Some physiological aspects of female Rabbit under different nutrition regimes

By

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B. Sc. (Animal Production) Faculty of Agriculture
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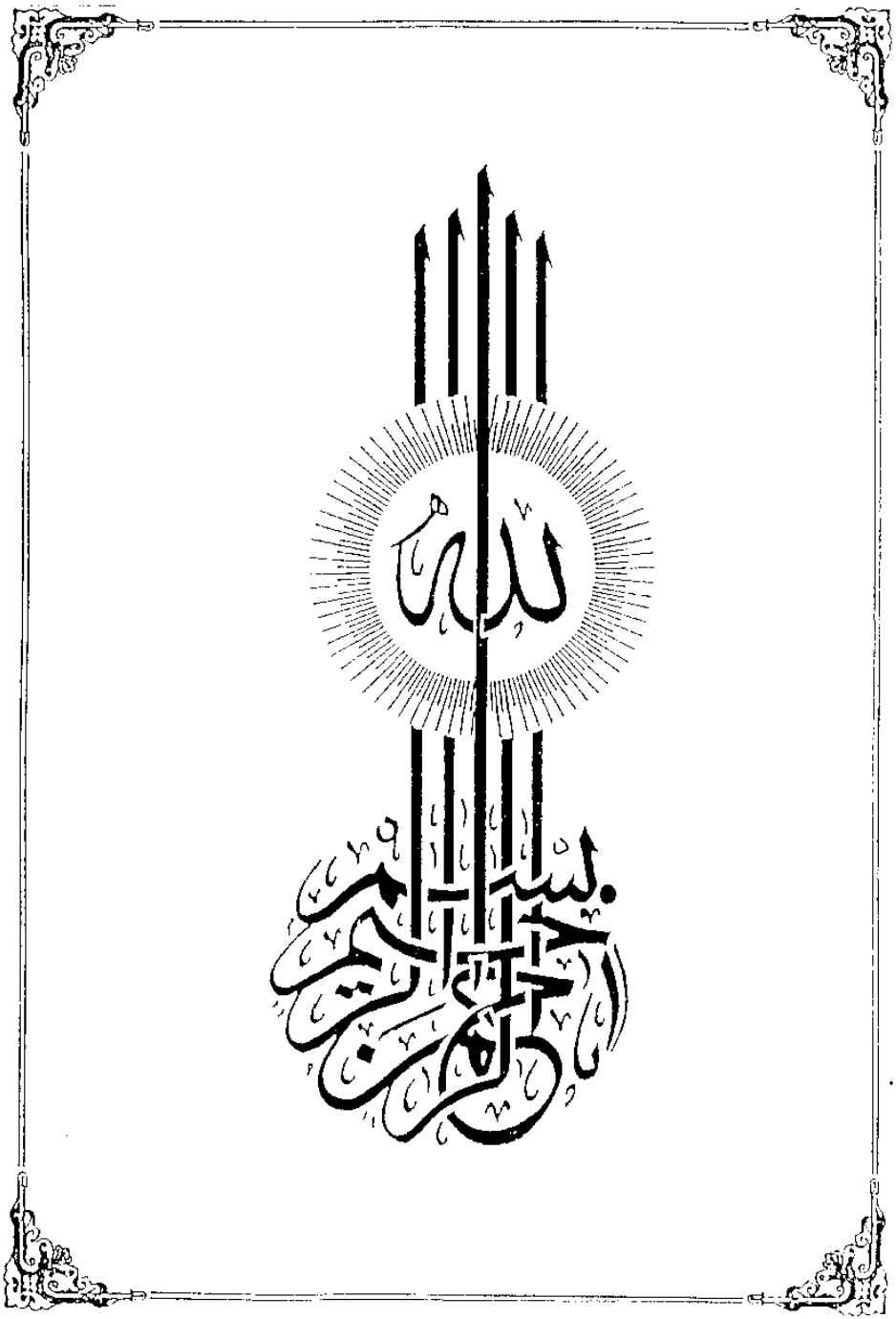

APPROVAL SHEET

SOME PHYSIOLOGICAL ASPECTS OF FEMALE RABBIT UNDER DIFFERENT NUTRITION REGIMES

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ABSTRACT

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This study was carried out at the unit of intensive rabbit production, Faculty of Agriculture, Ain Shams University, Cairo, Egypt. Twenty four uniparous NZW does and six mature bucks were used to investigate the effect of vitamins A and E on the reproductive and productive performance of the White New Zealand rabbit does. The does were divided randomly into four equal groups (six one each). Group I was orally administrated 3000 IU vitamin A per day during the study; group II was daily administrated orally with 10mg of vitamin E; group III was daily supplemented with 3000 IU vitamin A and 10mg vitamin E, while group IV was surved as control.

The results showed that vitamin A supplementation increased conception rate, litter size at birth and litter size at weaning by 25.4%, 14.45% and 45.4%, respectively. But the combination of vitamin A plus E reduced the mortality rate from birth to weaning by 33.36% Vitamin A supplemented group produced more milk during first and third weeks of suckling, while vitamin A plus E supplemented group produced more milk during the second week of suckling. Supplemented rabbit does with vitamin A increased ($P<0.01$) litter daily gain from birth to weaning by 28, 32.6, 46.9 and 42.7% during first, second, third and fourth weeks of suckling, respectively. The activity of AST and ALT was higher ($p<0.05$) in vitamin A supplemented groups than other groups. Also

physiological status had a significant effect on the plasma AST and ALT activities, however plasma Alkaline phosphatase activity decreased as a result of vitamin supplementation. Vitamin A supplementation increased the concentration of plasma T_3 and T_4 by 7.52% and 10.32%, respectively. Also T_3 and T_4 concentrations increased during pregnancy and pregnancy with suckling.

Supplemented NZW rabbit does with vitamin A increased numbers of RBC's, WBC's and percentages of Hb, HCT, Lymphocytes, Monocytes and decreased percentage of granulated cells.

The physiological status did not have a significant effect on RBC's, Hb% and HCT%. Pregnancy increased the percentage of lymphocytes. While suckling reduced the percentage of monocyte.

Key words: Rabbit does, vitamins A and E, liver function, T_3 and T_4, milk production, Reproduction.

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