

Some Economic Characteristics of the Egyptian Baladi Cattle

M. A. Morsy, A. A. Nigm, A. Mostageer and F. Pirchner*

*Animal Breeding Dept., Fac. of Agriculture, Cairo Univ.
Cairo, Egypt.*

THIS WORK is done on the data collected on the Baladi breed of cattle belonging to the South Tahreer Agricultural Company at Omar Makram Farm, during the period from February 1977 to January 1982. The main results are:

1. The overall least squares means of body weight, heart girth, body length and height at withers of dams at calving, estimated using 885 records were (in respective order) 1 : 293 kg., 165 cm., 126 cm., and 129 cm. Weight and dimensions of dams body at calving increased significantly with increasing the order of parity.
2. Breed of sire, parity, sex of calf and month of calving influenced significantly birth weight of calf and its percentage from dam's weight at calving. All crossbred calves were significantly heavier than the Baladi at birth and had also greater percentages from dam's weight at calving. Males had significantly higher estimates than females in both traits.
3. The average number of semen doses per conception calculated from 899 pregnancies was 1.84. Females inseminated with Braunvieh semen required the lowest (1.53).
4. Conception rate to 1st, 2nd, 3rd and 4th service was 54.2, 24.0, 11.3 and 6.2, in their respective order. The total number of doses used for estimation was 1653.
5. The gestation length calculated from 762 calvings averaged 280.5 days. None of the breed of sire, sex of calf, parity or month of calving showed significant effects on gestation length.
6. Least squares means of postpartum service interval, service period and calving interval were 87.3 days, 114.8 days and 401.3 days, respectively. Parity and month of calving influenced significantly both postpartum service interval and service period. Only month of calving influenced calving interval.

Few reports have been published concerning the productive and reproductive characteristics of the Baladi breed of cattle in Egypt. The population of this breed is about two million heads*, a little bit less than the buffalo population in Egypt. Almost all the Baladi cattle are in the hands of the farmers and used mainly to produce meat and draft work.

* Lehrstuhl für Tierzucht, Technische Universität München, Freising, Weihenstephan, West Germany.

** FAO Production Yearbook, Vol 34 (1980).

The milk production of these animals is very low except for the Damietti "strain", whose average production may reach 1500 kg* per lactation. But this strain constitutes only a low percentage of the cattle population in Egypt. Mostageer* estimated the average production of the first four lactations of this breed as : 707kg, 1006kg, 1275 kg. and 1310 kg. (in their respective order). The meat production of this breed and its crosses with some European breeds has been published by these authors elsewhere (Mostageer *et al.*, 1982).

In this work data are presented on some of the important economic traits, namely, body weight and dimensions of dam at calving, calf weight at birth, percentage of calf weight from dam weight and the reproductive traits of postpartum service interval, number of semen doses per conception, service period, gestation period and calving interval.

Material and Methods

This work was done on the herd of Baladi cattle at Omar Makram Farm belonging to the South Tahreer Agricultural Company. The herd was bought especially for the crossing experiment** from different markets in the Delta region. After purchasing, animals were housed under open sheds and were fed mainly on green fodder and rice straw and supplied with standard concentrate mixture.

The exact birth dates of these animals were unknown. Animals were classified only according to parity. They were artificially inseminated using semen of purebred Baladi bulls ; semen doses of Red Angler (RA), Braunvieh (BV), Deutsches Braunvieh (DBV = BV x Brown Swiss), South Tyrolean Grey (Grauvieh, GV) were bought from a DFG grant. Some of the BV semen was donated by the Swiss BV breed association. The Friesian (FR) semen was collected from locally produced bulls ; the Simmental (Fleckvieh, FV) semen was donated by the Swiss Simmental breed association ; the Pinzgauer (PG) by the Austrian PG breed association ; the Charolais (CH) and Normand (NR) semen by their breed associations in France, Gelbvieh semen by the breed association in West Germany, and the Swedish Red Pontae (SRB) semen was donated by the Egyptian Ministry of Agriculture.

