

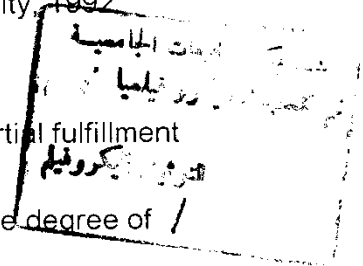
STUDY ON THE PREDICTION OF BUFFALO COW TRANSMITTING ABILITY

BY

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B.Sc. Agric. Sci. (Animal Production)
Ain Shams University, 1992

A thesis submitted in partial fulfillment
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Ain Shams University

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APPROVAL SHEET

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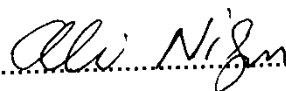
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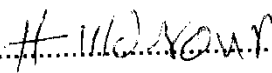
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ABSTRACT

Ehab Abdel-Aziz Gebriel. Study on the Prediction of Buffalo Cow Transmitting Ability. Unpublished master of science, University of Ain Shams, Faculty of Agriculture, Department of Animal Production, 1996.

This work was designed to predict the buffalo cow's transmitting ability for 305 days milk yield (305-MY), lactation period (LP) and age at first calving (AFC) using an animal model. The effect of parity, month of calving, year and age at calving and the interaction between the parity and age at calving on the milk production traits were included in a fixed model to study the effect of those factors on 305_MY, LP and AFC. The study also, included the estimation of the genetic and phenotypic parameters for 305_MY, LP and AFC by REML.

A significant effect was observed for all factors on milk production traits except for the effect of interaction between age at calving and the parity on 305-MY. For the age at first calving, the effect of year of birth was significant but month of birth did not affect this traits. Estimates of heritability were 0.15, 0.11 and 0.15 for 305_MY, LP and AFC, respectively. Genetic and phenotypic correlations were high and positive between milk production traits. While it was low and negative among age at first calving and milk production traits. The buffalo cows (with records) transmitting ability ranged from 401.12 to -2741.78 kg, for 305-MY and 53.03 to -32.02 day for LP and 2.61 to -2.22 month for AFC, respectively. Also, these values ranged from 200.57 to -160, from 27.51 to -16.01 and 1.30 to -1.11 for buffalo cow's dams (without records) for 305-MY, LP and AFC traits, respectively.

The results of the regression coefficient of buffalo cow's transmitting ability on year of birth indicated that there was a negligible annual genetic improvement about 0.728 kg milk, 0.097 day lactation and -0.001 month in age at first calving. Which correspond to improvement of 10.2 kg milk, 1.36 day and -0.014 month for 305_MY, LP and AFC per generation (7.01 years), respectively.

Key words : Egyptian buffalo, Milk production, Age at first calving and Transmitting ability.

Table of Contents

	Page
1.Introduction	1
2.Review of Literature	2
2.1. Factors Affecting Milk Production Traits	2
2.1.1. Parity	2
2.1.2. Age at Calving	2
2.1.3. Interaction of Parity and Age at Calving	3
2.1.4. Year of Calving	3
2.1.5. Month of Calving	3
2.2. Factors Affecting Age at first Calving	6
2.2.1 Year of Birth	6
2.2.2. Month of Birth	7
2.3 Genetic Parameters	9
2.3.1. Heritability	9
2.3.2. Repeatability.....	11
2.2.3. Genetic and Phenotypic Correlations	12
2.2.3.2. Phenotypic Correlation	12
2.2.3.1. Genetic Correlation	13
2.4. Buffalo Cows Transmitting Ability	14
3. Material and Methods	17
3.1. Management	17
3.2. Statistical Analysis...	18
3.2.1. Estimation of non-genetic Factors Affecting Milk Production Traits	18
3.2.2. Estimation of Variance Components and Prediction of Buffalo Cow's Transmitting Ability	19
4. Results and Discussion	22
4.1. Factors Affecting Milk Production Traits	22
4.1.1. Parity	22
4.1.2. Age at Calving	23

	Page
4.1.3. Interaction of Parity and Age at Calving	23
4.1.4. Year of Calving	24
4.1.5. Month of Calving	24
4.2. Factors Affecting Age at first Calving	29
4.2.1 Year of Birth	30
4.2.2. Month of Birth	30
4.3 Genetic Parameters	32
4.3.1. Heritability	32
4.3.2. Repeatability	34
4.3.3. Genetic and Phenotypic Correlations	35
4.3.3.1. Phenotypic Correlation	35
4.3.3.2. Genetic Correlation	36
4.3.4. Buffalo Cows Transmitting Ability	36
5. Summary and Conclusions	52
6. References	54
7. Appendix	61
8. Arabic summary	

List of Tables

	Page
Table 1. Reviewed estimates of 305 day milk yield	5
Table 2. Reviewed estimates of lactation period	6
Table 3. Reviewed estimates of age at first calving	8
Table 4. Estimates of heritability of 305 day milk yield	10
Table 5. Estimates of heritability of lactation period	10
Table 6. Reviewed estimates of heritability of age at first calving	11
Table 7. Reviewed estimates of repeatability of 305 day milk yield	11
Table 8. Reviewed estimates of repeatability of lactation period	12
Table 9. Reviewed estimates of phenotypic correlation (r_p) of 305 day milk yield, lactation period and age at first calving	13
Table 10. Reviewed estimates of genetic correlation (r_G) of 305 day milk yield, lactation period and age at first calving	14
Table 11. Feeding require used for buffalo cows (kg/day)	17
Table 12. Feeding require used for calves before weaning	18
Table 13 . Least squares means (LSM) and standard errors (SE) for 305 days milk yield (305_MY)	25
Table 14. Analysis of variance for some factors affecting 305 days milk yield (305_MY)	26
Table 15 . Least squares means (LSM) and standard errors (SE) for lactation period (LP)	27
Table 16. Analysis of variance for some factors affecting lactation period (LP)	28
Table 17. Partial linear regression coefficients (b) and standard errors of 305 days milk yield (305_MY) and lactation period (LP) on age at calving	29
Table 18. Least squares means (LSM) and standard errors (SE) for age at first calving (AFC)	31
Table 19. Analysis of variance for some factors affecting age at first calving (AFC)	32

	Page
Table 20. Estimates of additive genetic variance and covariance of 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	33
Table 21. Estimates of residual variance and covariance of 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	33
Table 22. Estimates of heritabilities (on the diagonal) , genetic correlation (above the diagonal) and phenotypic correlation (below the diagonal) among 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	33
Table 23. Estimates of uncorrelated variance and covariance of 305 days milk yield (305_MY) and lactation period (LP)	35
Table 24 . Estimates of phenotypic variance and covariance of 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	36
Table 25. Minimum, maximum values and the range for buffalo cows (with record) transmitting ability (TA) for 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	37
Table 26. Minimum, maximum values and the range for buffalo dams (without record) transmitting ability (TA) for 305 days milk yield (305_MY), lactation period (LP) and age at first calving (AFC)	37
Table 27. Percentage of negative and positive estimates for buffalo cows (with record) transmitting ability (TA) for 305 days milk yield 305_MY, lactation period (LP) and age at first calving (AFC) ...	38
Table 28. Percentage of negative and positive estimates for buffalo dams (without record) transmitting ability (TA) for 305 days milk yield 305_MY, lactation period (LP) and age at first calving (AFC)	38

	Page
Table 29. Regression coefficient (b) of buffalo cow's transmitting ability for the studied traits (305 days milk yield, lactation period and age at first calving) on the year of birth.....	39
Table 30. Correlations among buffalo cows transmitting ability for traits of 305_MY, LP and AFC	39