

PERFORMANCE OF LACTATING BUFFALOES UNDER THE FLYING HERDS SYSTEM IN EGYPT

BY

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B.Sc. Agric. Sci. (Animal Production), Fac. Agric., Cairo Univ., 1999

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ABSTRACT

A designed questionnaire was used to collect data from 102 flying herds keeping 6273 lactating buffaloes scattered in different sites of Giza and Qalubiya governorates. Data collection continued from October 2007 to March 2008 to investigate the features of flying herds system (Zarraba) and to evaluate the performance of Egyptian buffaloes under this system. Data were statistically analyzed using SAS (2002).

Means of daily milk yield, lactation period, total milk yield, calving interval, calving rate and percentage of buffalo cows permitted to be inseminated were 8.7 kg, 213 days, 1849 kg, 382 days, 83% and 14%, respectively.

About 50% of herdsmen cull their buffaloes completely after drying off. The rest maintain few high yielding young buffalo females (22% in Giza and 8% in Qalubiya) to be naturally bred to provide milk in the following lactation.

Returns from milk sales provide more than 97% of revenues while, feeding cost and labor wages capture more than 99% of variable costs.

The value of variable costs in Giza can be predicted from the equation of variable costs = $3110 + (1.03 * \text{feeding cost})$. In Qalubiya, it can be predicted from the equation of variable costs = $2000 + (1.07 * \text{feeding cost})$. Both equations explained higher than 99% of the variation of variable costs.

The value of revenues in Giza can be predicted from the equation of revenues = $6050 + (1.01 * \text{milk sales value})$. While, in Qalubiya, it can be predicted from the equation of revenues = $3151 + (1.01 * \text{milk sales value})$. Both equations explained higher than 99% of the variation of revenues.

The best equation for predicting gross margin in Giza was:

$GM = -30631 + (0.44 * \text{milk sales value})$, with an accuracy of 84.7%. While, in Qalubiya, the best equation for prediction was: $GM = 26798 + (0.75 * \text{milk sales value}) - (44.8 * \text{manure sales value})$, with an accuracy of 76.6%.

Herds of Giza were more economically efficient than those of Qalubiya where the annual gross margin per animal and the outputs/inputs ratio values were 5324 LE and 1.81 in Giza and 4350 LE and 1.65 in Qalubiya.

Values of annual gross margin per animal and the outputs/inputs ratio were better in small herds (4265 and 1.62) than in large ones (3742 and 1.50).

Milk marketing channels affected significantly gross margin, annual gross margin per animal and the outputs/inputs ratio; the best values were achieved when selling milk directly to the consumer whereas, the lowest values were recorded at herds which sell all milk to middlemen.

Key words: Buffaloes, flying herds, milk production, farm budget

Dedication

I dedicate this thesis to my family for their continued efforts, assistance and support they lovely offered me.

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