

## SOME ASPECTS OF LIFE PERFORMANCE OF IRAQI BUFFALO (Bubalus bubalis) COWS

G.A. Baghdasar and K.H. Juma

College of Agriculture, University of Baghdad, Iraq

### SUMMARY

806 lactation records produced by 210 buffalo cows disposed from the Misan Animal Breeding Station, were analysed to study some of their life performances. Least-squares means of breeding efficiency (BE), accumulative milk production (AMP) and days of lactation were 83.3%, 5419.95 kg and 1049.6 days respectively. Season and year of calving had no significant effects on the three traits studied. The effects of origin of birth on BE and DL were significant ( $P < 0.05$ ). The accumulative effect of lactations on each of the three traits was highly significant.

**Keywords:** Bubalus bubalis, breeding efficiency, milk production.

### INTRODUCTION

Information on the various performances of Iraqi buffaloes is very limited. This communication describes some life performances of this important dairy and beef animal (Juma *et al.* 1972, 1994). Such information are vital for economic assessment of buffalo herds, and for the formulation of future breeding and management programmes.

### MATERIALS AND METHODS

806 lactation records produced by 210 disposed buffalo cows were analysed to study their BE, AMP and DL, together with the effects of origin of birth, season and year of calving on them. BE was calculated (Wilcox *et al.* 1957) and the least-squares method was employed in the statistical analysis (Harvey, 1987).

### RESULTS AND DISCUSSION

Least-squares means of BE, AMP and DL were 83.3%, 5419.95 kg and 1049.6 days respectively "Table 1". Whereas, in India, life production of milk of 1024 Murrah and 699 Nili/Ravi buffalo cows was respectively 5364 and 4716 kg during 976 days (Singh and Yadav, 1987).

Season and year of calving had no significant effects on the three traits studied. Spring- and summer-born buffalo cows tended to produce more milk "Table 1". Similarly, Deshpande and Umrikar (1986) found no significant effect of calving season on AMP. In contrast, Singh and Yadav (1987) found the effects of calving season on AMP and DL highly significant. BE, on the other hand, was affected by origin of birth ( $P < 0.05$ ); Thee-Qar-born animals surpassed the other groups in this respect "Table 1".

Thee-Qar-born animals had the lowest AMP, the shortest DL and the highest BE. While Baghdad-born buffaloes whose BE was slightly better than the overall mean, produced more milk during significantly longer period ( $P < 0.05$ ) than the other three groups "Table 1". This may be attributed to differences in feeding and management practices to which the animals were subjected during their early stages of growth and development (McDowell, 1972), and to differences in genetic make up. Since Baghdad is the major milk consumption centre in the country, to meet its high demand for milk, all dairy animals including heifers in and around this city are better fed and managed than elsewhere in the country.

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**Table 1. Least-squares means of some life performance traits of Iraqi buffalo cows**

	No.	BE (%) Mean ± SE	AMP (kg) Mean ± SE	DL (day) Mean ± SE
Overall mean $\mu$	210	83.3±1.6	5420.0±205.7	1049.6±20.0
Calving season				
autumn	63	83.1±2.1	5274.2±273.1	1023.6±26.6
winter	41	82.9±2.4	5287.9±318.6	1036.6±31.0
spring	56	82.9±2.4	5689.1±314.2	1078.4±30.6
summer	50	84.3±2.0	5428.5±263.0	1055.8±25.6
Calving year				
1967-1975	54	83.5±2.2	5565.6±295.3	1055.3±28.7
1976-1980	103	82.0±1.5	5399.4±202.1	1054.5±19.9
1981-1984	30	82.1±3.2	5555.4±418.6	1102.3±40.7
1985-1988	23	85.6±3.3	5155.4±440.5	985.5±42.9
Origin of birth				
Misan	119	79.1±1.3	5351.3±172.8	1040.7±16.8
Thee-Qar	50	86.3±2.5	5048.9±332.7	979.2±32.4
Ninevah	23	83.3±3.1	5181.7±414.3	1054.8±40.3
Baghdad	18	84.4±3.3	6097.9±442.6	1123.8±43.1
Accumulative lactations				
1	20	84.0±3.4	1219.7±455.9	315.7±44.4
2	43	74.5±2.5	2608.7±327.8	519.7±31.9
3	36	79.3±2.4	3516.1±316.0	765.8±30.8
4	32	83.9±2.5	3509.6±330.0	1056.4±32.1
5	26	84.3±2.7	6878.8±352.6	1335.2±34.3
6	37	86.9±2.6	8367.0±346.0	1544.0±33.7
7	16	90.1±4.0	9837.7±529.9	1806.7±51.6

BE: Breeding efficiency; AMP: Accumulative milk production, DL: Total days of lactation.

**Table 2. Analysis of variance for the effects of factors on some life production traits in Iraqi buffaloes**

SOV	DF	BE	AMP	DL
Calving season	3	21.8	10804595.5	30156.4
Origin of birth	3	378.9*	4093972.3	81721.8
Calving year	3	80.1	772965.9	52552.0
AMP	6	612.0**	153673929.3**	4707777.7**
Error	194	152.7	2707456.9	25634.7

BE: Breeding efficiency; AMP: Accumulative milk production, DL: Total days of lactation.

\*  $P < 0.05$ , \*\*  $P < 0.01$