Data were collected during the period from February 1977 till January 1982 and the traits studied were (number of observations in brackets):

1. Body weight (BW) and measurements of dams at calving taken within three days from calving (855). The body measurements recorded were.

a) Heart girth (HG) : the circumference of the body just behind the forelegs, measured in cm. with a tape.

* Mostageer (Personal communication).

** Joint research project between the Fac. of Agric., Cairo Univ. and Munich Univ., financed by the Egyptian Academy of Science and the Deutsches Forschungsgemeinschaft (DFG) of West Germany.

- b) Body length (BL) : measured in cm, with a caliper from the point of withers to the point of pin bone.
- c) Height at withers (HW) : the vertical distance from the withers to the floor, measured with a caliper in cm.
2. Calf weight and its percentage from dam's weight (762).
3. Number of semen doses per conception (NDC) (899 pregnancies).
4. Gestation period (GP) (414).
5. Service period (SP) (414) ; postpartum service interval (PPSI) (414) ; and calving interval (CI) (414).

The statistical analyses of the data were carried out using the least squares method (Harvey, 1960). Duncan multiple range test was used to test the differences among means (Duncan, 1955).

Statistical model concerning each trait was developed including one or more of the following main effects : breed of serving bull, sex of calf, parity of dam, month of insemination and month of calving.

Results and Discussion

Body weight and dimensions of dam at calving

Body weight and dimensions of dam at calving, taken within three days from parturition are shown in Table I. The overall mean at calving was only 293 kg, much less than the estimates taken at 24 months of age by Ahmed and Tantawy (1954) (301 kg.) and Ragab and Abdel Salam (1962) (319 kg.). Tantawy and Ahmed (1953) reported a mean for body weight at 3.3 years of 389 kg.

The effect of parity on body weight at calving was statistically significant at the 5% level. Dams of calvings higher than the third had the heaviest weight at calving (342 kg) ; significantly different from the third calvers mean weight (297 kg.). Dams of the first and second parities had almost the same weight at calving, lighter than those of higher orders.

With respect to body dimensions, the effect of parity was significant at the 5% level on heart girth (HG), body length (BL) and height at withers (HW). However, differences between parity groups were significant only between calvers of the order higher than three and the rest of the groups for both HW and HG. For body length, differences between all groups were statistically significant, with the mean increasing along with the order of parity.

TABLE 1. Least squares means of body weight (in Kg) and measurements (in cm) and mean squares of females at calving

Trait	N	Body Weight (BW)	Heart Girth (HG)	Body Length (BL)	Height at Withers (HW)
Overall	885	293.1 ± 2.82	164.5 ± 1.34	125.7 ± 0.30	129.0 ± 0.30
Parity :					
1	214	^a 268.2 5.38	^a 161.5 2.55	^a 120.9 0.58	^a 128.3 0.57
2	358	^a 264.6 4.16	^a 156.1- 1.97	^b 122.5 0.45	^a 127.4 0.44
3	180	^b 297.3 5.86	^a 161.6 2.78	^c 126.7 0.63	^a 128.4 0.63
>3	133	^c 342.3 6.82	^b 178.9- 3.23	^d 132.5 0.73	^b 132.1 0.73

M e a n s q u a r e s

Source of Variance					
Parity	3	223887*	16883*	4513*	741*
Residual	881	6186	1390	72	70

*Means not followed by the same letter differ significantly from each other at the 5% level.

Birth weight of calf and calf / dam percentage

Estimates of birth weight of calf and percentage of calf weight from dam weight are presented in Table 2. These estimates were calculated using 762 live calvings, representing 4 parity classes, 8 breed-of-sire classes, 2 sexes and 6 month-of-calving classes.

Breed of sire exerted highly significant effect on both traits considered. For birth weight, purebred Baladi calves averaged 23.5 kg (the lowest), significantly lower than all crossbred groups. The DBV group recorded the highest birth weight mean (27.5 kg.), followed by the BV crosses (27.3 kg). Among crossbred calves, no significant differences were observed except for the RA ones, which scored significantly the lowest weight (25.3 kg). These results concerning the effect of breed of sire on birth weight are in complete agreement with those reported by Batra and Touchberry (1974).

