STUDY OF THE EGGS LAYING PERFORMANCE OF THE PHASIANUS COLCHICUS SPECIES IN THE PEDOCLIMATIC CONDITIONS OF BIHOR COUNTY

Monica Angelica DODU, Mirela Salvia CASĂU CRAINIC, Florin Gheorghe LUP, Călin Tănase LADĂR

[1] University of Oradea, Faculty of Environmental Protection, 26 Gen. Magheru St., 410048 Oradea; Romania, e-mail: monica_dodu@yahoo.com

RESEARCH ARTICLE

Abstract

In Bihor County, there are small populations of pheasants in the farms of breeders of purebred birds. These farmers appreciate the special quality of the meat, which is tender and juicy, but also the value of these birds as exhibition specimens. The County Forestry Directorate also owns a number of pheasant farms where young are obtained for the continuous population of forest areas.

Three farms were studied to identify the valuable resources that exist in these populations, with a number of 30 males and 173 females being analyzed.

Keywords: Dynamics of the incubation eggs, Dynamics of the eggs weight in the studied farms females, Dynamics of eggshell thickness, during laying period, Average laying intensity in the 3 studied pheasant populations

#Corresponding author: Monica Angelica DODU

INTRODUCTION

The species originated from the Asian continent, but is widespread throughout Europe, both in the natural environment, in hilly and lowland areas, but also in specialized farms, intended for meat production or for reuniting hunting herds.

This study only includes data collected from private breeders.

MATERIAL AND METHOD

In the three farms studied, 203 individuals were studied, of which 30 were males and 173 were females.

The individuals of the species Phasianus colchicus colchicus are distributed as follows: 56 female pheasants and 8 male pheasants, respectively 64 individuals in the first farm, 60 female pheasants and 8 male pheasants, respectively 68 individuals in the second farm and 64 female pheasants and 7 male pheasants, representing 71 birds in the third farm.

To carry out the research, the following equipment was used: digital analytical and technical balances, photogrammetry devices, and a computer equipped with spreadsheet software, depending on the experimental method used.

The results obtained were compared with reference values from the literature. (Sauveur B.,1988; Usturoi M.G., 1999; Vacaru-Opriș I. și col., 2002).

The experimental data obtained from the research were centralized and statistically processed.

RESULTS AND DISCUSSIONS

Egg weight measurements gave average values of 28.9±1.0g at the beginning of laying, 31.0±1.1g at the peak of laying, 31.4±1.4g in the plateau phase, and 32.1g towards the end of the laying cycle.

The measured values were within the requirements specified in the literature (29-35 g) for the appropriate weight of hatching eggs (Fig. 1).

The thickness of the mineral shell had a decreasing dynamic, from the beginning to the end of the laying period (Fig. 2).

Average values for this character were measured, 0.415±0.013 mm at the beginning of laying, 0.404±0.007 mm at the peak of laying, finally reaching an average thickness of the mineral shell of 0.375±0.008 mm, under conditions in which the uniformity of the populations was also average (v=9.8-10.4%).

For the format index, the values ranged from 74.0-74.8% and the uniformity of the populations was good to average (v=8.8-10.6%) (fig3).

The Haugh index showed a greater amplitude of variation, the minimum value being recorded at the beginning of laying (76.1±0.9UH) and the maximum at the end of laying (84.9±1.3%). The populations showed an average homogeneity for the studied character (v=12.5-12.9%) (fig4). Overall, the values approached the standard average (77 U.H.)

