

STUDIES ON THE EVOLUTION OF BODY WEIGHT IN SOME TURKEY POPULATIONS (*Meleagris gallopavo domesticus*), RAISED IN BIHOR COUNTY

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Abstract

This paper presents partial results, regarding the characterization and identification of some birds from Galliformes, like Meleagris, Meleagris gallopavo domesticus species, raised in Bihor County. The experiments have been run in 3 farms of pure breed, from Bihor County. There were analyzed a number of 91 birds. The results provide information regarding the growth of bird populations, aiming at the same time specific aspects of morpho-productive skills, the performances recorded in breeding activity, used in the growth of poultry bred in the north-west part of the country. The turkeys of the studied populations were assigned, from the age of one day to 30 weeks, in the youth category, and only in the 31 weeks of life they will start the breeding activity. Body weight from youth category has seen a spectacular development. In adults, the ascending line had a slow growth for body weight evolution until the peak of laying.

Key words: Improved bronzed turkey, Body weight, turkey males, turkey females

INTRODUCTION

The origin of breed lies in the North American continent, being approved in 1877. Flocks of turkeys, being a common race, existed in our country since the beginning of the 18th century, came from Europe and in the 20th century started the imports of valuable pure breeds. Thus, the first imports of the improved Bronzed breed were made in 1950.

In Bihor county, there are flocks of reduced turkeys populations, compared with web-footed species, whose growth represent a tradition in the west part of the country. Most specimens, although they belong to the standard of improved Bronzed breed, they have various degrees of hatching with unimproved local populations, which is an undesirable fact.

MATERIALS AND METHODS

The case studies were performed in 3 private turkey farms (*Meleagris gallopavo domesticus* species) from the area of Bihor County. The three studied farms were conventionally noted with: C1, C2, C3. Thus, in farm C1 there were analyzed 32 turkeys i.e (4 turkeys and 32 turkey hens), in farm C2: 22 turkeys

(2 turkeys and 20 turkey hens) and finally in farm C3: 37 turkeys (5 turkeys and 32 turkey hens). The material used in the experiment consisted in birds of both sexes and of different ages (hatching in the juvenile period, reaching sexual maturity, the active period of reproduction), hatching eggs of the studied species, in different periods of the laying cycle (onset, peak, plateau, end).

In order to determine the body weight, there was used the gravimetric method, making individual weighing with the analytical balance, achieved at hatching and weekly for the *youth* category, and monthly for the *adult* category.

The data resulted from the experiments or those extracted from the records of farms, regarding the studied characters and which showed measurable and quantifiable properties, have been statistically accumulated and processed.

RESULTS AND DISCUSSION

Body weight for youth category, has had a spectacular evolution, especially in young males. At the age of one day, the turkeys had an average weight of 60 g / head, but at 6 weeks old they reached an average weight of 1.72 kg / head, at 12 weeks old they had 3.32 kg / head, at 18 weeks old they had 6.56 kg / head, at 24 weeks old 10.69 kg / head and at 30 weeks old they had 16.6 kg / head. (Fig.1). The best performances were achieved by the young males from farm C2 (an average of 17.2 kg / head at the end of juvenile period) and by females from population C2 (an average of 9.83 kg / head at the same age).

Thus, adult turkeys have continued to increase, reaching an average weight of 21.0 kg at the age of 54 weeks, even if populations have become increasingly heterogeneous ($v = 35-39\%$).

In case of females, starting from an average of 9.9 kg per head, it reached up to 10.7 kg / head in the peak of laying, managing to register at the end of the productive period an average weight of 9.7 kg / head, as confirmed by data from literature (Vacaru-Opriş I, 2002).

In case of adults, the weight evolution has had an ascending line at males and in case of females, the weight evolution presented a slow growth until the peak of laying, after which growth was slightly negative, until the end of laying (Fig. 2).