The same trend of the effect of breed of sire could also be observed with respect to the percentage of birth weight from dam weight. The BV crosses scored the highest percentage (9.3%), almost the same as the DBV crossbreds (9.13%), both significantly different from the RA crosses (8.53%). The purebred Baladi calves mean was 7.65%, significantly lower than the means of all crossbreds.

SOME ECONOMIC CHARACTERISTICS OF THE EGYPTIAN BALADI CATTLE 277

TABLE 2. Birth weight of calves (kg) and its percentage of dams weight (1)

Trait	N	Calf Weight	Calf/dam %
Overall Mean	762	26.2±0.28	8.66±0.07
<i>Parity</i>			
1	208	25.0±0.40 a	9.34±0.14 a
2	290	24.1±0.329 a	8.52±0.11 b
3	151	26.6±0.45 b	8.30±0.15 b
>3	113	29.1±0.53 c	8.47±0.18 b
<i>Breed of Sire</i>			
BAL	128	23.5±0.48 a	7.65±0.16 a
RA	118	25.3±0.50 b	8.53±0.17 b
BV	125	27.3±0.48 c	9.30±0.16 c
DBV	114	27.5±0.51 c	9.13±0.17 cd
GV	69	26.5±0.65 bc	8.72±0.22 bcd
FR	77	26.6±0.62 bc	8.60±0.21 bd
FV	73	26.5±0.63 bc	8.77±0.21 bcd
PG	58	26.3±0.72 bc	8.60±0.25 bd
<i>Sex of calf</i>			
Male	391	26.9±0.29 a	8.89±0.10 a
Female	371	25.5±0.29 b	8.44±0.10 b
<i>Month of calving</i>			
1	140	24.8±0.46 a	8.22±0.16 a
2	172	26.0±0.41 ab	8.68±0.14 b
3	80	27.2±0.60 b	9.30±0.20 c
4-10	125	25.7±0.49 ab	8.55±0.17 ab
11	111	26.3±0.55 ab	8.39±0.19 ab
12	134	27.2±0.50 b	8.81±0.17 bc

Mean Squares

Source of Variance	d.f		
Parity	3	636.3**	35.5**
Breed of sire	7	203.9**	29.5**
Sex of calf	1	382.9**	38.0**
Month of calving	5	95.1**	14.0**
Residual	745	27.9	3.2

(1) Means within classification not followed by the same letter differ significantly from each other at the 5% level.

** Significant at the level 1%

Parity of dam exerted highly significant effect on both birth weight and percentage of calf weight from dam weight. Calvers beyond the second parity produced heavier calves; those of order greater than three yielding the heaviest (29.1 kg). No significant difference was detected between the first and second calvers in this respect. However, first calvers scored the highest mean percentage of calf weight from dam weight (9.34%); significantly different from groups of higher calving order.

Male calves were significantly heavier than females at birth (26.9 kg vs. 25.5 kg) (Table 2). This is in agreement with the results on Baladi reported by Tantawy and Ahmed (1953 and 1955), Ahmed and Tantawy (1954) and Ragab and Abdel Salam (1962). The same trend could also be observed for the birth weight expressed as percentage from dam's weight at calving.

Differences, in both birth weight and its percentage from dam weight, due to month of calving were highly significant. Calvers in March and December produced the heaviest calves (27.2 kg), significantly different from those calving during January (only 24.8 kg). Similar differences existed for the percentage of calf weight to dam weight; March calvers had the highest value (9.3%), followed by December calvers (8.81%); both significantly higher than all other groups. Tantawy and Ahmed (1953), Ragab and Abdel salam (1962) and Fahmy *et al.* (1975) reported the presence of significant effect of month of calving on birth weight of cattle in Egypt.

Number of inseminations per conception (NDPC)

A total of 1653 semen doses were used for inseminating the Baladi herd during the period from February 1977 till January 1980. The average number of doses per conception (NDPC) obtained here was 1.84 (Table 3). This figure is much less than 2.7, the mean reported by Oloufa (1960) for the Baladi cattle.