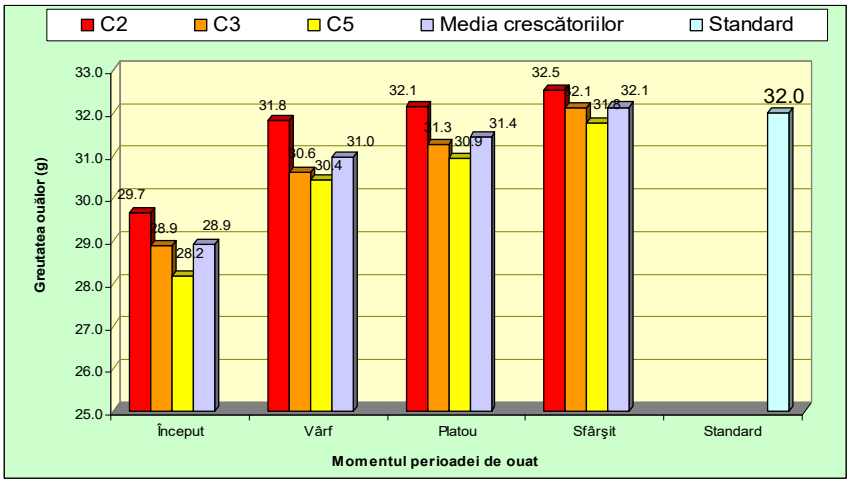

Fig. 1. Dynamics of the eggs weight, in the studied farms females

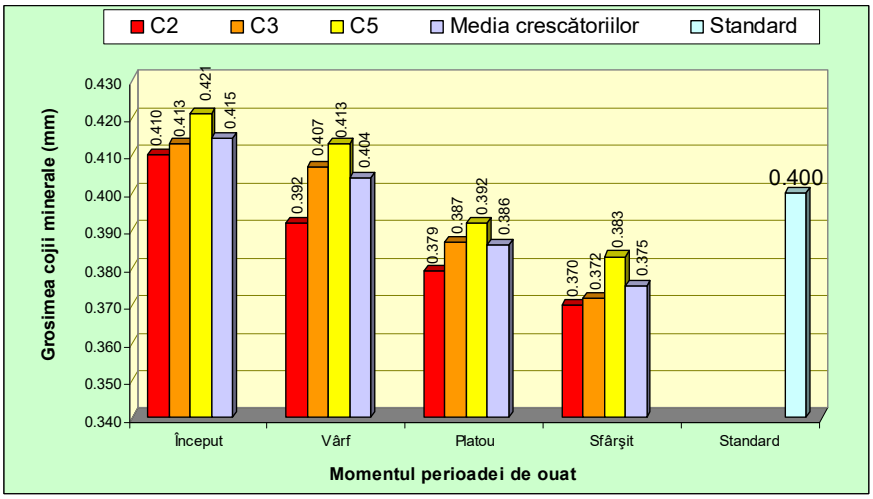

Fig. 2. - Dynamics of eggshell thickness, during laying period, in the pheasant females from the 3 studied populations

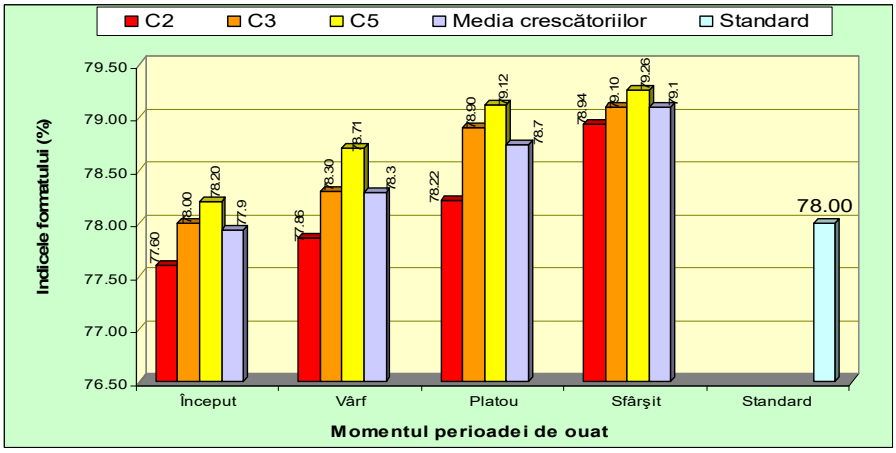

Fig. 3 - Dynamics of shape index, during laying period, in the pheasant females from the 3 studied populations

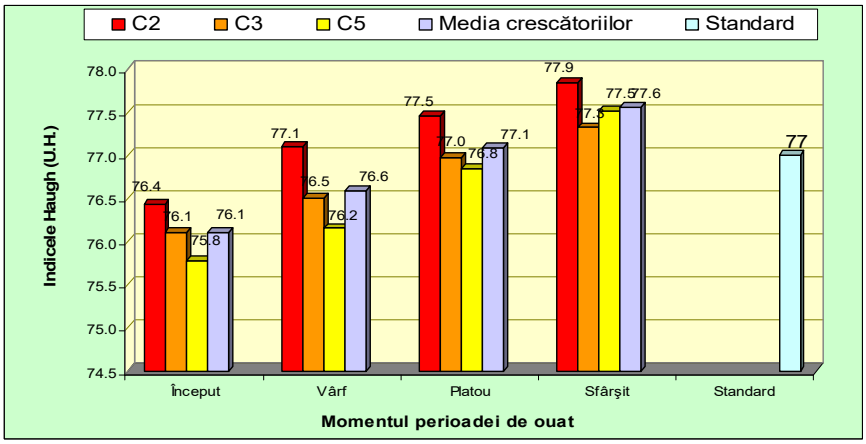

Fig. 4 - Dynamics of Haugh index, during laying period, in the pheasant females from the 3 studied populations

CONCLUSION

The prospects for increasing the number of common pheasants hunting flocks in private farms are uncertain, especially since most of the existing flock is kept strictly under control by state pheasant farms, which produce most of the biological material necessary to repopulate the hunting fund.

The study conducted determined a selection of valuable males to be used to increase the fertility rate in other similar populations.

Paternal lines are introduced into the breeding process because they generate genetic progress in terms of growth rate (quite low in the studied populations), superior feed utilization and some carcass quality elements (live weight, sensory quality of meat, etc.), and maternal lines must be selected for numerical egg production (Dodu M., 2010).

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 Iaşi.

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

Gîlcă, I., 1996. Aprecierea valorii de ameliorare a animalelor, Ed. Periscop, Iaşi

Grosu, H., Oltenacu, P.A., 2005. Programe de ameliorare genetică în zootehnie. Ed. Ceres, Bucureşti

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, Iaşi
Oroian, T.E., Vlaic, A., 2001. Ameliorarea genetică a populaţiilor 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", Iaşi
Usturoi, M.G., 2008. Creşterea păsărilor. Editura Ion Ionescu de la Brad, Iaşi
Usturoi, M.G., 1999. Incubaţia la păsările domestice, Ed. Ion Ionescu de la Brad, Iaşi.
Usturoi, M.G., 2004. Producerea ouălor de consum, Ed. Ion Ionescu de la Brad, Iaşi.
Usturoi, M.G., Boişteanu, P.C., Vacaru-Opriş, I.,1999. Indici de calitate pentru ouăle de prepeliţă destinate incubaţiei artificiale. Simpozion Ştiinţific 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-Opriş, I., 2000, 2007. Tratat de Avicultură. Vol I. Editura Ceres, Bucureşti.
Vacaru-Opriş, I., 2002, Tratat de Avicultură..Vol II. Editura Ceres, Bucureşti