RAISING BROILER POULTRY AND EGG-LAYING CHICKEN IN ROMANIA

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Abstract: *Raising poultry has been an ancient occupation of the Romanian people because eggs and meat have always been a staple food for the humans. Poultry meat ranks among the most important animal foods due to its nutritive value and low production costs. This is the results of both quick multiplication and high efficiency (high meat productions with high profitability). Raising broiler chicken has known in recent years radical changes: it has become a productive branch with an important role in industry.*

Keywords*: Romania, production, meat, eggs, poultry*

INTRODUCTION

Medium- and long-term, there is a favourable evolution of the meat offer in the poultry-raising sector due to a high production rate. The main factors that determine the increase of the offer of poultry can be differentiated using the following categories [2,5,7,8,10]:

- *Meat-related factors*: evolution of the costs, diversity of the offer, nutrition-related factors, organoleptic factors, easiness of using pre-packed meat, etc.;
- *Production-related factors*: easiness of raising, easiness of feeding, resistance of the poultry to pathological situations, easiness of selection processes, easiness of organising the production [1,4,11];
- *Price level evolution-related factors*: very competitive on the market compared to other meat assortments.

The poultry market in Romania has a smaller capacity than that of other livestock because it is supplied almost exclusively by integrated “industrial” producers and from imports. Raising poultry in an industrial intensive system is the activity that supplies the necessary meat and eggs for the urban population, products that are important and accessible for the population [3,6,9,12].

MATERIAL AND METHOD

In our study, we have used information regarding the raising of chicken, ducklings and goslings in literature, press releases, statistics and bulletins from the National Institute of Statistics.

RESULTS AND DISCUSSION

Raising broiler chicken on the range

The production cycle in each populated series is 11 weeks, of which 8 weeks for growing and 3 weeks for depopulation, cleaning, disinfection, hall rest and equipment and installation repair works.

During the 3 weeks, they also fumigate, kill pests (insects and rats), and disinfect the premises and the access paths.

Two days before populating the hall, they introduce a 10-cm straw bedding and the equipment (feeders and waterers). They also practice a second fumigation.

When raising chickens on the range with a permanent bedding, we need to observe the following parameters: 17 chickens/m^2, 5% losses because of mortalities, 16.1 chickens/m^2 delivered at the age of 8 weeks, 1.6 kg mean weight of the chickens, 25.8 kg live weight of the chickens/m^2/cycle, 4.7 cycles/year, and 121 kg live weight of the chickens/m^2/year.

When populating the hall, the chickens are introduced in boxes equipped with a feeding and watering for their first period of life. The box is made of PFL, is circular and established 1 m far from the heater. Inside the box, there is a 10-cm straw bedding (sunflower and rice seed husks, straw, wood chips, etc.). In the box, there are 800-1,000 chickens and a feeder-waterer for every 100 chickens around the heater. The temperature below the heater should be 34-35 C^0, and in the hall, 25-26 C^0.

At the age of 4 days, the box is expanded; at the age of one week, the chickens need to be accustomed to eat and drink for the automatic feeder-waterers to allow the boxes and the equipment to be dismantled. An automatic tronconic feeder feeds 50 chickens and a circular waterer supplies water for 100 chickens – both set 50 cm apart.

For feeding the chickens are supplied the 21-1 feed recipe (for the chickens aged 1-4 weeks) and the 21-2 feed recipe (for chickens aged 5-8 weeks). A high-quality combined feed and a specific consumption of 2.6-2.7 kg feed/kg of weight gain, there is a mean increase of 26-27 g/head/day. Daily feed consumption per chicken oscillated between 14-15 g in the first week and 115 g/day in the last week [12].

Environmental factors should have the following values:

- Temperature below the heater: 35 C^0 in the first 3 days, after which it is reduced 1 C^0 every 12 days and then 1 C^0 every week;
- Humidity: below 60% during the first weeks and above 60% during the last weeks;
- Ventilation: current speed should not be above 0.1-0.2 m/s;
- Ammonium concentration: maximum 0.2/1000;
- Lighting: 23 h of light/1 h darkness (1st week); 2 h light/1 h darkness (2nd week); 1 h light/2 h darkness (3rd-8th weeks).

Temperature, ventilation and light should be controlled with thermostats and programming clocks.

Raising broiler ducklings on the range

Raising broiler ducklings is done under the following conditions:

- The starting box should harbour 500 heads;
- Feeding should be done from feeders (small trays): one feeder for 100 ducklings;
- Watering should be done through vacuum waterers: one waterer for 100 ducklings;

- Temperature in the first day of life should be 33-35 C^0, after which it is reduced with 1 C^0/day in the first week;
- The light programme should be 24 h/day in the first 2 days, after which it should be reduced to 23 h;
- The box should be expanded after 8 days to harbour the waterer, and it should be dismantled after 14 days;
- Between the age of 12 and 14 days, the density should be 8-9 heads/m^2;
- In the first 54 days, ducklings reach 2-3 kg in bedding raising;
- The weight gain is 41.5 g/head/day for a mean consumption of 3 kg feed/1 kg of weight gain.

Raising broiler goslings on the range

Raising broiler goslings should be done under the following conditions:

- Continuous flow raising should be done in 11-week cycles (8 weeks for growing and 3 weeks for cleaning, washing, disinfection and rest);
- Density upon populating should be 4 goslings/m^2;
- Live weight upon populating should be 260 g/head, and at 8 weeks, 4.5 kg/head;
- Daily mean weight gain is 78 g, for a consumption of 2.7 kg/weight gain; in the weeks 3, 4, and 5, daily weight gain is above 100 g. [www. madr.ro]

In the seasonal raising system, daily mean consumption is 200 g/head, and green matter consumption is 400-450 g/head/day.

Table 1 shows the total number of egg-laying hens in Romania and the Timiş County in both state and private sectors.

Table 1. Egg-laying hens on March 31, 2014, in Romania (heads)

Egg-laying hens (N)	Total sectors	State sector		Private sector			
		Total	Industrial unit	Total	Industrial unit	Private associations	Family farms
Romania	35.565.634	55.901	45.208	35.509.733	5.374.850	2.986.672	27.148.211
Timiş County	1.474.102	-	-	1.474.102	-	160.070	1.314.032

Source: National Institute of Statistics

We can see that there were, on March 31, 2014, 35,565,634 egg-laying hens in Romania, and 1,474,102 egg-laying hens in the Timiş County.

CONCLUSIONS

Poultry meat quality varies because live poultry are a mixture of all bird species at the end of egg-laying cycle to which they add the surplus of young birds.

The largest share of poultry meat comes from broiler chickens, followed by turkey, duck and goose. Because in Central and East-European countries a large share of this production comes from individual households, it is difficult to estimate with accuracy the number of poultry slaughtered or their weight upon slaughtering.

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