

EVOLUTION OF ASPECTS REGARDING MORPHOPRODUCTIVE PROPERTIES IN THE GEESE POPULATION IN THE COUNTY OF BIHOR

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RESEARCH ARTICLE

Abstract

In the area of Bihor county, it was possible to carry out some studies in the framework of three breeders possessing the White Dutch Rhine breed in pure condition. The number of individuals analyzed was 22 males and 88 females, coming from private breeders in Oradea and Bihor County. The values achieved regarding the increase in growth, both for youth and for adult specimens, slightly exceed the standard of the breed, in males (6.4 Kg compared to 6 Kg), while in females they are below the reference values (4, 7 Kg vs. 5 Kg).

Keywords: Flock casualties dynamics, farms of geese, White Rhine Dutch breed

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INTRODUCTION

In Romania, birds belonging to a population of the White Rhine Dutch breed were imported, which were used to crossbreed with specimens of the Landaise Breed, in order to obtain meat-producing hybrids. These populations spread in the west of the country starting from the Arad poultry platform.

Currently, there are specimens disseminated in the households of the population, with a high degree of cross-breeding.

This species is characterized by a strong seasonality of egg production, the population prefers it for other valuable productions, namely meat, fluff and fatty liver, lending itself very well to making traditional products, especially in the western part of the country.

The advantages reside in the fact that these populations lend themselves to extensive breeding, the birds making very good use of some resources inaccessible to other species (meadows, water sheen).

MATERIAL AND METHOD

In the work presented, data were collected from three private farms as follows: 35 heads (7 males and 25 females) from the first farm, 28 heads (6 males and 26 females) from the second farm, 45 heads (9 males and 36

females) in the third breeder. The following work equipment and materials were used to carry out the research: digital analytical and technical balances, X-ray machines, computer equipped with spreadsheet software, depending on the experimental method approached.

The obtained results were compared with the reference values from the specialized literature (Sauveur B., 1988; Usturoi M.G., 1999; Vacaru-Opriş I. et al., 2002).

The data obtained experimentally were centralized and statistically processed.

RESULTS AND DISCUSSIONS

In the male youth, a more intense evolution of the growth spurt is observed in the age period 1 day-8 weeks (average weight of 160.3 g - 3972.1 g), after which the weight gain takes place at a lower intensity, achieving, at the age of 33 weeks, an average weight of 5988.2 g.

In the case of females, weight gain occurs more intensively until week 7-8 (from 159.0g to 2892.5g), after which they reach, at 33 weeks, an average body weight of 4333.4g/head (figure 1).

This spectacular evolution of the weight in the first 7-8 weeks of the birds' life is related to the restriction of the youth's access to the meadows and to its feeding with existing resources within the farms.

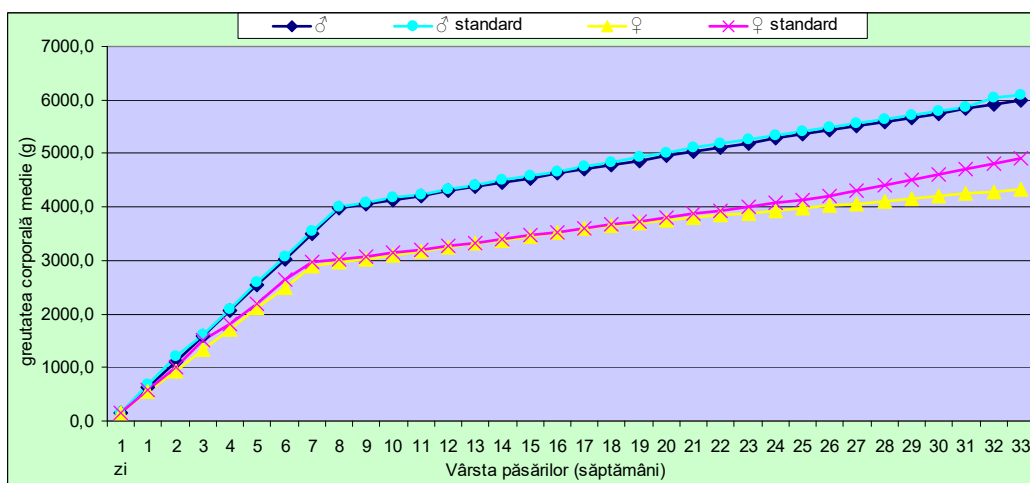


Figure 1. Body weight dynamics in both genders youth geese, White Rhine Dutch breed

