

The Influence of Yeast on Pheasant Performances

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Abstract. Study objectives are developed in line with modern techniques of analysis and aim: the analysis of physical-chemical implications of pheasants given hay and outstanding results in their weight gain, determination of crude protein, crude fat, lysine, methionine and yeast of fodder given the three categories of feeding pheasants, weight gain registration in the three categories of pheasants considered (pheasant chicks, pheasants for growth and maintenance). Pheasant food problem, the level and quality of administrated forage is one of the factors under the breeder control, and who may ultimately decide, economic growth and operating profitability pheasants. After improving enzymatic activity of nine strains of yeast *Saccharomyces* genus were identified and chosen the best strains of yeast, one of each kind, that a strain of bread, bakery and wine yeast. These three strains were gradually added in advanced feeding ration of pheasant chicks, pheasants for growth and maintenance. The addition of yeast in feed ration influences positively the weight gain of pheasants. The most complete and beneficial for growth and development of the three pheasant categories (pheasant chicks, pheasants for growth and for maintenance) was a feed ration with bread added yeast, followed by the addition of beer yeast.

Keywords: biotechnology, wine yeast, bakery yeast, brewer yeast, enzyme activity, physical-chemical properties, growing pheasants

INTRODUCTION

In the category of biologically active substances are yeasts and also microorganisms widely distributed in nature, which are necessary for the proper functioning of living organisms. Organic substances, like vitamins, in small quantities are essential for normal growth and development of living organisms, participating, besides enzymes and hormones to regulate and stimulate metabolic processes (Iancu, 2010). Knowing the physiological role of yeasts and their necessity, the study's hypothesis is: feed stimulating and high quality feed in the necessary quantities of various physiological pheasant, is indispensable to obtain high yields, a good health and reproduction of high index by diversifying feed ration with added different bread yeast and wine (Banu, 2002; Oprean, 2003; Wolf, 1996). Study objectives are developed in line with modern techniques of analysis and aim: the analysis of physical-chemical implications of pheasants given to outstanding results in their weight gain, determination of crude protein, crude fat, lysine, methionine and yeast of fodder given to three categories of feeding pheasants, weight gain registration in the three categories of pheasants considered such as pheasant chicks, pheasants for growth and maintenance.

MATERIALS AND METHODS

Because pheasant have been domesticated, its breeding in captivity has certain particularities, so that the sense of extensive, intensive and semi-intensive breeding is quite

different from the known poultry farm. (Gastineau, 1979) To create a pheasant farms we had to choose a quiet place, away from the wind, sun, where the grass dries easily.

After improving enzymatic activity of nine strains of yeast *Saccharomyces* genus were identified and chosen the best strains of yeast, one of each kind, that a strain of bread, bakery and wine yeast (Anghel, 1993; Oprean, 2002; Tița, 2010). These three strains were added gradually advanced feeding ration of pheasant chicks, a pheasant pheasants for growth and maintenance (Iancu, 2011). The primary endpoint was the analysis of physical-chemical implications of pheasants given hay and outstanding results in their weight gain. Thus, we determined the amount of crude protein, crude fat, lysine, methionine and yeast in the three categories of food given to pheasants.

Feeding system for each category of pheasants (pheasant chickens, a pheasant for growth and maintenance), carefully selected and managed, is presented below.

The weight gain was performed on a group of 10 pheasant chicks for 14 days. Pheasant chicks are reared in good conditions with artificial breeders, providing well balanced nutritious rations in terms of protein-vitamin–mineral (Tab.1.)

Tab. 1

Physical-chemical composition of mixed fodder supplemented with yeast, administered to pheasant chicks

Content	U.M.	The forage ration with beer yeast	The forage ration with bakery yeast	The forage ration with wine yeast
Crude protein	%	28.14	28.14	28.14
Crude fat	%	3.2	3.2	3.2
Lisine	%	1.68	1.68	1.68
Metionine	%	0.66	0.66	0.66
Yeast	%	1.2	1.33	1.33

Feed ration used for pheasant chicks was: corn flour, sifted barley flour, sifted oat flour, wheat feed, soybean meals, sunflower, wheat bran, chopped boiled eggs, milk powder, flour alfalfa hay, flour meat, blood, fish, fodder beer yeast, carrots, red or green fodder (alfalfa) meal of oysters (chalk fodder), bone meal and salt. For each kg of feed mixture we put also 40 mg vitamin A, 7.2 mg vitamin D2, 30 mg vitamin B2 (Iancu, 2011). First feeding will be done within 24 hours from birth. Growth and plumage coloration ration is ensured by the presence of cakes, sunflower and soya, and premix containing essential amino sulfonic group. It also contains a number of antibiotics necessary to defend the body against infectious diseases. This mix of concentrated can be given either dry (representing half of the grain-flour, cereals, meals, bran), either wet. Wet mixture will be given in small portions, 2-3 times per day, rarity to arrive at a meal. The amount of feed consumed daily by a young pheasant is relatively small, in the first 3 weeks of life, for example, a chicken consumed 330-350 g, 2-3 g daily for the first 3 days of life, reaching 30-35 g/day at 2 weeks of age.

