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RESEARCH ON MORPHOPRODUCTIVE PERFORMANCE OF THE FOWL POPULATION IN BIHOR COUNTY

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Abstract

The populations of guinea fowls are raised Bihor county, both for meat and egg production. During the research performed there were studied birds appertaining to three private farms, from order Galliformes, genus Numidia, species Numida meleagris, gray guinea fowl. There were studied a number of 212 females and 40 males. It turned out that young males performed an approximately linear dynamic of weight progression: 277,5g at 3 weeks; 692,7g at the age of 8 weeks, 1001,7g at the age of 12 weeks respectively 1965,2g at achieving sexual maturity (28 weeks). The best growth performance was recorded at the cockerels from hennery 3. Regarding the case of pullets, character studied showed a similar pattern, achieving at the onset of laying an average weight of 1795,1g with limits 1761.8 ± 29,5g (hennery 1) and 1829.4 ± 26,1g (hennery 2). Males reached average weight of 2245,8g at 35 weeks of age, 2395,0g at the age of 50 weeks, respectively 2536,0g at the moment of the last checkweighing (65 weeks). In the case of adult females, weight gain was dimed, being known the fact that much of the energy and nutrient input of food is directed to egg production. The average weight reached at the end of the productive period was 2294,8g emphasizing poultry from the hennery 23 with a performance average of 2329.7 ± 80,9g.

Key words: Grey Guinea fowl, Body weight dynamics, mature males, mature females

INTRODUCTION

Is not known exactly the moment of multiplying herds of guinea fowl in the Northwest area of the country but it is known that the local population breed these birds, along with web-footed to get traditional meat products which have particular organoleptic properties.

MATERIALS AND METHODS

Studies were conducted on populations of gray guinea fowl (Numida meleagris) in some private henneries in Bihor County. Therefore the henneries were symbolically numbered C1, C2 and C3. The flock being of: 65 heads (10 males and 55 females) - in the first hennery, 99 heads (16 males and 83 females) in hennery C2 and 88 heads (14 males and 74 females) in the hennery C3. As biological material were used birds of both sexes at different ages (hatching juvenile period, at attaining sexual maturity, in active breeding period). To determine body weight was used the

gravimetric method, by individual weighing with analytical balance, performed at hatching and weekly for youth category, respectively monthly, for adult category.

All experimental data collected, as regards the studied characters and which presented measurable and quantifiable properties, were statistically centralized and processed.

RESULTS AND DISCUSSION

For cockerels, the total flock studied was of 40 individuals, divided as follows: 10 heads - hennery 1; 16 heads - hennery 2; 14 heads - hennery 3. In case of pullets was analyzed a flock of 212 birds distributed in the 3 henneries studied: 50 heads - hennery 1; 83 heads - hennery 2; 74 heads - hennery 3.

Analyzing the data in tables 1 and 2, it is noted that, as the youth gray fowl ages, populations become increasingly heterogeneous in terms of body development (v = 13.7% -17.8% at 28 weeks)

Table 1

Dynamics of body weight (g) in Grey Guinea fowl male youth, from the three studied farms

Age	C1 (n = 10)		C2 (n = 14)			C3 (n = 16)			Average (g)
	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	
1day	29,8	±0,4	4,2	30,9	±0,6	3,9	30,1	±0,8	4,60	30,3
1 week	98,7	±2,3	4,9	109,8	±2,4	4,5	101,7	±2,6	5,17	103,4
2 weeks	185,3	±4,3	5,6	203,9	±4,2	5,1	192,7	±4,4	5,73	194,0
3 weeks	257,4	±6,2	6,2	298,3	±5,9	5,6	276,9	±6,2	6,30	277,5
4 weeks	349,2	±8,2	6,9	386,6	±7,7	6,2	357,8	±8,1	6,86	364,5
5 weeks	431,7	±10,1	7,6	482,7	±9,5	6,8	449,3	±9,9	7,43	454,6
6 weeks	492,3	±12,1	8,3	559,2	±11,3	7,4	519,6	±11,7	7,99	523,7
7 weeks	591,5	±14,0	9,0	648,4	±13,1	7,9	608,1	±13,5	8,56	616,0
8 weeks	672,4	±16,0	9,6	712,4	±14,8	8,5	693,2	±15,3	9,12	692,7
9 weeks	759,7	±17,9	10,3	812,9	±16,6	9,1	801,5	±17,1	9,69	791,4
10weeks	821,3	±19,9	11,0	887,6	±18,4	9,7	854,9	±19,0	10,25	854,6
11weeks	918,4	±21,8	11,7	974,3	±20,2	10,2	947,8	±20,8	10,82	946,8
12weeks	976,5	±23,7	12,4	1024,8	±22,0	10,8	1003,7	±22,6	11,38	1001,7
14weeks	1109,8	±25,7	13,0	1196,7	±23,7	11,4	1152,1	±24,4	11,95	1152,9
16weeks	1215,6	±27,6	13,7	1321,2	±25,5	12,0	1279,4	±26,2	12,51	1272,1
18weeks	1397,1	±29,6	14,4	1492,6	±27,3	12,5	1442,8	±28,0	13,08	1444,2
20weeks	1516,2	±31,5	15,1	1605,7	±29,1	13,1	1569,8	±29,8	13,64	1563,9
22weeks	1587,4	±33,5	15,8	1698,2	±30,9	13,7	1637,2	±31,7	14,21	1640,9
24weeks	1729,1	±35,4	16,4	1824,6	±32,6	14,3	1786,4	±33,5	14,77	1780,0
26weeks	1831,9	±37,4	17,1	1943,7	±34,4	14,8	1883,4	±35,3	15,34	1886,3
28weeks	1908,7	±39,3	17,8	2019,3	±36,2	15,4	1967,7	±37,1	15,90	1965,2

Therefore, was observed an average weight of 30,3g at a day cockerels, value included between the limits of 29.8 ± 0.4g (Hennery 1) and 30.1 ± 0.8 g (Hennery 2). A similar situation was recorded in the case of pullets, in the first post-hatching day, registering an average weight of 27.7 g in the 3 henneries, included in the variation range of 27.3 ± 0.2g and 28.1

± 0.2g. In the case of male youth was observed an approximately linear dynamic of weight progression: 277,5g at 3 weeks; 692,7g at the age of 8 weeks, 1001.7g at the age of 12 weeks respectively 1965.2g at achieving sexual maturity (28 weeks).