Regarding the increase in growth recorded in adults, it is observed that it is much more attenuated, especially during the egg-laying season. Thus, during 19 weeks of the productive period (usually January-June), the males achieve an average body weight of 6493.8g, starting from a value of 5988.2g, i.e. a weight gain of approximately 8.5%.

In females, the growth spurt reaching an average value of 4715.5 g/head, which represents a weight gain of approx. 8.8% (figure 2). The seasonal character of egg

production in the species *Anser anser*, determined that the laying period should be comprised, as a rule, between the second half of January and June, totaling 19 peak weeks.

In the case of the studied populations, the egg-laying peak was reached in the 5th week, that is, when the birds were 37 weeks old. Egg production per season averaged 41.4 eggs/head (figure 3).

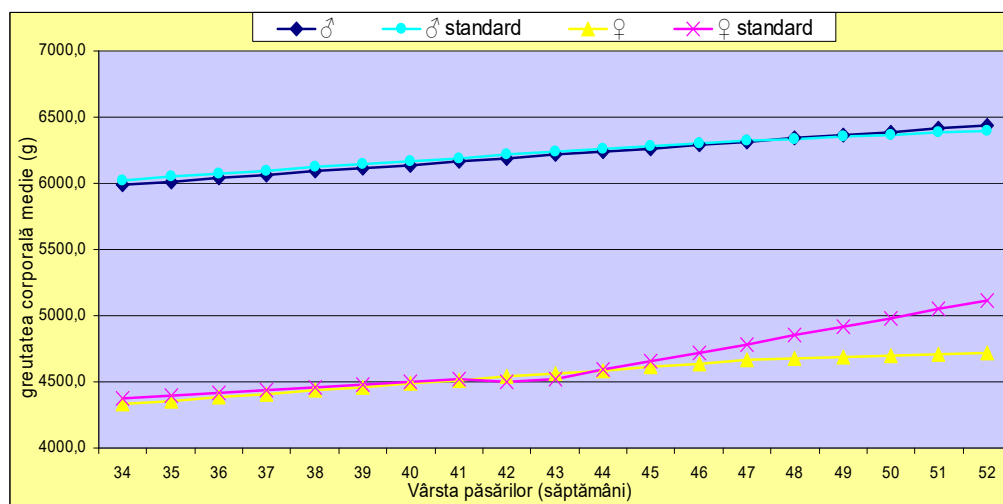


Figure 2. Body weight dynamics (g) in both genders' mature geese, White Rhine Dutch breed

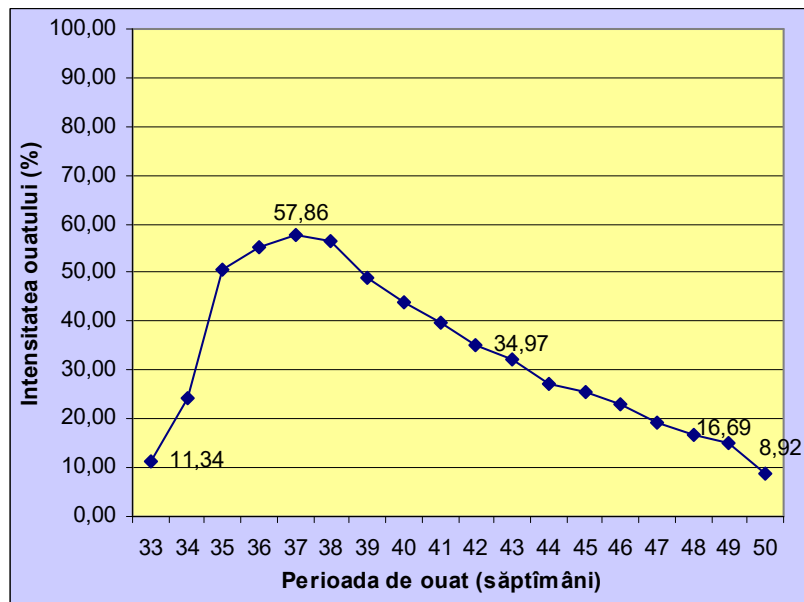


Figure 3 Average value of the laying intensity in those 3 farms of White Rhine Dutch geese

These values are, however, lower than the standard of the breed (50-60 eggs/season), requiring the selection of plus variants for the numerical production of eggs or even the import of more valuable parents in the existing populations.

