

**PHYSIOLOGICAL AND IMMUNOLOGICAL STUDY
ON RABBITS: EFFECTS OF DIFFERENT SIZE
GROUPS AND SELECTIVE FEEDING**

By

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B.Sc. Agric. Sc. (Poultry Production), Cairo University, 2008

M.Sc. Agric. Sc. (Poultry Production), Ain Shams University, 2014

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Approval Sheet

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ABSTRACT

Esraa Mohamed Abd EL Megeed Ali: Physiological and Immunological Study on Rabbits. Unpublished Doctor of Philosophy Thesis, Department of Poultry Production, Faculty of Agriculture, Ain Shams University, 2019.

A total number of 108 APRI weaning rabbits were investigated. They were maintained from weaning at 5 weeks to 12 weeks of age. Rabbits were randomly divided into three treatments (in 3 replicate, 12 rabbits each). Each treatment was divided into two groups with two densities. The first group housed by 4 rabbits in cage 60 cm² and second group housed by 8 rabbits in cage 120 cm². Each treatment has an average weight of (560g±10). Animals were assigned to three feeding groups The 1st group was fed the basal diet (control) while the 2nd and 3rd groups were fed the basal diet without hay plus % hay in control diet, the basal diet without hay plus hay fed ad libitum. The behaviour of the rabbits was video recorded in cages for 24 h. During the night, light wasn't used to avoid disturbing the nictameral activities of the rabbits, cameras have led lamb to light at the night.

The results showed that housing rabbits on large group size (8 rabbits/cage) and rabbits fed hay ad libitum for growing rabbits could improve behaviour, decrease the mortality rate and increase the dressing weight that also lead to increase the economical efficiency. Additionally, the current study confirmed that the rabbits housed in large group and fed hay ad libitum did not have any negative influence on growth performance traits and blood parameters during the whole experimental period.

It was concluded that housing growing rabbits on large group 8 rabbits in cage (120 cm²) and fed hay ad libitum; decrease mortality rate and increase the economical efficiency for the breeder.

Key words: rabbit, hay, group size, behaviour, economical efficiency.

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LIST OF ABBREVIATIONS

ARC	: Agriculture Research Center
APRI	: Animal Production Research Institute
BW	: Body weight
BWG	: Body weight gain
°C	: The degree Celsius
C	: Control
Cm	: Centimeter
CP	: Crude Protein
DE	: Digestive energy
DFCR	: Daily feed conversion ratio
DFI	: Daily Feed Intake
DM	: Dry Matter
DoP%	The dressing out percentage
DWG	: Daily Weight Gain
EE%	: The economical efficiency
FC	: Feed conversion
FCR	: Feed conversion ratio
FI	: Feed Intake
G	: Group
G	: Gram
H	: Hour
H₂O₂	: Hydrogen peroxidase
Kcal	: Kilo calorie
Kg	: Kilo gram
LBW	: Live body weight
L.E	: Liver Egyptian
M.E.	: Metabolizable energy
Mg	: Milligram