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The Current Situation of Free Range Egg Production Farms: The Model of Çanakkale Region

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Abstract

This study was conducted to emphasize the importance of free range production system and to discuss the current situation of the farms in the case of farms located in the Çanakkale region. The consumer demand is an important factor to spread of this system and many entrepreneurs are investing in this sector. The marketshare of free range eggs is expected to arise because of the rearing system code will be placed on the egg with the new labeling method in Turkey. Obtained results were shown that there are serious management errors and the lack of information and it is necessary to improve and to standardize of this system according to local conditions.

Keywords: *Pasture, Dermanyssus gallinae, Layer, Marketing, Barn*

Özet

Bu çalışma gezen tavuk olarak adlandırılan serbest yetiştirme sisteminin önemini burgulamak ve Çanakkale yöresi ele alınarak mevcut durumun tartışılmasını amaçlamaktadır. Tüketici talepleri bu sistemin yaygınlaşmasında önemli bir faktördür ve çok sayıda girişimci bu sektöre yatırım yapmaktadır. Türkiye'de yetiştirme metoduna göre yeni etiketleme yönteminin uygulamaya konmuş olması gezen tavuk yumurtasına ilişkin pazar payının arttırabileceği ön görülmektedir. Bu çalışmadan elde edilen sonuçlar uygulamada önemli yönetimsel hataların ve bilgi eksikliğinin olduğunu göstermekte ve bölgesel koşullar göz önüne alınarak bu sistemin standardize edilmesi ve iyileştirilmesi gerekmektedir.

Anahtar kelimeler*:* Mera, *Dermanyssus gallinae,* Yumurtacı, Pazar, Kümes

Introduction

The EU regulation (EU, 1999), which orders a ban on conventional battery cages in the EU starting on 1 January 2012 and this regulation was resulted in improve of barn and production systems. The modifications of conventional barn systems were adjourned to at 2023 in Turkey. But

alternative production systems have become popular in recent years. Besides of animal welfare concerns and ethical approaches, consumer demands were another driver for free-range poultry production worldwide. Consumers have the perception that free-range eggs are a healthy and wholesome food, low in calories and saturated fats, high in protein and vitamins (Miao et al., 2005). The percentage of free range egg production was 14.1% of total egg production according to the data of the year 2016 (Anonim a, 2017). It was estimated that free-range production systems account for about 6-8% of total egg production and 10-12% of supermarket shell egg sales in Australia (McMaster, 1999). Şekeroğlu et al. (2010) was reported that free range system some advantages when compared with deep litter and cages systems. The rearing system code will be placed on the egg with the new labeling method in the egg marketing process since November 2017 in Turkey according to legal regulations. The demand for free-range eggs can be increased after this regulation and this can lead to an increase in the number of farms that produce in this way. But this change has also led to new problems specific to this system. The aim of this study was to discuss the current situation of the farms in the case of farms located in the Çanakkale region.

Materials and Methods

This study was conducted in the Central, Ayvacık, Yenice, Ezine and Çan districts of Çanakkale region. Farms were member of The Association of Çanakkale Free Range Layer Egg Producers and Sellers and the nine farms were surveyed in this study. Farmers were surveyed from descriptive questions and also all farms were assessed on account of several environmental parameters. Additionally, structural characteristics were investigated of barns and it was examined for ectoparasite existence. Environmental conditions were scored such as hygienic conditions, ventilation quality, pasture quality. The obtained data were analyzed in MS Excel program.

Results and Discussion

The average size of the herd was 1973.8 hens and the largest herd size consisted of 4,500 chickens (Table 1.). The maximum barn area was 780 m^2 and the 45% of barns had galvanized roofing material. Concrete was the most commonly used floor material (56%) and one of both farms does not have used litter material. It was found that the density of the barns was within acceptable limits. It was observed that there was average of 6 animals in per square meter in closed area. The most commune used genotype was Lochmann Brown and farms were procured to pullets at 16 weeks old from commercial farms located in Ankara, Bandırma and Afyon regions.

