THE PRODUCTIVE INDICES OF THE GOOSE POPULATION IN THE AREA OF BIHOR COUNTY

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RESEARCH ARTICLE

Abstract

In Romania, birds belonging to a population of the Rhine White Dutch breed were imported and 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. However, in the area of Bihor county, it was possible to carry out some studies, they were carried out in three breeders holding this breed, in pure condition, 22 males and 88 females being analyzed.

In terms of weight gain, both for youth and adult specimens, they slightly exceed the breed standard, 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: White Rhine Dutch breed, Body weight dynamics in both genders mature geese #Corresponding author: Monica Angelica DODU

INTRODUCTION

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.

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

MATERIAL AND METHOD

The birds from three breeders possessing this breed, in a pure state, were studied. The number of individuals analyzed was 22 males and 88 females from three breeders.

In total, 100 specimens of the Dutch breed were studied, distributed as follows: 35 heads (28 females and 7 males) in the first farm, 30 heads (26 females and 4 males from the second farm, 45 heads (36 females and 9 males) in the of the third farm.

The following were used to carry out the research: analytical and technical balances, digital, x-ray machines, computer equipped with

spreadsheet software, depending on the experimental method approached.

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

The obtained experimental data were centralized and processed statistically.

RESULTS AND DISCUSSIONS

Spectacular weight evolution in the first 7-8 weeks of the birds' life is related to restricting the access of the young to the meadows and feeding them with existing resources within the farms.

The male youth shows a more intense evolution of the growth spurt 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 age 33 weeks, an average weight of 5988.2 g. The best evolution was recorded by the birds from farm 1 (6103.4±179.6 g at the end of the juvenile period).

In the case of females, weight gain is more intense until week 7-8 (from 159.0g to 2892.5g), after which there is a linear progression than in the case of males and they reach, at 33 weeks, an average body weight of 4333 ,4 g/head (Fig. 1).The growth rate

recorded in adults 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 increase in growth is also reduced, reaching an average value of 4715.5 g/head at the age of one week, which represents a weight gain of approx. 8.8% (fig. 2). The maximum weight was reached by

females from the second farm, at the age of 54 weeks.

Also, the most precocious population was the one from the second farm, reaching sexual maturity at the age of 237 days, the other flocks studied being later, by approximately one week. Losses from the flock amounted to 8.6-10%, being generated by technological accidents and the elimination of minus variants in the first two weeks of the birds' life figure 3.

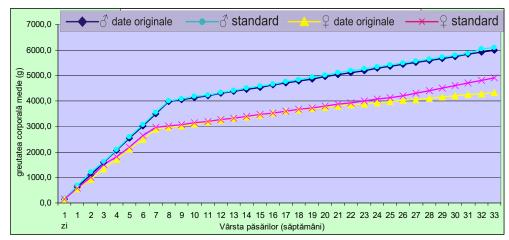


Fig. 1 Body weight dynamics in both genders youth geese, White Rhine Dutch breed

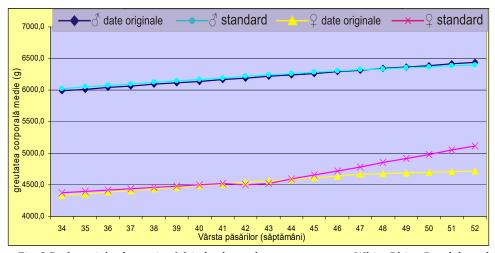


Fig. 2 Body weight dynamics (g) in both genders mature geese, White Rhine Dutch breed

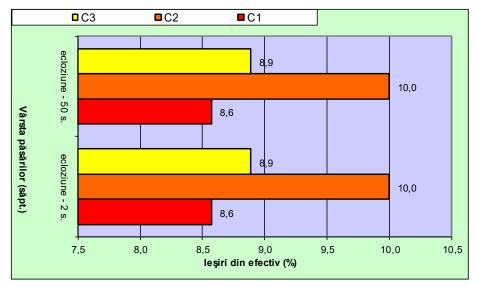


Fig. 3.- Flock casualties dynamics in the 3 farms of geese, White Rhine Dutch breed

CONCLUSION

Specimens of geese from the studied race can be used in bi- or triracial crossings, in order to maximize the hybrid vigor of the first generation (Dodu M. 2010).

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.

Also, consideration will be given to ensuring the access of birds (where applicable) to water, in order to capitalize on the existing food resources in the natural environment.

REFERENCES

Bălăşescu, M., Bâltan, Gh., Dascălu, AL., Vancea, I., 1980, Avicultură. Ed. Didactică şi Pedagogică, Bucureşti

Dodgson, J.B., 2000, Integrating quantitative and molecular techniques in selection for diseses rezistence. XXI World's Poultry Congress, Montréal, Canada, Aug. 20-24.

Dodu, M., 2010, Contribuţii la indentificarea şi dezvoltarea fondului genetic aviar din judeţul Bihor.Teză de doctorat,USAMV laşi.

Driha, A., 2000, Curs de Tehnologia creşterii păsărilor. Editura Mirton, Timişoara.

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., Boişteanu, P.C., Chelaru, A., 2002, Fiziologia animalelor domestice, Ed. Ion Ionescu de la Brad, Iasi

Oroian, T.E., Vlaic, A., 2001, Ameliorarea genetică a populațiilor de animale domestice, Ed. Academic Press, Cluj- Napoca

Popescu-Vifor, Şt., 1990, Genetică populaţiilor de animale domestice. Editura Ceres, Bucureşti.

Sandu, Gh., 1995, Modele experimentale în zootehnie, Ed. Coral-Sanivet, Bucureşti

Ţîrlea, S., 1995, Consideraţii privind producerea şi difuzarea materialului biologic avicol în Romania. Simpozionul Ştiinţific Naţional "Dezvoltarea zootehniei-o certitudine pentru viitor", laşi

Usturoi, M.G., 2008, Creșterea păsărilor. Editura Ion Ionescu de la Brad, Iași

Usturoi, M.G., 1999, Incubaţia la păsările domestice, Ed. lon lonescu de la Brad, Iaşi.

Usturoi, M.G., 2004, Producerea ouălor de consum, Ed. Ion Ionescu de la Brad, Iași.

Usturoi, M.G., Boişteanu, P.C., Vacaru – Opriş, I.,1999, Indici de calitate pentru ouăle de prepeliță destinate incubației artificiale. Simpozion Știinţific de Zootehnie cu participare internaţională, Iaşi 9-10 decembrie

Vacaru-Opriş, I., 1993, Tehnologia creşterii păsărilor. Vol I şi II. Lito, Universitatea Agronomică, Iaşi.

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