Considering the breed of the semen used, the foreign breeds had almost the same mean of the pure Baladi (1.83 vs. 1.87 doses/conception). The BV semen scored the lowest figure (1.53), while the sum of the PG, CH, NOR, GIBV, HOL and SRB scored the highest (2.3). McDowell *et al.* (1974) in dairy cattle found that females bred to sires of their own breed required similar NDPC as when bred to sires of different breeds.

When classified by month of insemination (Table 4), NDPC decreased gradually from January through May (from 2.23 to 1.43). It was reported by Foley *et al.* (1973), Jordan and Swanson (1979), and Plasse *et al.* (1970) that the NDPC is significantly influenced by season of insemination, which includes the nutritional supply, the ambient temperature and the availability of pasture. Out of the 1653 semen doses used here, only 262 were recorded during the period from June through December, scoring 1.71 as NDPC.

When conception rates (CR) to first and subsequent inseminations is considered, Table 5 shows that CR to first service was 54.2%. Conception rates of 24%, 11.3%, 6.2%, 2.7% and 1.6% were found to the second, third, fourth, fifth and sixth services, in their respective order.

SOME ECONOMIC CHARACTERISTICS OF THE EGYPTIAN BALADI CATTLE 279

TABLE 3. Number of doses /conception (in Baladi Cattle) by breed of Sire.

	Total No of doses	No of pregnancies	Doses/conception
Baladi	251	134	1.87
RA	203	125	1.62
BV	204	133	1.53
DBV	206	119	1.73
GV	128	73	1.75
FR	159	83	1.92
FV	150	80	1.88
Other Breeds*	352	152	2.3
All foreign breeds tog.	1402	765	1.83
Total	1653	899	1.84

* These include : Pinzgauer, Charolais, Normand, Gelbvieh, Holstein & Swedish Red

TABLE 4. Number of doses/conception by month of insemination in Baladi cattle.

Month	Total No Doses used	No of Pregnancies	No doses/ concep.	Conception Rate %
Jan	96	43	2.23	44.84
Feb	338	156	2.17	46.08
March	351	172	2.04	49.02
April	356	200	1.78	56.18
May	250	175	1.43	69.93
Other months . .	262	153	1.71	58.48
Total	1653	899	1.84	54.35

It is worth noting that the percentage of cows requiring more than three doses was only 10.5%. Oloufa (1960), on Egyptian Baladi cattle, reported estimates comparable to those found here.

Gestation period (GP)

Gestation period of the Baladi cattle, estimated from 762 pregnancies, averaged 280.5 days (Table 6). Cows of parities beyond the third carried their calves the longest period (282.9 days), followed by the first calvers (281.1 days), and then come the second and third calvers, both averaging 279 days. Differences between parities in this trait, however, proved to be statistically insignificant.

TABLE 5. Percentages of conceptions requiring 1, 2, 3, 4, 5, or 6 doses in Baladi cattle.

No of Services Required	Total No of Pregnancies	% of Total Conceptions
1	487	54.2
2	216	24.0
3	102	11.3
4	56	6.2
5	24	2.7
6	14	1.6
Total	899	100

When the breed of sire is considered, Baladi dams carried the FV sired calves for the shortest period (275.5 days) (Table 6), followed by FR crossbred calves (278.8 days). BV crossbred calves were carried for the longest period (284.6 days). However, differences due to the breed of sire did not reach the level of significance.

Sex of calf did not show any significant effect on the length of gestation, and male and female calves were carried on the average for the same period (280.5 days).

The effect of month of calving on gestation length was also insignificant. However, dams calving during December carried their calves the shortest period, and those calving during March recorded the longest (275.1 vs. 286 days). It should be noted that out of the 762 recorded calvings only 125 occurred during the period from April to October.

Breeds of cattle are known to differ with respect to GP (Plasse *et al.*, 1968 and Wilson and Willis, 1976). But different results are reported in literature with respect to the effect of the sex of calf on GP. Male calves were reported to be carried for longer periods compared to females (Galal and Fahmy, 1969 and Batra and Touchberry, 1974). However, Gianola and Tyler (1974) found also no significant effect of calf sex on GP. Foley *et al.* (1973) found that gestation length varied with the parity of dam and sex of calf.

Postpartum service interval (PPSI)

Postpartum service interval (PPSI) defines the period elapsing from parturition to the first subsequent breeding. Table 7 shows that both parity of dam and month of calving exerted highly significant effects on this trait.