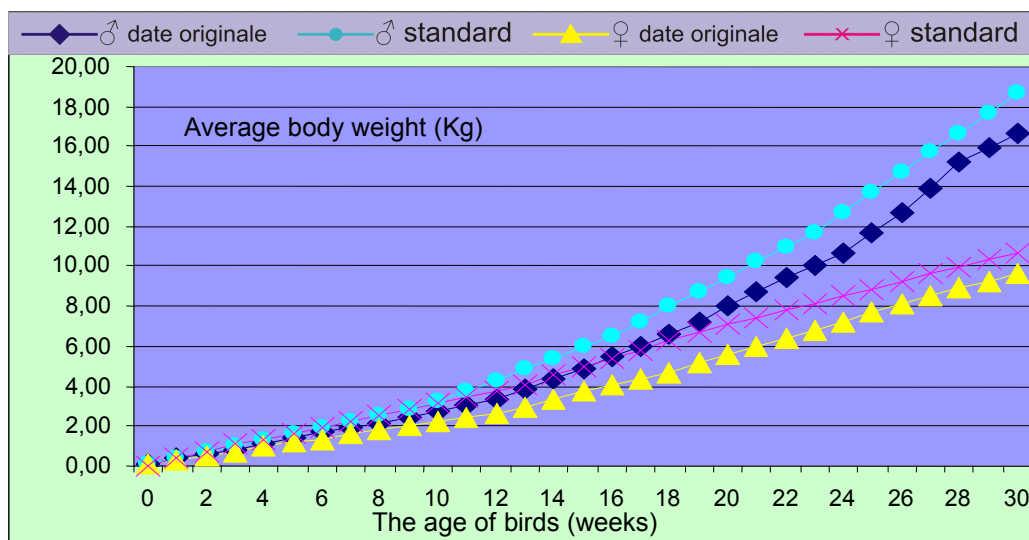


Fig.1.-Body weight dynamics of the both genders youth Improved Bronzed breed

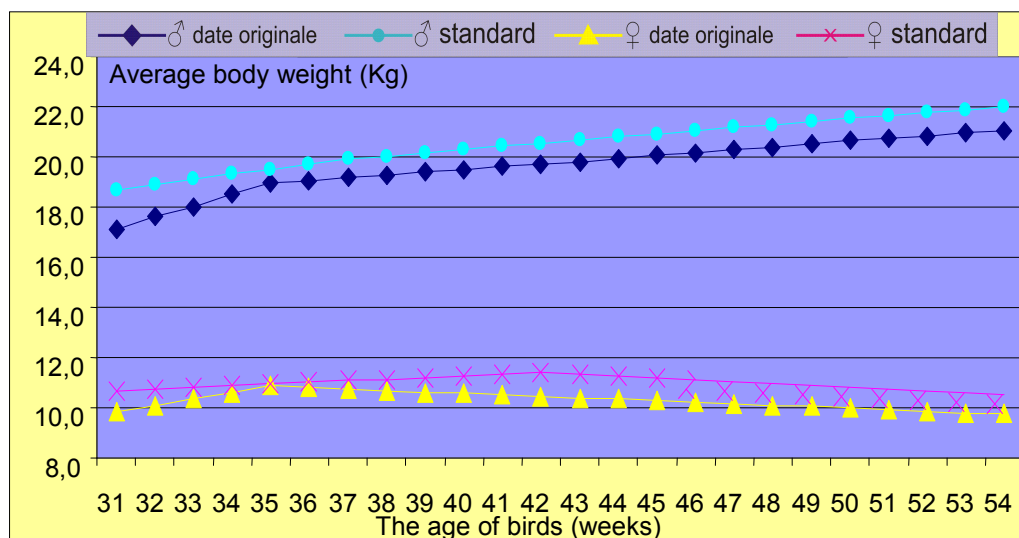


Fig.2. – Body weight dynamics of the both genders mature fowl, Improved Bronzed breed

The best performances of adult turkeys, were achieved by the same populations, namely in farm C3 by females and in farm C2 by males.

CONCLUSIONS

The improved Bronzed breed of turkey, existing in the private farms from Bihor County, was characterized by a reduced rate of growth in the first 3 months of life, followed, especially in turkeys, by an accelerating pace of development, prior to the installation of sexual maturity. Thus, in adulthood, males reached an average weight of 21 kg (towards the upper limit of potential for this race) and females 10.9 kg. (Dodu, 2010). In terms of technological measures and management of flocks, it requires the producing of certain facilities, in order to maintain the turkeys chicks in a most favorable microclimate, at least in the first weeks of life.

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