

Haematology and Reproductive Performance of Pubertal Rabbit Do Administer Crude *Moringa oleifera* (LAM.) Leaf Extract

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Abstract : *Moringa oleifera* leaf has been traditionally used in the local medicine as an ingredient in some herbal formulations for blood purifier, cholesterol reducing agent, immune and reproductive enhancers. Twenty-four pubertal rabbit are divided equally into four groups were administered with varied concentrations of crude extract of the leaves of *Moringa oleifera* gavage at doses of 2.5ml/kg body weight (BW) in every 48 hours for 63 days. These rabbits were allotted into four treatments and each treatment was replicated six times to investigate the effect of administered crude *Moringa oleifera* leaf extract (CMOLE) on haematology and reproductive performance of pubertal rabbit does. Four experimental treatments were used. The animals on the control (T1) were administered water only. Rabbits on treatments 2, 3, and 4 were administered 100ml CMOLE/L, 200ml CMOLE/L, and 300ml CMOLE/L, respectively. The does were placed on extract two weeks before mating, five weeks after mating and continued for another two weeks after kindling. Six proven untreated bucks were used for the mating of the twenty-four treated does and these bucks were randomly allotted to the does such that each buck mated at least one treated does in each treatment. The same management practices and experimental diets were given ad libitum to all animals. Blood was sampled from the gestating does at the third trimester for haematological analysis. The haematology results showed that treated rabbits with 100ml CMOLE/L with mean corpuscular volume value of 93.38fl significantly ($p < 0.05$) higher than those on the control which is water only (82.24fl) but not significantly different from T3 (200ml CMOLE/L) and T4 (300ml CMOLE/L) which had mean values of 91.69fl and 91.49fl, respectively. While the erythrocyte counts, leukocyte counts, haematocrit, haemoglobin concentration, mean corpuscular haemoglobin, mean corpuscular haemoglobin concentration, lymphocyte, neutrophil, monocyte, and eosinophil count were not significantly different across the treatments. For platelets, treated animals on T2 (100ml CMOLE/L) had the highest numerical value of $148.80 \times 10^9/L$ which was identical with those on T3 (200ml CMOLE/L) with mean value of $141.50 \times 10^9/L$ but significantly ($p < 0.05$) higher than those on T4 (300ml CMOLE/L) with mean value of $135.00 \times 10^9/L$ and those on the control which had the least mean value of $126.60 \times 10^9/L$. The percentage conception rate of the treated animals was higher than those in the control group. The animals administered 300ml CMOLE/L had the apparently highest litter size of 5.75, while gestation length and litter weight tended to decline with increase in CMOLE concentrations. The investigation demonstrated the potential effect of crude *Moringa oleifera* leaf extract on pubertal rabbit does. The administration of up to 300ml crude *Moringa oleifera* leaf extract per liter did not adversely affect but improved the haematological response and reproductive potential in gestating rabbit does.

Keywords : conception, haematology, moringa leaf extract, rabbit does

Conference Title : ICASVM 2015 : International Conference on Animal Science and Veterinary Medicine

Conference Location : Penang, Malaysia

Conference Dates : December 03-04, 2015