TABLE 6. Least squares means of gestation period (1)

Trait	N	Gestation period (day)
Overall	762	280.5±1.06
Parity :		
1	208	281.1 ^a 1.97
2	290	279.0 ^a 1.57
3	151	279.0 ^a 2.21
>3	113	282.9 ^a 2.59
Breed of Sire		
BAL	128	281.2 ^{ab} 2.35
RA	118	280.6 ^{ab} 2.46
BV	125	284.6 ^a 2.36
DBV	114	280.5 ^{ab} 2.47
GV	69	281.9 ^{ab} 3.17
FR	77	278.8 ^{ab} 3.04
FV	73	275.5 ^b 3.08
PG	58	280.7 ^{ab} 3.54
Sex of Calf		
Male	391	280.5 ^a 1.41
Female	371	280.5 ^a 1.43
Month of Calving		
January	140	278.6 ^{ab} 2.25
February	172	280.4 ^{ab} 2.03
March	80	286.5 ^a 2.92
April-Oct	125	282.9 ^a 2.39
November	111	279.4 ^{ab} 2.71
December	134	275.1 ^b 2.44

Means squares

Source of Variance		NS
Parity	3	514.0 ^{NS}
Breed of sire	7	595.0 ^{NS}
Sex of calf	1	0.9 ^{NS}
Month of calving	5	019.8 ^{NS}
Residual	745	

(1) Means within classification not followed by the same letter differ significantly from each other at the 5% level

As could be seen in parity effect, first calvers scored the shortest PPSI (72.1 days); significantly less than the estimates of the second and third calvers (92.6 and 97.1 days, resp.).

With regard to the effect of the month of calving on PPSI, cows calving during March and February scored the shortest periods (70.8 and 76.1 days resp.), significantly different from the means scored by animals calving during November (105.6 days) and those calving during the period from April to October (101.3 days). These observed differences could be reasonably

attributed to the varied environmental conditions prevailing during the calving periods. Low level of protein and energy and high ambient temperature lengthen the period required for involution of the reproductive tract, manifestation of estus and ovulation (McDowell, 1972 and Thatcher, 1974).

TABLE 7. Least squares means¹ ($X \pm SE$) and mean squares of postpartum service period, service period and calving interval.

Trait	N	Postpartum service interval (day)		Service period (day)		Calving Interval (day)	
		$X \pm SE$	SE	$X \pm SE$	SE	$X \pm SE$	SE
Overall Parity	414	87.3	± 2.67	114.8	± 3.01	401.3	± 5.39
1-2	103	72.1 ^a	5.11	97.9 ^a	5.75	384.7 ^a	10.30
2-3	178	92.6 ^b	3.78	116.2 ^b	4.26	410.7 ^a	7.62
3-next	133	97.1 ^b	4.39	130.3 ^c	4.95	408.4 ^a	8.86
Month of calving							
January	97	86.1 ^{ab}	4.98	107.9 ^a	5.61	399.2 ^a	10.04
February	96	76.1 ^a	5.01	106.2 ^a	5.65	400.7 ^{ab}	10.11
March	38	70.8 ^a	7.93	96.6 ^a	8.93	389.2 ^a	15.99
April-Oct.	33	101.3 ^{bcd}	8.54	123.5 ^{ab}	9.63	408.1 ^{ab}	17.23
November	69	105.6 ^c	5.93	143.7 ^b	6.68	433.9 ^b	11.96
December	81	83.9 ^{ad}	5.47	111.3 ^a	6.16	376.7 ^a	11.03
Source of Variance		Mean Squares					
Parity	2	18340**		27166**		22777NS	
Month of calving	5	10255**		16262**		25691*	
Residual	406	2337		2969		9508	

(1) Means within classification not followed by the same letter differ significantly from each other at the 5% level

** Significant at the 1% level

* Significant at the 5% level

NS not significant

Service period (SP)

The overall least squares mean of service period was 114.8 days (Table 7), a figure much higher than that reported by Oloufa (1960) for the same breed of cattle.

