ABSTRACT

This study was carried out to evaluate the reproductive physiological performance in four pure breeds of rabbits and their crosses (Baladi Red (BR), Chinchilla Giganta (ChG), French Giant Papillion (FGP) (Pepion) and Simenwar (S)), evaluate productive and some physiological aspects in their litters as well as, month of kindling, age of bucks and/ or sex effects on the characteristics evaluated. The problem in private farm is the shortage of knowledge about the better mating different between the different breeds on the scientific basic and what is effect when occur crossbreeding from physiological trend. The traits evaluated was as the following; litter traits (litter size and weight at birth and at weaning and pre-weaning litter mortality ratio), progeny weight**,** growth rates, Feed intake**,** weight gain, Feed Conversion, hematological parameters (Red blood cells count, hemoglobin content (Hb) and haematocrit value (Ht%), biochemical parameters of plasma (Total protein (TP), Albumin (Alb), Globulin (Glo) concentration, Albumin / Globulin ratio and triglycerides (Trig)). Also, carcass traits, heterosis % and superiority % of crossbred rabbits were evaluated. The results have shown that in most cases, mating groups were highly significant effect on litter traits, body weight at different age of study, feed intake, weight gain and feed conversion at various age stages. Crossbred groups showed the best performance compared to purebred groups, while BR X BR showed lower performance except in preweaning mortality which was the best. The crossbred litters produced from mating BR with other breeds had obvious improvement in body weight, weight gain and feed conversion especially when other exotic breeds as a dam were used. In physiological aspects the litters result from mating group BR was higher value of RBCs, concentration and Ht %. The benefit of BR rabbits which its high adaptation to the Egyptian conditions is reached the maximum in the present study when doing the simple crossing with other exotic breed such as S. The obviously improvement occurred in RBCs, Hb concentration and Ht % of crossbred litters result from mating BR rabbits as a sire or as a dam with other breeds. The Obvious improvement occurred in TP and their fractions (Alb and Glo) values for crossbred litters. The crossbred litters result from mating BR and FGP rabbits with other breed had an obviously improvement in Glo especially when used FGP rabbits as a sir and reached the maximum in the present study to

higher value of Glo when doing the simple crossing between FGP X BR. In biochemical parameters of plasma rabbits born in May-June month were higher value of TP and their fraction (Alb and Glo). Genetic factors do not function without physiological and environmental factors effects. Positive heterosis % was shown for litter size at birth and at weaning, litters weight at birth and at weaning, all postweaning weights. Negative heterosis and superiority was shown for prewaning mortality and feed conversion which means positive effects. Positive heterosis % and superiority % of carcass performance indicated that crossbreeding is associated in bettering carcass performance.

Key Words: Rabbits, crossbreeding, productive, performance, physiological, carcass, heterosis % and superiority.

CONTENTS

LIST OF ABBREVIATIONS

μ = Overall mean

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A	Line A rabbits
Altex	Breed ALtex rabbits
B	Bouscat rabbits
Bal	Baladi rabbits
BB	Baladi Black rabbits
BBr	Black Brown rabbits
BR	Baladi Red rabbits
BW	Baladi White rabbits
C	Line Caldes rabbits
Cal	California rabbits
Ch	Chinchilla rabbits
ChG	Chinchilla Giganta rabbit
Cr	Criollo rabbits
F	Flander rabbits
F.C.	Feed Conversion
FGP	French Giant Papillion rabbits
G	Line G rabbits
Gab	Gabali rabbits
GG	Grey Giant rabbits
GS	Gabali Saudi rabbits
GW	Giza White rabbits
H	Line H rabbits
K	Kabylian rabbits
L_1	Line 1 rabbits
L_2	Line 2 rabbits
L_3	Line 3 rabbits
Lit	Literature
LSM	Least square means
N	Line N rabbits
NZW	New Zealand White rabbits
P	Line P rabbits
Pe	Pepion (Papillion) rabbits
PAL	Palomino rabbits
R	Line R rabbits
S	Simenwar rabbits
SC	Soviet Chinchilla rabbits
V	Line V rabbits
WG	White Giant rabbits
WGF	White Giant Flander rabbits

WS	White Stain rabbits
Z	Line Z rabbits

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LSB	Litter size at birth
LSW	Litter size at weaning
LWB	Litter weight at birth
LWW	Litter weight at weaning
MKWB	Mean kit weight at birth
MKWW	Mean kit weight at weaning
PWM	Preweaning mortality

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BW_{32}	Body weight at 32 days of age
BW_{39}	Body weight at 39 days of age
BW_{46}	Body weight at 46 days of age
BW_{53}	Body weight at 53 days of age
BW_{60}	Body weight at 60 days of age
BW_{67}	Body weight at 67 days of age
BW_{74}	Body weight at 74 days of age
Wk	Week

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Alb	Albumin
Glo	Globulin
Hb	Hemoglobin concentration
Ht %	Haematocrit %
RBCs	Red Blood cells count
TP	Total Protein
Trig	Triglycerides

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