ИЗСЛЕДВАНЕ НА ИЗПОЛЗВАНЕТО НА ХРАНИТЕЛНИ СМЕСКИ ПРИ БАВНОРАСТЯЩИ БРОЙЛЕРИ
STUDY ON THE USE OF FARM MIXTURES AT BROILERS WITH A SLOW RATE OF GROWTH

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Резюме**

В Румъния, за разлика от други страни и особено от страните в ЕС, значителна част от птичето месо се произвежда в домакинства, където птиците се хранят предимно със зърнени храни (царевица, пшеница) и евентуално с техни вторични продукти като пшеничени трици. Целта на изследването е да подчертае научно-икономическата ефективност на отглеждането на бройлери в домакинства, което е специфично за нашата страна, и възможностите за рационализиране на това производство. Изследването е проведено върху 4 партиди цветни бройлери (Starbro-Fermier), отглеждани подово, при осигурени нормални технологични параметри на отопление, осветление и вентилация. Използвани са четири програми за хранене с два типа фураж: стандартни комбинирани фуражи (пълноценни) и стартерни, гроуерни и финишерни. Фуражите са направени по специални домашни рецепти с 60% пшеница, 37% царевица и 3% пшеничени трици. От данните за продуктивността и за икономическата ефективност е установено, че при използването на домашни смески резултатите са по-ниски по всички показатели, в сравнение с използването на промишлени, а консумацията на фураж на бройлер е по-голяма 3,2 пъти и съответно 2,2 пъти.

Abstract

In Romania, unlike other european countries – especialy the ones from the EU, a significant part of the poultry meat production is acomplished in households, where the poultry is fed mostly cereal based foods (corn, wheat) and eventually their by-products, like wheat bran. The purpose of this research is to scientifically highlight the economic efficiency of growing broilers in the household system specific to our country and the posibilities to streamline this production. Research was carried on 4 lots of colored broilers (STARBRO-Fermier) raised on the ground; in the shelter the normal technological parameters of heat, light and ventilation were assured. Four feeding programs were used, with two types of fodder: standard combined fodders(complete) and starter, growth and finishing. The fodder were made after specific household recipes with 60% wheat, 37% corn and 3 % wheat bran. From both livestock performance data and of the economic efficiency ones we find that when using household mixture results in all aspects are much lower than when the specific consumption (IC) and feed consumption for broiler are greater by 3.2 times, respectively 2.2 times.

Ключови думи: домашно отглеждане, хранене, смес, ефективност, продуктивност.
Key words: household system, feeding, mix, efficiency, performance.

INTRODUCTION

Poultry meat continues to be the cheapest, this explains it's worldwide succes. The curent competitive situation is causing constant concern for increasing poultry meat production, especialy for the one from the chicken broilers (Ştefănescu et al., 1999).

In Romania, unlike other european countries – especialy the ones from the EU, a significant part of the poultry meat production is acomplished in households, where the poultry is fed mostly cereal based foods (corn, wheat) and eventualy their by-products, like wheat bran (Chiran et al., 2004).

A reduced growth rate, specific consumption of food and reduced eficiency are assumed with this feeding system which makes the price of meat prodution poultry not competitive, mostly because this production does not fit with the ecological products and that is because the rules

for ecological poultry meat production are not respected (Halga et al., 2005).

The purpose of this research is to scientifically highlight the economic efficiency of growing broilers in the household system specific to our country and the posibilities to streamline this production.

MATERIALS AND METHODS

Research was carried on 4 lots of colored broilers (STARBRO-Fermier) (*Ghid teoretic*) raised on the ground; in the shelter the normal technological parameters of heat, light and ventilation were assured. in each lot (group) were each 100 chickens.

Four feeding programs were used, with two types of fodder: standard combined fodders(complete) and starter, growth and finishing produced by S.C. Nutrimold S.A. Iasi. The fodder were made after specific household recipes with 60% wheat, 37% corn and 3% wheat bran (table 1). During the growth of the broilers a series of indicators were followed: the weight at the age of 42 days; the age at the weight of 500g; the total specific food consumption; total costs for kg of live meat.

Lot M (the control group) had the folowing feeding program: days 1-21 with starter fodder; days 23-35 with growth fodder; and days 36-42 with finishing fodder. For lot L1 the starter fodder was used for days 1-10, the growth fodder for days 11-24 and for the rest of the days the finishing fodder (Leonte, 2005).

The following feeding program was used for lot L2: days 1-10 starter fodder, and for the rest of the days a householde mixture, made of cereals (wheat, corn and wheat bran).