With respect to the effect of parity on SP, first calvers had the shortest period (97.9 days) followed by the second and then the third calvers (116.2 and 130.3 days, resp.). Differences between parity groups were significant at the 1% level.

Month of calving exerted highly significant effect on the length of SP (Table 7). Cows calving during March scored the shortest service period (96.6 days) followed by those calving during February and January (106.2 and 107.9 days resp.). Cows calving in November had the longest SP (143.7 days), significantly different from those calving in January, February, March and December.

Calving interval (CI)

The overall mean calving interval for the Baladi cattle obtained from this study was 401.3 days (Table 7). The estimate reported by Oloufa (1960) for the Baladi cattle was 361.6 days.

Means of parity groups were insignificantly different from each other, recording 384.7, 410.7 and 408.4 days for the first, second and subsequent CI, in their respective order.

With respect to the effect of the month of calving on CI, females calving during December, March and January had the shortest CI (376.7, 389.2 and 399 days resp.). These means were significantly different from the mean obtained for the November calvers (433.9 days). A picture close to this was observed for the SP, explaining the significant relationship between the two traits.

References

- Abdel, I.A. and Tantawy, A.O. (1954). Growth in Egyptian cattle during the first two years of age. *Alex. J. Agric. Res.* 2 (1) : 1.
- Batra, T.R. and Touchberry, R.W. (1974). Birth weights and gestation period in purebred and crossbred dairy cattle. *J. Dairy Sci.* 57, 323.
- Duncan, N.B. (1955). Multiple range and multiple F-tests. *Biometrics* 11, 1.
- Foley, R.C., Bhat, D.L., Dickinson, F.N. and Tricker, H.L. (1973). "Dairy Cattle principles, Practices, Problems, Profits" 1st ed., Lea and Febiger, U.S.A.
- Galal, E.S.E. and Fahmy, M.H. (1969). Birth weight and gestation length in the Egyptian buffaloes and factors influencing them *Trop. Agric. (Trinidad)* 46, 111.
- Gianola, D. and Tyler, W.J. (1974). Influences on birth weight and gestation period of Holstein Friesian cattle. *J. Dairy Sci.* 57, 235.
- Harvey, W.R. (1960). Least squares analysis of data with unequal subclass numbers. ARS-20-8. U.S. Dept Agric. Beltsville, Ma., U.S.A.
- Jordan, E.R. and Swanson, L.V. (1979). Effect of crude protein on reproductive efficiency serum total protein and albumin in the high producing dairy cow. *J. Dairy Sci.*, 62, 58.
- McDowell, R.E. (1972). "Improvement of Livestock Production in Warm Climates". W.H. Freeman and Co. San Francisco.

- McDowell, R.E., Velasco, J.A., VanVleck, L.D., Johnson, J.C., Brandt, G.W., Holton, B.F. and McDaniel, B.T. (1974). Reproductive efficiency of purebred and crossbred dairy cattle. *J. Dairy Sci.* 57, 220.
- Mostageer, A., Nigm, A.A., Morsy, M.A. and Pirchner, F. (1982). Carcass Traits in Baladi and in their crosses with European cattle. *Z. Tierzucht. Zuchtgsbiol*, 99, 101.
- Oloufa, M.M. (1960). Reproductive efficiency of Egyptian buffalo and cattle. *Fac. Agric., Cairo Univ., Bul.* 214.
- Plasse, D., Warnick, A.C., Rasse, R.E. and Koger, M. (1968a) Reproductive behavior of *Bos indicus* females in a subtropical environment. Gestation length in Brahman cattle. *J. Anim. Sci.*, 27, 101.
- Plasse, D., Koger, M., and Warnick, A.C. (1968 b) Reproductive behavior of *Bos indicus* females in subtropical environment. III. Calving intervals, intervals from first exposure to conception and intervals from parturition to conception. *J. Anim. Sci.*, 27, 105.
- Plasse, D., Warnick, A.C., and Koger, M. (1970). Reproductive behavior of *Bos indicus* females in a subtropical environment. IV. length of estrous cycle, duration of estrus, time of ovulation, fertilization and embryo survival in grade brahman cattle. *J. Anim. Sci.* 30, 63.
- Ragab, M.T. and Abdel-Salam, M.F. (1962). The effect of sex and month of calving on body weight and growth rate of Egyptian cattle and buffaloes. *J. Anim. Prod.* U.A.R. 2, 109.
- Tantawy, A.O. and Ahmed, I.A. (1953) Factors influencing birth weight in Egyptian cattle. *Alex. J. Agric. Res.* 1, 46.
- Tantawy, A.O. and Ahmed, I.A. (1955) Some factors influencing weaning weight of Egyptian cattle. *Alex. J. Agric. Res.* 3, 1.
- Thatcher, w.w. (1974) Effects of season, climate and temperature on reproduction and lactation. *J. Dairy Sci.*, 57, 360.
- Wilson, A. and Willis, N.B. (1976) Factors affecting calving difficulty in cows mated to Chianina bulls and factors affecting the birth weight of their calves. *Anim. Prod.* 22, 27.

