FACTORS INFLUENCING PRODUCTION CHARACTERS OF MARATHWADI BUFFALOES - FIELD STUDY*

S.D. Kalyankar, B.V. Gujar, D.D. Patange and M.S. Deshmukh
Marathwada Agricultural University, Parbhani - 431 402, India

ABSTRACT

In a field study with Marathwadi buffaloes reared by farmers in villages of Parbhani district of Maharashtra state, it was observed that the overall mean for lactation length, lactation milk yield and dry period averaged as 313.91 ± 0.34 days, 1121.52 ± 0.84 lits and 182 ± 0.82 days, respectively. The season of calving had significant influence on lactation length only, while lactation milk yield was significantly (P<0.05) influenced by order of lactation. The lowest yield was recorded in buffaloes of second lactation while significantly higher yield was found in 6th lactation. Other lactational yields were at par with each other.

INTRODUCTION

India possess as more than half (78.55 million) of the total buffalo population of the world yielding 50-52 per cent of the total milk production of the country (Prabhaharan, 2000). The milk thus produced in India is contributed not only by the recognised milch buffalo breeds but also by several other buffalo breeds, types existing in the country. As such, an attempt has been made to study the production potential of local (Marathwadi) buffaloes in their breeding tract. The animals belonging to this breed are commonly bred in the area comprising Marathwada region of Maharashtra state. The Marathwadi is an animal of light to medium built with small hump, while dewlap is absent. Forehead is long and narrow with straight nasal bridge (Hadi, 1995). Animal with white patch on forehead and white tail switch are common. Horns are found to be long, flat, curved, extended back parallel to neck reaching up to shoulder point. Tail is found to be longer reaching a little below the point of hock.

MATERIAL AND METHODS

In the present investigation 183 lactations of Marathwadi buffaloes spread over 15 villages and reared by farmers in Parbhani district of Maharashtra state were studied. From the district, three zones were selected randomly forms the survey centres. Each centre covers adjoining five villages which forms the sample area. The villages covered in the survey were studied for preliminary information regarding total livestock population. Amongst the buffalo population all peculiar Marathwadi animals were enumerated and classified according to age and sex. The information on production characters viz. Lactation Length (LL), Lactation Milk Yield (LMY) and Dry Period (DP) was collected through personal interview of the owners and also through test day recording of milk yield. Based on climatic conditions prevailing in the area, the year was further divided in to three seasons viz., summer (March – June), mansoon (July – October) and winter (November- February). The effect of season of calving and parity on production traits were analysed by standard statistical procedures.

RESULTS AND DISCUSSION

The results are presented in Table 1 along with analysis of variance in Table 2.

Lactation length : The overall lactation length was observed to be 313.9 ± 0.3 days which is close to that in Mehsana buffalo (Singh, 1992 ; Gajbhiye et al., 1994). The analysis of variance shows that the season of calving had significant influence on lactation length. The highest lactation length of 319.06 ± 3.2 days was observed in mansoon calvers followed by summer and winter calvers.
Similar findings of significant influence of season of calving on lactation length were reported in Surti (Jain and Kothari, 1983; Mathur and Nagpal, 1992; Gajbhiye et al., 1994) and Bhadawari (Singh et al., 1993).

Parity showed non-significant influence on lactation length, lactation length ranged between 310.82 ± 3.03 days and 318.42 ± 7.9 days from first to 6th parity. Pundir et al. (2000) observed that weighted means for lactation length of Mehsana buffalo in various parity showed no differences, which supports the present study that the lactation length is not influenced by parity.

Lactation milk yield: Overall average lactation production in Marathwadi buffaloes under farmers management condition was 1121.51 ± 0.84 lits. This estimate is close to yield levels in Naguri (Kaikini and Paragaonkar, 1969), Bhadawari (Singh and Singh, 1977; Singh and Nivserkar, 1997) and Surti buffaloes (Tailor et al. 1992 and Shrinivas et al., 1997). The season of calving had non significant influence on lactation milk yield. Summer calvers however, had lower lactation milk yield as compared to those calved during monsoon and winter. The performance of buffaloes was inferior during March through
June, i.e. during summer season. The variation is attributable to the differences in feeds and fodder availability during different seasons (Singh et al., 1993). Singh (1992) also recorded non-significant effect of season of calving on LMY in field herds. Parity had significant (P<0.05) influence on LMY. The lowest yield 1052.69 lits. was recorded in buffaloes of second lactation while significantly highest yield was found in 6th lactation. Other lactational yield were at par with each other. Similar findings of significant influence of parity on LMY were reported in Surti (Jain and Kothari, 1983) and Murrah (Gajbhiye, 1987).

Dry Period: The mean dry period of 182 ± 0.82 days is almost similar to that in Mehsana buffalo (Siddiquee et al., 1994) and analysis of variance shows that the DP was not influenced either by season of calving or parity. The winter calvers had shorter DP than monsoon and summer calvers, the differences were statistically non-significant. Similar findings of non-significant influence on dry period by season of calving in farmers herd (Pundir et al., 2000) or by parity (Jain and Kothari, 1983, Singh 1992 and Singh et al., 1993) were reported earlier. The means for DP did not follow any consistent trend in different parities.

The study indicates that Marathwadi buffaloes are well adopted to the farmers management conditions in Parbhani district and performing fairly with average lactation length, milk yield and dry period as 313.91 ± 0.34 days, 1121.52 ± 0.84 lts. and 180 ± 0.82 days, respectively.

REFERENCES