tamil Nadu also. This should be given major attention to solve the reproductive problem. The other reproductive problem encountered were (13.7 per cent) and abortions (9.1 per cent)These findings are line with the findings of Reddy (2013) [6] who found that repeat breeding in crossbred cows was also reported as a common problem for all the categories of farmers (72.63 per cent) and anoestrus to some extent in Chittoor District of Andhra Pradesh.

Conclusion

The knowledge of dairy members on dairy farming was very low in both rural and urban categories which require suitable interventions. The capacity building for dairy farmers in dairy farming area is essential that may be done by providing knowledge kit on livestock for their livelihood. For maximization of productivity, a sustainability suitable intervention to improve knowledge levels and skills in dairy animal management is very essential.

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