CONCLUSIONS

The prospects for increasing the number of goose flocks in this part of the country are optimistic, as there is a tradition in the western area of Romania for the consumption of the meat and liver specialties of palmyra.

Within the herds already studied, it is necessary to improve by artificial selection the performances regarding the numerical production of eggs and the production of meat and fatty liver.

Selection for egg production is difficult, due to the seasonal nature of egg laying.

For this reason, the selection must be combined (own performances + family average for females and through the performances of collateral relatives of the opposite sex, for males).

Also, the geese of the studied breed can be used for bi- or triracial crosses, to maximize the hybrid vigor of the first generation (Dodu M. 2010)

REFERENCES

- Bălășescu, M., Băltan, Gh., Dascălu, AL., Vancea, I., 1980, *Avicultură*. Ed. Didactică și Pedagogică, București
- Dodgson, J.B., 2000, Integrating quantitative and molecular techniques in selection for diseases resistance. XXI World's Poultry Congress, Montréal, Canada, Aug. 20-24.
- Dodu, M., 2010, Contribuții la indentificarea și dezvoltarea fondului genetic aviar din județul Bihor. Teză de doctorat, USAMV Iași.
- Driha, A., 2000, *Curs de Tehnologia creșterii păsărilor*. Editura Mirton, Timișoara.
- Gîlcă, I., 1996, *Aprecierea valorii de ameliorare a animalelor*, Ed. Periscop, Iași
- Grosu, H., Oltenacu, P.A., 2005, *Programe de ameliorare genetică în zootehnie*. Ed. Ceres, București
- Mallard, J., Donaire, M., 1990, Evaluation de la selection. C.R. Acad. Agric. Fr. 76, 6 81-91
- Mărgărint, I., Boișteanu, P.C., Chelaru, A., 2002, *Fiziologia animalelor domestice*, Ed. Ion Ionescu de la Brad, Iași
- Oroian, T.E., Vlaic, A., 2001, *Ameliorarea genetică a populațiilor de animale domestice*, Ed. Academic Press, Cluj- Napoca
- Popescu-Vifor, Șt., 1990, *Genetică populațiilor de animale domestice*. Editura Ceres, București.
- Sandu, Gh., 1995, *Modele experimentale în zootehnie*, Ed. Coral-Sanivet, București
- Țîrlea, S., 1995, *Considerații privind producerea și difuzarea materialului biologic avicol în Romania*. Simpozionul Științific Național „Dezvoltarea zootehniei-o certitudine pentru viitor”, Iași
- Usturoi, M.G., 2008, *Creșterea păsărilor*. Editura Ion Ionescu de la Brad, Iași
- Usturoi, M.G., 1999, *Incubația la păsările domestice*, Ed. Ion Ionescu de la Brad, Iași.
- Usturoi, M.G., 2004, *Producerea ouălor de consum*, Ed. Ion Ionescu de la Brad, Iași.
- Usturoi, M.G., Boișteanu, P.C., Vacaru – Opreș, I., 1999, *Indici de calitate pentru ouăle de prepeliță*

- destinate incubației artificiale. Simpozion Științific de Zootehnie cu participare internațională, Iași 9-10 decembrie
- Vacaru-Opriș, I., 1993, Tehnologia creșterii păsărilor. Vol I și II. Lito, Universitatea Agronomică, Iași.
- Vacaru-Opriș, I., 2000, 2007, Tratat de Avicultură. Vol I. Editura Ceres, București.
- Vacaru-Opriș, I., 2002, Tratat de Avicultură. Vol II. Editura Ceres, București