بعض الصفات الاقتصادية للإبقار البلدية في مصر

محمد عبد العزيز هرسى ، على عطية نجم ، أحمد مستجير ، وفرانز بيرخت
قسم الانتاج الحيوانى - كلية الزراعة - جامعة القاهرة ومعهد تربية الحيوان -
جامعة ميونيخ - ألمانيا الغربية

أجريت هذه الدراسة على البيانات التي جمعت عن قطيع الأبقار البلدية في مزرعة عمر مكرم التابعة لشركة جنوب التحرير الزراعية وذلك في الفترة من فبراير ١٩٧٧ ، وحتى يناير ١٩٨٢ ، كانت أهم النتائج المتحصل عليها كما يلي :

١ - كانت متوسطات وزن الجسم ومحيط الصدر وطول الجسم وارتفاع الكتف للأمهات عند الولادة (عددنما ٨٨٥ أم) ٢٩٣ كجم ، ١٦٤ سم ، ١٢٥ سم و ١٢٩ سم على الترتيب . وقد زادت متوسطات هذه الصفات معنويا مع تقدم ترتيب الوضع .

٢ - أظهرت سلالة الأب ، ترتيب الوضع ، جنس النتاج وشهر الوضع تأثيرات معنوية على كل من وزن الميلاد والنسبة المئوية لوزن العجل من وزن الأم - عند الوضع . وكانت عجول كل المجموعات الخليطة أثقل معنويا من العجول البلدية النقية عند الميلاد وكانت لها أيضا نسب أعلى من وزن الأم - عند الوضع مقارنة بنسب البلدية . وكانت متوسطات الذكور أعلى معنويا من متوسطات الإناث في كلتا الصفتين .

٣ - كان متوسط عدد التلقيحات اللازمة للحمل والمجسوب من ٨٩٩ حمل يساوى ١٨٨٤ تلقيحة وقد احتاجت الإناث الملقحة بالسائل المنوي من سلالة البراونقوية الى أقل عدد (١٥٣ تلقيحة) عند مقارنتها بالإناث الملقحة بسائل منوي من السلالات الأخرى .

٤ - بلغ معدل الإخصاب من التلقيحات الأولى والثانية والثالثة والرابعة ٥٤% ، ٢٤% ، ١١% ، ٦% على الترتيب وكان العدد الكلى المستعمل من الجرعات ١٦٥٣ جرعة .

٥ - كان متوسط طول فترة الحمل المجسوبة من ٧٦٢ ولادة ، ٢٨٠٥ يوم ولم يكن لاي من سلالة الأب ، جنس النتاج ، ترتيب الوضع أو شهر الوضع تأثير معنوي على طول فترة الحمل .

٦ - بلغت متوسطات الفترة من الوضع حتى أول تلقيح ، فترة التلقيح والفترة بين الولادتين ٨٧٣ يوم ، ١١٤٨ يوم و ٤٠١٣ يوم على الترتيب . أثر ترتيب الوضع وشهر الوضع تأثيرا معنويا (على مستوى ١%) على كل من الفترة من الوضع حتى أول تلقيح وفترة التلقيح ، بينما أثر شهر الوضع فقط على الفترة بين الولادتين (على مستوى ٥%) .