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**STUDIES ON SOME IMMUNE AND PRODUCTIVE
PERFORMANCE OF SOME LOCAL AND
ADAPTED STRAINS USING MODERN
SNAPS TECHNIQUES**

By

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B. Sc. Agric. Sc. (Poultry Production), Faculty of Agriculture, Ain Shams University, 2013

M. Sc. Agric. Sc. (Poultry Production), Faculty of Agriculture, Ain Shams University, 2018

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ABSTRACT

HABIBA HASSAN REZK. Studies on some immune and productive performance of some local and adapted strains using modern snaps techniques .Unpublished PhD in Philosophy, Ain Shams University, Faculty of Agriculture, Department of Poultry Production, Egypt, 2022.

This experiment was designed to evaluating some productive traits and immune traits of Baladi chickens under heat stress condition and description of Baladi chickens genetically by using modern techniques.

Main results could be summarized as follows:

- Growth characteristics (body weight and body measurement) reflect that males of baladi chickens were significantly heavier than their counterparts at different ages. Also, the heat treatment group induced a significant decrease in body weight compared with the control treatment group for both sexes in parents stock.so, in offspring stock. And, heat treatment induced a significant decrease compared with control group in body weight trait. Also, heat treatment induced a significant decrease compared with control group in all body measurements(shank length, tibia length ,body depth, keel length, comb length and wattle length)
- Feed consumption and feed conversion ratio of baladi chickens recorded at 8-12 weeks of age. The present result showed that the Baladi chickens that was exposed to heat stress significantly consumed less feed from 8 to 12 days of age compared to the control treatment group.
- Phenotypic, the results showed that in the parent stock, at one day of age, orange color (light brown) was the dominant color among the colors within the stock 32% of the all stock, and at the age of 4 weeks, the orange color also appeared to be the dominant color among the colors by 35%. But, the results showed that in offsprings stock, at one day of age, orange color (light brown) was the dominant color among the colors within the stock 40% of the all stock, and at the age of 4

weeks, the orange color also appeared to be the dominant color among the colors by 65%.

- Heat stress measurements (Respiratory rate and rectal temperature) Shows that rectal temperature and respiration rate were significantly higher for the group exposed to heat stress than for the control group for parent stock, in offspring, Shows that rectal temperature and respiration rate were significantly higher for the group exposed to heat stress than for the control group.
- Maturation characters (body weight and body measurements) the results showed that body measurements of sexual maturity were no significantly in all traits (Shank length, Tibia length, Body depth, Keel length, Comb length and Wattle length).
- Production traits (egg weight, egg mass, egg number and egg production percent) the results showed that there is no significant difference between heat treatment and control treatment in the egg number trait. As, in egg mass trait, it was found that the heat treatment was significantly higher than the control treatment in 30 and 90 days of age. But a difference appeared in 150 days of age, where it was found that the control treatment was significantly higher than the heat treatments.
- Internal and external egg quality indicated Show that the effect of significant on the treatment.
- Immunity traits: the antibody titer was higher in control group compared with heat stress group. This shows that immunity is affected under heat stress compared to the control group and exposure to heat stress.
- The gene expression level of CD1b gene and IL4I1 gene expression were highly significant in the control group compared with the heat group.

Key words: Heat stress, baladi free chicken, ELISA, SNAPs,

RNA extraction, egg production, egg quality, CD1b gene and IL4I1 gene.

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CONTENTS

TITLE	Page
List of tables	Vi
List of figures	Vii
INTRODUCTION	1
REVIEW OF LITERATURE.....	3
1. Definition of Baladi free chickens	7
2. Effect of heat stress on productive performance of chickens	7
2.1. Body weight	11
2.2. Body measurements	14
2.2.1. Keel length	14
2.2.2. Shank length.....	14
2.2.3. Body depth.....	15
2.2. 4. Tibia length.....	15
2.2. 5. Comb and wattle length.....	16
2.3. Feed consumption and feed conversion ratio.....	18
3. Phenotypic traits.....	22
4. Effect of heat stress on physiological responses.....	22
4.1. Thermal reaction.....	27
4.1.1. Respiratory rate.....	28
4.1.2. Rectal temperature.....	29
5. Laying performance under heat stress.....	29
5.2. Egg production measurements under heat stress.....	34
5.2.1. Egg number, Egg weight and egg mass.....	36
5.3. Egg quality measurements under heat stress.....	37
5.3.1. External egg quality	37
5.3.1.1. Shell thickness	37
5.3.1.2. Shell percentage	38
5.3.1.3. Egg area	38
5.3.1.4. Egg shape index.....	39
5.3.1.5. Shell index.....	39

5.3.1.6. Egg volume	39
5.3.1.7. Shell strength.....	40
5.3.2. Internal egg quality measurements.....	40
5.3.2.1. Yolk quality.....	41
5.3.2.2. Albumin quality.....	41
5.3.2.3. Haugh units.....	42
6. Newcastle disease virus (NDV).....	46
7. Immune Responses.....	49
7.1 Elisa (enzyme-linked immunosorbent assay) for Newcastle disease.....	52
8. Relation between immune and heat stress.....	53
9. Genetics studies.....	54
9.1. RNA extraction.....	55
9.2. Genes responsible for immunity.....	55
9.2.1. CD1b gene.....	56
9.2.2. IL4I1 (Interleukin 4 inducible 1 gene).....	56
MATERIALS AND METHODS	57
1. Experimental designs.....	57
1.1. Parent stock.....	57
1.2. Offspring flock	58
2. Measurements and observations.....	58
2.1. Body weight.....	58
2.1.1. Parent stock.....	58
2.1.2. Offspring flock.....	58
2.2. Body measurements.....	58
2.2.1. Parent stock.....	59
2.2.2. Offspring flock.....	59
2.3. Feed consumption.....	59
2.4. Phenotypic traits.....	59
2.5. Respiratory rate and rectal temperature.....	60
2.7. Egg production parameters.....	60

