# EFFECT OF USING DIFFERENT PROTEIN SOURCES IN RATIONS ON PRODUCTIVE PERFORMANCE OF LACTATING BUFFALOES

**By**

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**B.Sc. Agric. Sci. (Animal Production), Fac. Agric., Cairo Univ., 2009**

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APPROVAL SHEET

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**Date**: **/ 8 /2015**

SUPERVISION SHEET

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**Title of Thesis:** Effect of Using Different Protein Sources in Rations on Productive Performance of Lactating Buffaloes
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**Approval: / 8/ 2015**

## ABSTRACT

This study aimed to evaluate the effects of feeding lactating buffaloes on different dietary protein sources on nutrients digestibility, blood parameters, milk yield, fatty acids and amino acids profile of milk and milk urea nitrogen. Eight lactating Egyptian buffaloes in second parity weighed 730±32 kg in average were used after 8 weeks of calving. The animals were arranged in three swing over design. Tested sources of protein were soybean meal (SBM), cotton seed meal (CSM) and sunflower meal (SFM), as: ration one (R1) contained three meals; ration two (R2) contained soybean meal and cotton seed meal; ration three (R3) contained soybean meal and sunflower meal and ration four (R4) contained soybean meal. Results of digestibility showed that dry matter and organic matter were significantly ($P<0.05$) higher with R4 (82.15 and 84.74%) compared to R3 (72.02 and 75.62%). No significant difference among R1 (77.36), R2 (79.96), R3 (75.94) and R4 (80.35) in digestibility of crud protein. Insignificant differences were observed in blood urea (BU), albumin and creatinine among the experimental rations. Daily and fat corrected milk yield were significantly higher with R2 (10.22 and 10.39%) compared to the other experimental rations; R4 (9.18 and 8.51%), R1 (8.57 and 8.54%) and R3 (8.17 and 7.71%) respectively. Data of milk fatty acids showed that, vaccienic was significantly higher in R4 (0.59%) than R2 (0.34%) and R3 (0.31%). Also, there were significant difference among R4 (0.23%), R1 (0.20%), R3 (0.19%) and R2 (0.15%) in linolenic. Ration one recorded the highest values in most of essential, non-essential amino acids and total EAA and ratio of EAA/NEAA in milk compared with the other experimental rations, whereas, R4 had the lowest ratio of EAA/NEAA in milk. Milk urea nitrogen was significantly lower with R1 (11.67%) compared with R4, which recorded the highest value (12.97%) followed by R2 (12.78%) and R3 (11.90%). It could be concluded that feeding lactating buffaloes on more than one source of protein in its rations had a positive effect on amino acids profile in milk and decrease milk urea nitrogen level.

**Key words:** Dietary protein, soybean meal, cotton seed meal, sunflower meal, amino acids, milk urea, lactating buffaloes

# *DEDICATION*

*I dedicate this work to whom my heart felt thanks; to my father, my mother, my uncle and my twin for all the support they offered me through out my life and my work, as well as to my friends and to every one gave me a hand to support me.*

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