Table 1. The mean, maximum and minimum values of observed parameters regarding to farm characteristics

Parameters	Mean	Maximum	Minimum
Herd size, hen	1973.8	4500	290
Barn closed area, m^2	330	780	30
Hen number/m^2	5.8	10.8	1.6
Feed intake, g/hen/day	127.5	180	75
Feed cost, □ /kg	1.48	1.60	1.40
Pasture area, m^2/hen	11.3	37.5	0.7
Investment cost, □	431857.1	1000000	58000
Investment cost, TL/hen	200.67	246.15	144.44
Egg production, number	1392.5	3500	140
Egg price, □ /egg	0.45	1	0.40

The amount of daily feed offered was 127.5 g per hen and all farms have purchased feeds from a factory as mixed. The cost of feed was calculated as average 1.48 □ per kilogram and it was detected that the feeding management was serious problem in all farms. All farms had free range areas but only 67% of farms had pasture for grazing of hens (Figure 1.). The mean of pastured area per hen was 11.3 m^2 but the 78% of farms were no cultivated in pastured area. It seems that the area offered to the animals is in accordance with the European Union. The most important problems regarding to pastures were the ignorance and the lack of management and irrigation. Animals were in the free range areas for 9 hours during average 10 months.

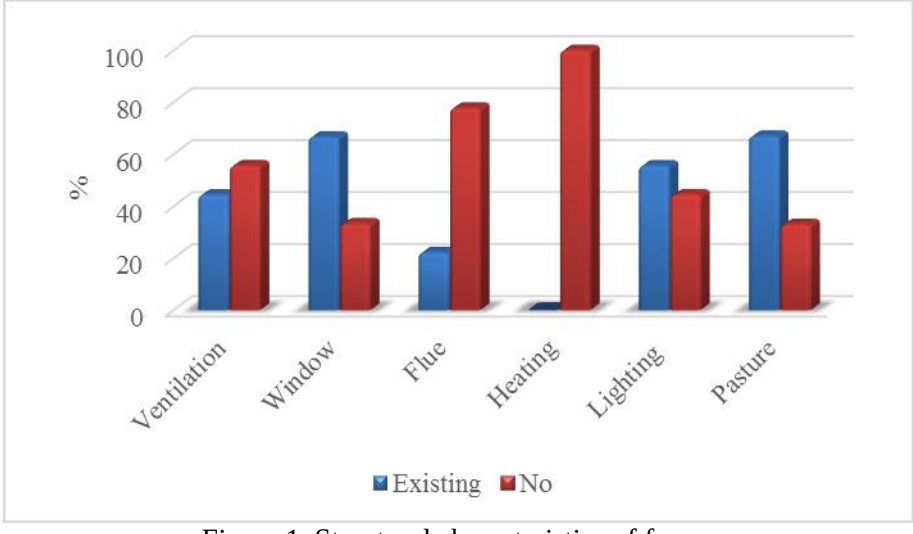


Figure 1. Structural characteristics of farms

It was resulted that hen-housed performance was 68% and the amount of daily egg production of these farms were average 1392.5 eggs. The biggest problem in egg production was that the productivity was very fluctuating during the year. Although the environmental conditions were quite variable in this production system, farmers could not take precautions. In the Figure 1 it was shown that the 44.4% of the all farms did not use artificial lighting. On the other hand, the barn lighting was not use in a stable lighting program and lighting time was changed between 14 and 24 hours. This is a serious problem because of lighting is very important environmental factor for hens. It was seen that the majority farmers did not have any information about the importance of lighting. According the results, 78% of farms did not have flue system in their barns. Additionally, more than half of the barns did not have a ventilation system. According the scoring of barns regarding to quality parameters, ventilation and hygienic conditions of barns were insufficient. Barns had no heating system and the heating was no implemented on any farms. The most common health problem was prolapsus (46%). Also the other most common health problems were cannibalism, feather pecking and respiratory problems. The 67% of barns examined was detected poultry red mite (*Dermanyssus gallinae*). It was noted that farmers have problems with flock management practices, such as veterinary treatments. When we surveyed 'What problems are frequently seen according to your opinion?' that farmers were answered as the lack of legal controlling and unconscious consumers.

Conclusion

There are large or low-budget farms that produce the concept of free range system in Çanakkale. According to the results, the first major problem is the management errors. There is lack of information on technical issues such as lighting, feeding, biosecurity and pasture management. The basis of free range system does not perceive in accordance with European standards. There are important shortcomings in the implementation and supervision of the system even though it has a serious consumer demand. There is a serious variation in terms of barn conditions and implementations. Although this production system was developed with the purpose of the animal welfare concern and the obtaining healthy products, it seems that there are some problems in practice. It is necessary to establish a standardization with respect to the structural and administrative aspects.

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