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RESEARCH PAPER

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Studies on production performance of milk of indigenous cows and graded buffaloes in Ramabai Nagar district of U.P.

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ABSTRACT

A survey was carried out on 1020 animals out them 495 indigenous cows and 525 were graded buffaloes all reared by the 350 villager's families in Ramabai district. The study revealed that the milk yield of indigenous cows per family was 1366.29±196.18 litres, whereas the milk yield of graded buffaloes was 2337.93±274.28 litres. The average milk yield of indigenous cows and graded buffaloes were found to be 966.06±106.70 litres and 1558.26±150.29 litres per lactation. The average length of lactation period was noted 280.01±8.14 and 285.92±8.47 days in indigenous cows and graded buffaloes, respectively. The dry period of indigenous cows and graded buffaloes were recorded 146.34±5.30 and 132.46±2.89 days, respectively. The intercalving period of indigenous cows and graded buffaloes were found to be 426.36±3.68 and 418.38±2.58 days, respectively.

KEY WORDS : Indigenous cows, Graded buffaloes and milk yield

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INTRODUCTION

India possesses the largest population of cattle in the world after Brazil. Total milk production of India is 100.9 million tons sharing 10.2% of world production. This is surprising very low as against the exclusively large population. The National economy of some Scandinavian countries and landless labourers in poor countries like India depends upon milk production of their livestock. India ranks first among the milk producing countries of the world with an output of 81 million tons in the year 2001 (Kadirvel, 2002). Our milch stock is not proving very much benefits to us because of indifferent and indiscriminate breeding, failure of livestock owners to respond promptly due to ignorance towards disease control measures and feeding of unbalanced ration to the animals. In the present investigation, an attempt has been made to study on production performance of indigenous cows and graded buffalo's milk and effect of milk yield.

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MATERIALS AND METHODS

The present study was carried out on 1020 animals out of them 495 indigenous cows and 525 graded buffaloes from 350 families of various villages of Ramabai district of U.P. during 2005-2006. the distribution of families was done according to their size holding and number of indigenous cows and buffaloes reared in different categories. A detailed description of cross breed cows and *murrah* buffaloes, lactation number, lactation length, lactation yield and calving interval were collected through prepared schedules and questionnaires by personal contact with the families. Both functional as well as tabular analysis were employed for the analysis and interpretation of data. Randomized Block design and analysis of variance of various data were carried out according to the methods described by Snedecor and Cochran (1968).

RESULTS AND DISCUSSION

The result obtained on the production level of milk of indigenous cows and graded buffaloes per family are given in Table 1. it is evident that the average milk yield of indigenous cows per family in the present investigation was 1366.29±196.18 litres whereas the milk yield of graded buffalo was 2337.93±274.28 litres. The overall average milk yield of indigenous cow and graded buffaloes was found to be 1852.11±106.64 litres per family.

Table 1 : Milk production performance of ruminants in Ramabai district (U.P.)

Animals/ ruminants	No. of family	No. of animals	Milk production/ family (l)	Lactation yield/day /animal (l)	Milk yield/day / animal (l)	Lactation length/ animal (in day)	Dry period of animals (in day)	Inter calving period (in day)
Indigenous cow	350	495	1366.29±196.18	966.06±106.70	3.45±0.84	280.01±8.14	146.34±5.30	426.36±3.68
Graded buffalo	350	525	2337.93±274.28	1558.26±150.29	5.45±1.22	285.92±8.47	132.46±2.89	418.38±2.58
Overall average	350	1020	1852.11±106.64	1277.16±150.29	4.45±0.46	282.97±3.71	139.40±1.91	422.37±1.42
Test of significant	-	-	9.13**	4.54**	4.27**	4.27**	4.27**	5.60**

* = Significant value

The lactation yield per animal of indigenous cows and graded buffaloes is presented in Table 1 which revealed that average milk yield of indigenous cows in the present study was 966.06±106.70 litres per lactation, whereas the milk yield of graded buffaloes was 1558.26±150.29 litres. The average milk yield per day per animal of indigenous cow and graded buffaloes was found to be 3.45±0.84 and 5.45±1.22 litres, respectively the overall average milk yield per day of these animals being 4.45±0.46 litres.

The statistical analysis indicated that the difference in per day milk yield of indigenous cow and graded buffaloes per animal was significant at 1% level of probability. The results suggested that because of higher milk yield per animal per day in buffalo, its lactation yield was greater as compared to cows (Table 1). This is in agreement with reports of Rajendra *et al.* (2000). It is also evident from Table 1, that the average length of lactation period of indigenous cows and graded buffaloes was 280.01±8.14 and 285.92±8.47 days, respectively. The overall average lactation length was found to be 282.97±3.71 days for both species. It is fair in agreement with those reported by Singh and Tomar (1994).

It is clear from Table 1 that the dry period of indigenous cow and graded buffalo was 146.34±5.30 and 132.46±2.89 days, respectively. The overall average dry period of animals was recorded 139.40±1.91 days.

The statistical analysis also revealed that the dry period of indigenous cow was significantly higher than graded buffaloes. From the economic point of view, the upkeep of graded buffalo was more profitable proposition because dry period was shorter as compared to indigenous cow. This is in harmony with those reported by Singh and Tomer (1994). The length of lactation and dry period of each species of animals are among intrinsic characteristics which are also affected to some extent by the managerial conditions. The indigenous cows are bestowed with a longer lactation but a shorter dry period because of inherent genetic potentialities. The inter calving period of indigenous cow and graded buffalo was found to be 426.36±3.68 and 418.38±2.58 days, respectively. The overall inter calving period of these animals was 422.37±1.42 days. These data revealed that the inter calving period of indigenous cow was higher than graded buffaloes. This is fully corroborated by the observation of Yadav *et al.* (2004).

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