2.8. Egg quality measurements.....	60
2.8.1. External egg quality.....	60
2.8.1.1. Strength of eggshell.....	61
2.8.1.2. Shell thickness	61
2.8.1.3. Shell percentage.....	61
2.8.1.4. Egg area.....	61
2.8.1.5. Egg shape index.....	61
2.8.1.6. Shell index.....	61
2.8.1.7. Egg volume.....	62
2.8.2. Internal egg quality.....	62
2.8.2.1. Albumen quality.....	62
2.8.2.2. Albumen weight and albumen percentage.....	62
2.8.2.3. Yolk quality.....	63
2.8.2.4. Yolk weight and yolk percentage.....	63
3. Immune Responses Evaluation.....	63
3.1. Indirect ELISA.....	63
4. Genetics studies.....	63
4.1. RNA extraction.....	64
5. Statistical analysis.....	64
RESULTS AND DISCUSSION	66
1. Productive traits.....	66
1.1. Parent stock.....	66
1.1.1. Body weight	66
1.1.2. Body measurements.....	67
1.1.2.1. Shank length.....	67
1.1.2.2. Tibia length.....	68
1.1.2.3. Keel length.....	69
1.1.2.4. Body depth.....	69
1.1.2.5. Comb length	69
1.1.2.6. Wattle length.....	70
1.1.3. Feed consumption.....	72
1.1.4. Phenotypic traits.....	73

1.1.5. Heat stress exposure.....	74
1.1.6. Maturation measurements.....	76
2. Laying performance.....	78
2.1. parent stock.....	78
2.1.1. Egg production measurements during the first 30 day and 90 day and 150 day of production.....	78
2.1.2. Egg quality measurements.....	
2.1.2.1. External egg quality.....	80
2.1.2.1.1. Egg shape index.....	80
2.1.2.1.2. Egg volume.....	80
2.1.2.1.3. Shell strength.....	80
2.1.2.1.4. Shell thickness.....	80
2.1.2.1.5. Wet shell weight and percentage.....	80
2.1.2.1.6. Dry shell weight and percentage.....	80
2.1.2.1.7. Shell index.....	80
2.1.2.2. Internal egg quality.....	81
2.1.2.2.1. Egg Weight.....	81
2.1.2.2.2. Haugh units.....	81
2.1.2.2.3. Yolk index.....	81
2.1.2.2.4. Albumin weight and percentage.....	81
2.1.2.2.5. Yolk weight and percentage.....	82
1.2. Off spring flock.....	83
1.2.1. Body weight	83
1.2.2. Body measurements.....	84
1.2.2.1. Shank length.....	84
1.2.2.2. Tibia length.....	85
1.2.2.3. Keel length.....	85
1.2.2.4. Body depth.....	85
1.2.2.5. Comb length.....	86
1.2.2.6. Wattle length.....	86
1.2.3. Feed consumption.....	88
1.2.4. Phenotypic traits.....	89

1.2.5. Heat stress exposure.....	90
3. Immune Responses Evaluation.....	92
.4.Genetics studies.....	92
.4.1.RNA extraction.....	92
4.1.1. Gene expression for immune genes.....	92
SUMMARY AND CONCLUSION	94
REFERENCES	98
ARABIC SUMMARY	

LIST OF TABLES

Table	Page
1. Primers used for the RT-qPCR	64
2. Means $\pm$ SE of effect of sex, age and treatment and their interaction of body weight for baladi chickens parents	67
3. Means $\pm$ SE of effect of age and treatment and their interaction on body measurements for baladi chickens parents	71
4. Means $\pm$ SE of effect of treatment on feed consumption for baladi chickens parents.	72
5. Means $\pm$ SE of effect of treatment and age on Heat stress measurements for baladi chickens parents	75
6. Means $\pm$ SE of effect of treatment on of maturation measurements for baladi chickens parents	77
7. Means $\pm$ SE of effect treatment on of external egg quality (measurements for Baladi chickens parents (29 Week	82
8. Means $\pm$ SE of effect treatment on of Internal egg quality measurements for Baladi chickens parents (29 Week).	83
9. Means $\pm$ SE of effect of sex, age, treatment and their interaction of body weight for baladi chickens offspring generation	84
10. Means $\pm$ SE of effect of age and treatment and their interaction of Body measurements for baladi chickens offspring generation	87
11. Means $\pm$ SE of effect of age and treatment and their interaction on heat stress measurements for baladi chickens offspring	90
12. Means $\pm$ SE of effect of treatment on Newcastle diseases indirect for baladi chickens offspring (16 week).	91

LIST OF FIGURES

Figure		Page
1	Phenotypic of baladi chickens for parent stock at one day of age.	73
2	phenotypic of baladi chickens for parent stock at 4weeks of age.	74
3	egg production of Baladi chickens for parent stock at 30, 90 and 150 day of age.	79
4	phenotypic of baladi chickens for offspring stock at one day of age.	88
5	phenotypic of baladi chickens for offspring stock at 4 weeks of age.	89
6	Newcastle diseases indirect of baladi chickens for offspring stock at 16 week of age.	91
7	The mRNA abundance of the CD1b gene and IL4I1 gene of Baladi chickens at 16 week of age	93