The best growth performance was observed at the cockerels from the hennery 2 (total benefit from hatching to adulthood of 1988.4g).

Table 2

Body weight dynamics (g) in mature males of Grey Guinea Fowl, in the three farms

Age	C1 (n =9)			C2 (n =14)			C3 (n =12)			Avarage (g)
	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	$\bar{x} \pm s_{\bar{x}}$ (g)		V%	
29 wks	2012,9	±34,1	14,1	2095,7	±35,3	17,5	2043,7	±32,6	16,3	2050,8
30 wks	2049,3	±36,7	14,8	2125,6	±37,9	13,3	2079,7	±35,2	14,6	2084,8
31 wks	2085,7	±39,3	15,5	2155,5	±40,5	14,0	2115,6	±37,8	15,3	2118,9
32 wks	2122,0	±41,9	16,2	2185,4	±43,1	14,8	2151,6	±40,4	16,0	2153,0
33 wks	2158,4	±44,5	17,0	2215,3	±45,7	15,5	2187,5	±43,0	16,8	2187,1
34 wks	2189,2	±47,1	17,7	2243,3	±48,4	16,2	2216,9	±45,6	17,5	2216,4
35 wks	2219,9	±49,7	18,4	2271,2	±51,0	16,9	2246,2	±48,2	18,2	2245,8
36 wks	2250,7	±52,3	19,1	2299,2	±53,6	17,6	2275,6	±50,8	18,9	2275,1
38 wks	2281,4	±54,9	19,8	2327,1	±56,2	18,3	2304,9	±53,5	19,6	2304,5
40 wks	2293,3	±57,5	20,5	2340,6	±58,8	19,0	2317,3	±56,1	20,3	2317,0
42 wks	2305,2	±60,1	21,2	2354,0	±61,4	19,8	2329,6	±58,7	21,0	2329,6
44 wks	2317,0	±62,8	22,0	2367,5	±64,0	20,5	2342,0	±61,3	21,7	2342,1
46 wks	2328,9	±65,4	22,7	2380,9	±66,6	21,2	2354,3	±63,9	22,5	2354,7
48 wks	2349,1	±68,0	23,4	2402,6	±69,2	21,9	2372,9	±66,5	23,2	2374,8
50 wks	2369,2	±70,6	24,1	2424,3	±71,8	22,6	2391,4	±69,1	23,9	2395,0
52 wks	2389,4	±73,2	24,8	2445,9	±74,4	23,3	2410,0	±71,7	24,6	2415,1
54 wks	2409,5	±75,8	25,5	2467,6	±77,0	24,0	2428,5	±74,3	25,3	2435,2
56 wks	2429,7	±78,4	26,2	2489,3	±79,6	24,7	2447,1	±76,9	26,0	2455,4
58 wks	2444,7	±81,0	26,9	2507,8	±82,2	25,5	2461,9	±79,5	26,7	2471,5
60 wks	2459,6	±83,6	27,7	2526,3	±84,8	26,2	2476,8	±82,1	27,5	2487,5
62 wks	2474,8	±86,2	28,4	2544,7	±87,4	26,9	2491,6	±84,7	28,2	2503,7
64 wks	2489,9	±88,8	29,1	2563,2	±90,0	27,6	2506,5	±87,3	28,9	2519,8
65 wks	2504,9	±91,4	29,8	2581,7	±92,6	28,3	2521,3	±89,9	29,6	2536,0

Regarding pullets, studied character showed a similar evolution, achieving at the onset of laying an average weight of 1795 g, with limits of 1761.8 ± 29.5g (Hennery 1) and 1829.4 ± 26 1g (Hennery 2).

Therefore, males reached average weights of 2245 g at the age of 35 weeks, 2395.0g at the age of 50 weeks, respectively of 2536.0 g at the moment of last check weighing (65 weeks).

Therefore average weight reached at the end of the productive period was 2294.8g emphasizing poultry from the hennery 3, with an average performance of 2329.7 ± 80.9g. In the case of the adults, was observed an acute decrease in the population's uniformity, the coefficient of variation reaching, in the last period of control, values within the range of 28.1% - 31.6.

Results obtained in the experiments falls below the breed standard recommended by the specialized literature, which provides achievement of weights of over 2.12Kg for males, respectively over 1.87Kg for females. In the case of females, weight gain had a lower amplitude.

CONCLUSIONS

From the viewpoint of morpho-physiological characteristics can affirm that the studied specimens corresponded to the breed standard, successfully externalizing the specific characters. Hereby it is wanted the introduction of the pearl color on white background variety, due to the possibility of obtaining carcasses with superior aesthetic properties.

Regarding changes in body weight, in both sexes and age categories came under the specifications of literature, males reaching an average body weight of 2,53Kg at the age of 65 weeks, and females a weight of 1.79 Kg at the same age.

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