The weight was register also for the pheasant chicks for growth on a group of 10 pheasant chicks in 14 days. During cold weather, feeding is done under the shelter of feeding, managing food ration in semi feeders placed on some stands at a height of 8-10 cm of soil. Food ration mixture was made of 35% corn grain, millet 20%, 10% hemp, sunflower 5% 5% soy and wheat or barley break 25%. Physical-chemical composition of mixed fodder supplemented with yeast, administered to pheasant chicks for growth is presented in Table 2. At the same time it provides about 10 g daily for each pheasant roots (carrots, beets, turnips), which arises during frosty to not freeze and cause digestive disorders. Daily food ration administration is once daily in the morning, always at the same time.

Tab. 2

Physical-chemical composition of mixed fodder supplemented with yeast,
administered to pheasant chicks for growth

Content	U.M.	The forage ration with beer yeast	The forage ration with bakery yeast	The forage ration with wine yeast
Crude protein	%	24.58	24.58	24.58
Crude fat	%	3.6	3.6	3.6
Lisine	%	1.38	1.38	1.38
Metionine	%	0.57	0.57	0.57
Yeast	%	2.8	2.75	2.75

The third category analyzed was the pheasants for maintenance, also o lot of 10, during 14 days. Daily feed for this category of pheasant should be more diversified. The core consists of: cereals-wheat, barley, oats, corn, millet, wheat bran, soy, peas, sunflower seeds, cauliflower seeds, acorns, meals or feed concentrate, cakes made of ground, with a rich protein and minerals/sunflower, soy, nuts, root crops-potatoes, fodder beet, carrots, radishes, green fodder-cabbage, lettuce, spinach, nettle, alfalfa, watercress, fruit-white acacia, elderberry, hawthorn, cranberry, rosehip.

Physical-chemical composition of mixed fodder supplemented with yeast, administered to pheasant chicks for maintenance is presented in Table 3.

Tab. 3

Physical-chemical composition of mixed fodder supplemented with yeast,
administered to pheasant chicks for maintenance

Content	U.M.	The forage ration with beer yeast	The forage ration with bakery yeast	The forage ration with wine yeast
Crude protein	%	17.01	17.01	17.01
Crude fat	%	3.4	3.4	3.4
Lisine	%	0.93	0.93	0.93
Metionina	%	0.49	0.49	0.49
Yeast	%	2.5	2.67	2.67

RESULTS AND DISCUSSIONS

Following diversification feeding stuffs ration different from yeast, the bread and wine were significant increases in weight of pheasants.

Results on the influence of the addition of yeast in the feed ration of pheasant chicks. Nutritional value of feed is given by their ability to meet the body energy and substances with plastic and bio-stimulator, the way they affect the health and animal production. It results that the nutritional value of forage depends primarily on their nutrient content but also the result of their interaction with the body. Monitoring weight gain was realized on a group of 10 young pheasants for 14 days and results are presented in Figure 1.

The largest increase recorded in the addition of yeast in feed ration showed a lot of pheasant chicks were feed with bread yeast. Thus, day 14, chickens fed with bread yeast increased with an average weight of 440 grams compared to the control group, which grew by 384 grams.

Results on the influence of the addition of yeast in the feed ration for growing pheasants. The feed and rations is seen as a result of interaction of biological relationships

between food and animal body. Average weight gain of pheasants for growth is shown in the Figure 2.

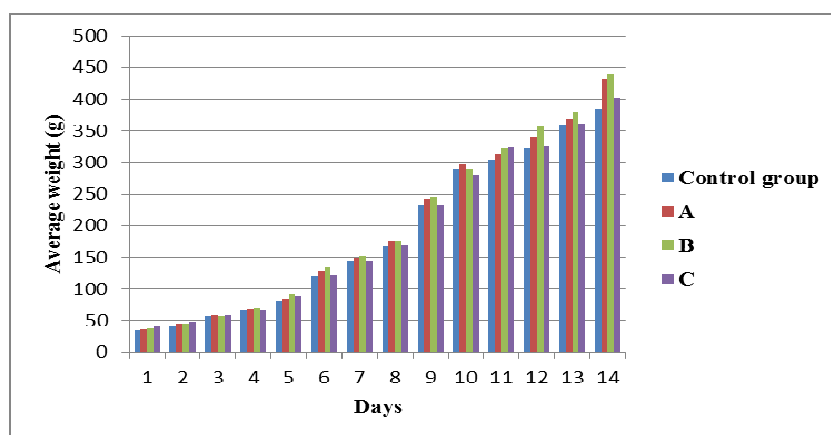


Fig. 1. Average weight gain of pheasant chicks according to the addition of yeast in the feed ration.

