

***EFFECT OF NIGELLA SATIVA AND THYMUS VULGARIS ON  
DIGESTIBILITY, NITROGEN BALANCE AND PERFORMANCE OF NEW  
ZEALAND WHITE RABBITS***

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***ABSTRACT:***

A study was carried out on forty growing NZW rabbits to test the effect of *Nigella sativa* and/or *Thymus vulgaris* as feed additives. Rabbits were fed on a control diet (C) and 3 experimental diets containing the medical herbs *Nigella sativa* seeds (NS) or *Thymus vulgaris* herb (TV) or mixture of both (MIX) for the experimental period of 10 weeks. Parameters studied included digestibility, N balance, growth performance. The results obtained showed that supplementing the basal diet with herbs did not affect the digestion coefficients. The diet containing the mixture of NS and Tv were higher in their DCP. The MIX group recorded the best value TDN. Rabbits received the MIX ration retained more nitrogen (1.37g/d) than the other three groups. Rabbits in all the experimental groups grew at almost the same rate. The highest performance index was recorded with group fed diet MIX.

***Key words:*** *Nigella sativa* seeds, *Thymus vulgaris* herb, rabbits, digestibility, performance.

***EFFECT OF STIMULATION TYPES ON MACHINE MILKING PROCESS IN EGYPTIAN BUFFALOES***

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***ABSTRACT:***

The present study was carried out at a commercial buffalo farm named "El-koumy farm", located in Elbeheera province, Nubaria, El-shagaha village on the desert road (Cairo – Alexandria, Egypt) at 90 km, from Alexandria. The experiment was conducted to study the effect of stimulation type on milking process such as parlor waiting management, milk yield per milking and milk flow rate. Animals were classified according to: type of stimulation, milking frequency per day, times of milking; and milkers team. A total numbers of 92 randomly chosen machine milked animals in their second to sixth lactation were used in the present experiment. Data were analyzed using SPSS program version 10, (1999). Results revealed that type of stimulation had a highly significant effect on stimulation period and parlor waiting period. In general, milking process duration can be arranged in the following descending order: hand massage and machine stimulated buffaloes (7.85 min.), only machine stimulated buffaloes (7.16 min.) and finally oxytocin treated buffaloes (6.53 min.). Type of stimulation had a highly significant effect on stimulation period, the longest stimulation period was achieved in hand massage and machine stimulated Buffaloes (9.66 min.) which was significantly higher than oxytocin administrated animals (7.68 min.). The lowest period was observed in only machine stimulation which was significantly lower than another two groups. Type of stimulation had no significant effects on milk yield per milking or milk flow rate

***Key words:*** Machine milking, Parlor management, stimulation type, milk yield, flow rate, Oxytocin, Buffaloes

***REDUCING ENVIRONMENTAL POLLUTION OF MANURE BY ADDING  
TAFLA AND YEAST TO DAIRY BUFFALO RATION***

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***ABSTRACT:***

This study was carried out at the Experimental Buffalo Unit of the Animal Production Department, Faculty of Agriculture, Minufiya University, Shebin El-Kom, Egypt. Nine dairy buffalo cow at 2nd to 4th lactation with an average body weight  $614 \pm 24.08$  kg were randomly assigned among three experimental tested rations (three animals each). The experimental rations were Control ration (42% commercial concentrate feed mixture + 33% berseem hay + 25% rice straw), Control ration + 3% Tafla/animal/day and Control ration + 20 g Baker's yeast/animal/day (on dry matter basis). Fresh manure sample was collected from each animal daily and physical, chemical and biological analyze were applied. Manure from animals fed tafla supplemented ration had the lowest ( $P < 0.01$ ) odor intensity followed by manure from animals fed yeast additive ration, while manure from animals fed control ration had the highest odor intensity ( $1.83 \pm 0.058$ ,  $2.42 \pm 0.048$  and  $2.68 \pm 0.064$ , respectively). The similar differences were evident for moisture percentage ( $78.90 \pm 0.23$ ,  $80.60 \pm 0.26$  and  $84.38 \pm 0.26$  % respectively). The effect of adding tafla and yeast on manure pH value was highly significant ( $P < 0.01$ ) but within normal range. Manure from animals fed tafla supplemented ration was lower in nitrogen, phosphorus and potassium % ( $P < 0.01$ ) than either manure from animals fed yeast additive ration or manure from animals fed control ration ( $0.433 - 0.105 - 0.377$ ,  $0.467 - 0.108 - 0.374$  and  $0.498 - 0.121 - 0.395$  %, respectively). After 6, 12, 24h of incubation manure from animals fed tafla supplemented ration had the lowest gas production followed by manure from animals fed yeast additive ration, while manure from animals fed control ration had the highest gas production ( $0.633 - 1.485 - 2.767$ ,  $0.674 - 1.570 - 3.093$  and  $0.893 - 1.903 - 4.341$  ml/g manure, respectively). Manure from animals fed tafla supplemented had the lowest ( $P < 0.01$ ) coliforms count followed by manure from animals fed yeast additive, while manure from animals fed control ration had the highest coliforms count ( $5.31 \pm 0.020$ ,  $5.44 \pm 0.012$  and  $6.46 \pm 0.015$  cfu Log<sub>10</sub>/g manure, respectively).

***Key words:*** Environmental pollution, Buffalo, Manure, Tafla, yeast.