Таблица 1. Резултати за наддаване, хранително потребление и икономическа ефективност в зависимост от системата на хранене и вида на консумираната храна на Starbro-Farmer цветни бройлери

Table 1. Results for weight gain, food consumption and economic efficiency depending on the feeding program and the kind of food consumed- Farmer (Starbro) colored broilers

Lot/Партида	Feeding Program Хранителен режим	The type of fodder used Тип на използвания фураж	Weight Broilers at the age of 42 days (g) Тегло на бройлери на възраст 42 дни, g	The age for delivery weight of 1500 g (days) / Възраст при крайно тегло 1500 г (дни)	I.C***.	Consumption Fodder for broiler at delivery /Консумация фураж на бройлер преди клане, kg	Total costs lei/live kg Общо разходи леи/кг живо тегло
M	1-21 days / ден	N.C.starter */ стартерна	1500	42	2,09	3,32	5,6630
	22-35 days / ден	N.C.growth / *гроуер					
	36-42 days / ден	*N.C.finishing / финишер					
L1	1-10 days / ден	N.C.starter * / стартерна	1523	42	2,10	3,32	4,2270
	11-24 days / ден	N.C.growth / *гроуер					
	25-42 days / ден	*N.C.finishing / финишер					
L2	1-10 days / ден	N.C.starter* / стартерна	615	116	4,08	6,12	8,9760
	11 delivery-days / ден до клане	Household mixture* Домашна смеска					
L 3	0 delivery-day / от начало до клане	Household mixture** Домашна смеска	462	129	4,52	6,72	11,4250

** NC = combined fodder produced by S.C. Nutrimold Iaşi*

**NC = комбиниран фураж, производство на S.C. Nutrimold Яш*

*** household compound = 60% wheat, 37% corn. 3% wheat bran*

** домашна смеска = *60% пшеница, 37% царевица и 3 % пшеничени трици*

*** *I.C* = index of food consumption = amount of food consumed/weight

*** *I.C* = коефициент на усвояемост = количество консумирана храна/тегло

Таблица 2. Синтетични резултати (в относителни стойности M=100%), регистрирани при угояване на бройлери Starbro-Fermier

Table 2. Synthetic results (in relative values M=100%) recorded when growing "Starbro-Fermier" broilers

L O T ПАР-ТИДА	The type of fodder used Вид на използвания фураж	The weight at the age of 42 days / Тегло на възраст 42 дни	The age at the weight of 1500 g Възраст при тегло 1500 г	I.C.	Fodder consumption for one broiler Консумация на фураж на бройлер	Costs for kg of live broiler RON Разходи за килограм живо тегло на бройлер, румънски леи
M	N.C. *	100	100	100	100	100
L1	N.C.	101,5	100	99,5	100	74,7
L2	N.C. 1-10 days, after that, household mixture N.C. 1-10 ден, след което домашна смеска	41	276	195	184	152
L3	Household mixture Домашна смеска	30,8	307	216	321	201,7

** standard combined fodder*

** стандартен комбиниран фураж*

At lot L3 the household mixture was used for the whole period.

RESULTS AND DISCUSSION

By analising the data presented in tables 1 and 2 we find that livestock and economic results are enlightening regarding the requirement of using mixed fodders; their effect is superior in all aspects. We must specify that the Starbro-Farmer hybrid has a lower growth rate and the weight at the age of 42 days for lots M and L1 is consistent with the growth curve given by the company that produces them.

From the results obtained in groups M and L1, it appears that the use of combined fodders specific to broilers (ROSS 308 or STARBRO hard) is not associated with superior performance. Thus L1 at which the combined starter fodder was used for 10 days, and the growth and recovery fodders were like for lot M with reduced time use of expensive combined fodders has a reduced broiler price.

From both livestock performance data and of the economic efficiency ones we find that when using household mixture results in all aspects are much lower than when the specific consumption (IC) and feed consumption for broiler are greater by 3.2 times, respectively 2.2 times .

Results obtained in this study are similar to studies done by Leonte (2005).

CONCLUSIONS

1. Using mixed fodder for a starter period of 10 days and a growth a period of 14 days improved livestock performance; the weight at 42 days of 1523 g in group 4 compared with 1500 g in group M.
2. By making at L1 a weight of 1523 g, total expenditure per kg body weight were lower, representing 25.36% compared to group M.
3. Economically, the cost per delivered broiler doubles in group L3, although apparently the price of hay is lower, due to the increase in food consumption and prolonging growth.
4. Costs per kg of body weight at L2, where we used the combined fodder only during the first 10 days and then mixed household, increased by 52% compared to the control group.
5. Broilers from lot L2 had at 42 days only 41% of the weight the one form lot M had and those in group L3 achieved only 30.8% comparing to lot M.
6. For the broilers in lot L2 to reach delivery weight there were needed 74 extra days. For lot L3 there were needed 87 extra days.

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