- A - Lot pheasant chicks that received feed rations enriched with beer yeast
- B - Lot of pheasant chicks that received feed rations enriched with bread yeast
- C - Lot pheasant chicks that received feed rations enriched with wine yeast

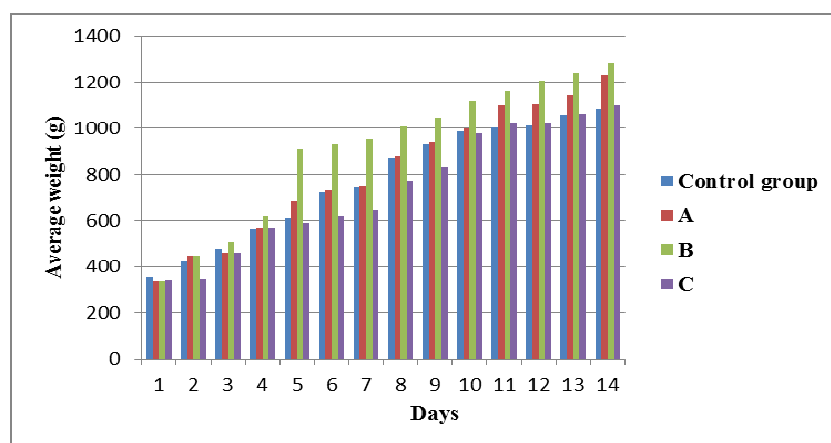


Fig. 2. Average weight gains of pheasants for growth based on the addition of yeast in feed ration.

- A - Lot pheasants to increase forage ration enriched with beer yeast
- B - Lot pheasants to increase forage ration enriched with bread yeast
- C - Lot pheasants to increase forage ration enriched with wine lees

As pheasant chicks, influence of the addition of yeast to feed of pheasants for growth has been positive, also in conclusion with other authors regarding the properties of this kind of yeast (Dabija, 2001; Pop, 2002). Favorable outcome classified using bread yeast in pheasants ration classified first; the maximum weight (weight average) is the 1281 grams, from 1084 grams recorded in the control group.

Results on the influence of the addition of yeast in the feed ration for pheasant maintenance. Life and livestock production are subject to uninterrupted energy consumption. Weight gain, the monitoring for 14 days of a sample of 10 pheasants is presented as follows in Figure 3.

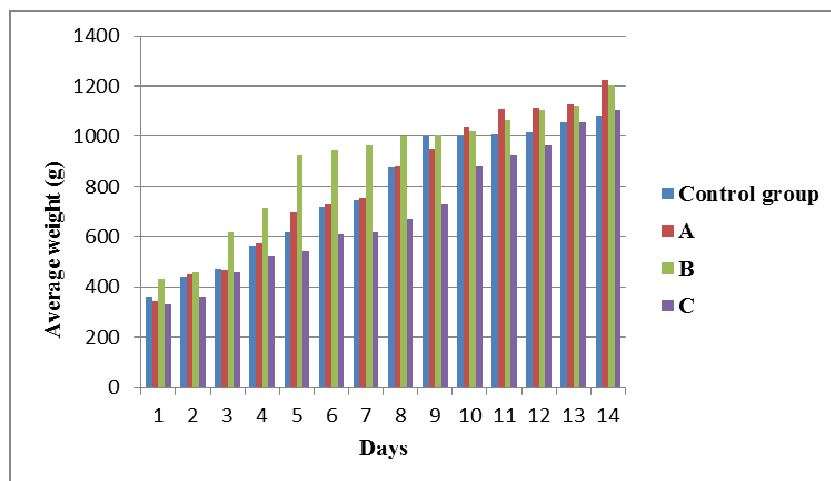


Fig. 3. Average weight gain for the maintenance of pheasants by the addition of yeast in the feed ration.

A - Lot pheasants for maintenance feed ration enriched with beer yeast
 B - Lot pheasants for maintenance feed ration enriched with bread yeast
 C - Lot pheasants for maintenance feed ration enriched with wine lees

As can be seen from Figure 3, the rate of weight gain pheasants for maintenance, according to the addition of yeast, is oscillating. Lot of pheasants receiving yeast showed a maximum, with the other additions, by day 9. Different absorption of yeast used, the 10-day feeding was a decisive, placing beer yeast first, against bread yeast. However, average weight recorded in the 14 days had a value of 898 grams for pheasants feed with bread yeast, from 818 grams to pheasants feed with beer yeast.

CONCLUSION

The addition of yeast in feed ration positively influences weight gain of pheasants. The most complete and beneficial for growth and development of the three categories of pheasant (pheasant chicks, pheasants for growth and for maintenance) was a feed ration with bread added yeast, followed by the addition of beer yeast.

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