CONTENTS

5. SUMMARY AND CONCLUSION

This study was carried out at the Rabbits Farm of Sakha Station, Animal Production Research Institute, Agriculture Research Center, Egypt, during the period from June 2016 till September 2016.

One hundred and eight APRI line rabbits were divided and assigned randomly into nine experimental groups of 5 weeks of age with an average live body weight of 620±6.0 g. Rabbits were similar, with respect to body weight and sex. the experimental design was factorial 3×3, whereas three stocking denesity (2,4 and 6 rabbit/ cage) and three Levels of dietary phytobiotic (0,0.5 and 1% lycopene). So, nine experimental treatments were as follow: **G1**: Stocking density of 2 rabbits per cage (800 Cm^2/ rabbit) and rabbits fed basal diet without any supplementation, **G2**: Stocking density of 4 rabbits per cage (400 Cm^2/ rabbit) and rabbits fed basal diet without any supplementation, **G3:** Stocking density of 6 rabbit per cage (267 Cm^2/ rabbit) and rabbits fed basal diet without any supplementation, **G4:** Stocking density of 2 rabbits per cage (800 Cm^2/ rabbit) and rabbits fed basal diet supplemented with 0.5% phytobiotic, **G5**: Stocking density of 4 rabbits per cage (400 Cm^2/ rabbit) and rabbits fed basal diet supplemented with 0.5% phytobiotic, **G6:** Stocking density of 6 rabbits per cage (267 Cm^2/ rabbit) and rabbits fed basal diet supplemented with 0.5% phytobiotic, **G7:** Stocking density of 2 rabbits per cage (800 Cm^2/

rabbit) and rabbits fed basal diet supplemented with 1% phytobiotic, **G8:** Stocking density of 4 rabbits per cage (400 Cm^2/ rabbit) and rabbits fed basal diet supplemented with 1% phytobiotic and **G9:** Stocking density of 6 rabbits per cage (267 Cm^2/ rabbit) and rabbits fed basal diet supplemented with 1% phytobiotic.

The obtained results can be summarized as follows:-

1- the minimum and maximum temperature were 27.6 and 30.2 ^oC, respectively during 1^{st} and 8^{th} week of experimental period and the moderate temperature between the same period.

2- There was a significant difference in the rectal temperature among 2, 4 and 6 rabbits / cage started from week 7 of age up to end of experimental period (12 week). The minimum rectal temperature 39.01^0C as found in the treatment 2 rabbits /cage during 6 and 8 weeks of age, whoever, the maximum rectal temperature 40.01^0C was found in the treatment for 6 rabbits /cage on 12 weeks of age.

3- The highest body weight was found in the treatment 2 rabbits / cage and those fed diet with 1% lycopene. While the lowest body weight was found in the treatment 4 and 6 rabbits / cage and those fed diet with 0 and 0.5% lycopene.

4- Daily feed intake was significantly higher for stocking denesity of 2 rabbits /cage during 5-9 (69.38 g/d), 9-13 (94.17 g/d)

and 5-13 weeks (81.77 g/d) than stocking denesity of 4 rabbits /cage (62.19, 84.42 and 73.30 g/d, respectively) and treatment 6 rabbits /cage (59.25, 80.11 and 69.68 g/d, respectively) during the whole experimental period (5 to 13 weeks of age).

5- Feed conversion ratio showed significant differences ($P<0.05$), on stocking density during 5-9 weeks and 5-13 weeks among 6 rabbits /cage (3.074 and 3.688, respectively) than treatment 2 rabbits /cage (2.703 and 3.321) and treatment 4 rabbits /cage (2.914 and 3.434, respectively).

6- Carcass percentage were significantly decreased ($P<0.001$) by increasing the number of animals from 2 to 6 rabbits/cage. (53.3, 52.7 and 50.8%, respectively). The opposite trend of increasing carcass was found in rabbit fed diets with 0, 0.5 and 1.0% lycopene (50.9, 52.2 and 53.8%, respectively).

7- Crud protein percentage of meat were significantly decreased ($P<0.001$) by increasing stocking density from 2 to 6 (68.9, to 65.7%, respectively).

8- Total protein (g/dl) of growing APRI-line rabbits were significantly ($P<0.001$) decreased the number of animals increased from 2 to 6 (6.19, 6.04 and 5.68, respectively). Total protein (g/dl) of growing APRI-line rabbits were significantly ($P<0.001$) of phytobiotic 0, 0.5 and 1.0 (5.72, 5.99 and 6.20, respectively).

9- TAC (mmol/L) of growing APRI-line rabbits were significantly ($P<0.001$) of stocking density 2, 4 and 6 (0.766, 0.699 and 0.621 respectively). TAC (mmol/L) of growing APRI-line rabbits were significantly ($P<0.001$) of phytobiotic 0, 0.5 and 1.0 (0.680, 0.726 and 0.726, respectively).

10- WBC's ($x10^3/\mu l$) of growing APRI-line rabbits were significantly ($P<0.001$) of stocking density 2, 4 and 6 (9.01, 8.10 and 5.30, respectively). WBC's ($x10^3/\mu l$) of growing APRI-line rabbits were significantly ($P<0.001$) of phytobiotic 0, 0.5 and 1.0 (6.57, 7.52 and 8.32, respectively).

11- The economic efficieny was decreased from 1.17 to 0.96 as the number of rabbits increased from 2 to 6 animals/ cage. While it was increased from 1.02 to 1.08 by increasing the level of lycopene from 0 to 1% in rabbit diets.

Conclusion

It can be concluded that raising rabbits in cages with low density and supplementing with 1% lycopene in rabbit diets gave the best productive performance, increasing immune responses and improving economical efficiency. At the same time, raising rabbits in low density, permits for somewhat motor activity and social life which reflect on the meat quality and increasing the selling price.