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ANALYSIS OF ECONOMIC EFFICIENCY IN BROILERS FATTENING

ANALIZA EFICIENTEI ECONOMICE IN INGRASAREA PUILOR BROILERI

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The paper aimed to analyze economic efficiency in broilers fattening . In this purpose , the study was carried out at Breading Prod Commercial Company, Giarmata, Timis County . The economic and financial results of two series of broilers fattening have been comparatively analyzed based on the following specific indicators variable costs (one day chicken supply , medicines, disinfectants , veterinary services , straw bed, feeding, fuels, electricity , watering , labor force) , fixed costs (rent, interest, fixed assets depreciation , communication and other taxes), total production costs , cost per marketed broiler, cost per square meter , cost per kg live weight , gross margin , incomes (incomes coming from marketed broilers and subsidies) , profit, profit rate , profit per marketed broiler, profit per square meter, profit per kg live weight , costs to 1,000 incomes and incomes to 1,000 costs. This comparison proved that the higher the chickens series size , the higher costs and incomes . The both fatenning series have profitable but the series S2 registered lower financial performances .

Keywords: analysis, economic efficiency , broilers fattening

Introduction

Broilers fattening is considered the most efficient activity in poultry farming and compared to other branches of Animal Production , could also be considered the most efficient one at the moment in Romania (1,6) . It has become a real industry of aviculture because the lenght of fattening is the shortest one , an amount of 2.4 or 2.6 kg live weight is produced in the fastest way , due to the high biological performances of the specialized hybrids , high conversion of fodder into high quality meat with a lower content of cholestrole compared to other sorts of meat and high quality protein (2,3,4) . From an economic point of view , broilers fattening is a very efficient activity as high performances in animal production are achieved at the lower costs compared to other species such as young steers fattening or pig fattening (4, 5,6) .

This paper aimed to present a study regarding economic aspects in broilers fattening in a private farm producing about 170 tons live weight per series in 45 days .

Materials and Methods

The paper was carried at Breading Prod Commercial Company , Giarmata , Timis County during the year 2008. The data have been collected from two series of broilers fattened at Ortisoara Farm : Series S1 , Spring 2008 (February 4 - March 24, 2008, lasting 45 days) and Series S2 , Fall 2008 (October 23 - December 9 ,2008 , lasting 48 days) . The economic efficiency has been assessed by means of the following specific indicators : variable costs (one day chicken supply , medicines, disinfectants , veterinary services , straw bed, feeding, fuels, electricity , watering , labor force) , fixed costs (rent, interest, fixed assets depreciation , communication and other taxes), total production costs , cost per marketed broiler, cost per square meter , cost per kg live weight , gross margin , incomes (incomes coming from marketed broilers and subsidies) , profit, profit rate , profit per marketed broiler, profit per square meter, profit per kg live weight , costs to 1,000 incomes and incomes to 1,000 costs. All these indicators are expressed in Euro at the exchange rate : Euro 1 = Lei 3.78 for the Series S1 and Euro 1 = Lei 3.98 for S2.

Results and Discussion

The Variable Costs have been Euro 136,901 for S1 and Euro 152 ,553 for S2. Therefore , the series S2 registered costs by Euro 15,652 or 11.49 % higher than S1 (Table 1).

The variable costs were influenced by the number of chickens at the beginning of fattening : 66,000 heads for S1 and 68,400 heads for S2 and the price per one day chicken :Euro 0.38 /head in case of S1 and Euro 0.36 /head in case of S2.

Medicines , disinfectants and veterinary services counted for Euro 2,037 in case of S1 and Euro 2,005 in case of S2.

Straw bed cost was Euro 463 in case of S1 and Euro 503 in case of S2. This cost item depended on the number of straw ballots used per series (500 ballots for S1 and 800 ballots for S2) and the ballot price .

Feeding costs registered Euro 98,796 for S1 and Euro 113,550 for S2. This cots item was influenced by ratio structure (Prestarter 5.35 % , Starter 16.07 % , Grower 42.85 % , Finisher 35.73 %), the amount supplied of each sort of recipe and the price per recipe . The total amount of combined fodder for S1 was 302,174 kg and for S2 365,673 kg, assuring a food consumption per broiler for the whole fattening period of 4.72 kg for S1 and , respectively 5.54 kg for S2.

Fuel costs recorded Euro 3,187 for S1 and Euro 4,647 for S2. It was determined by the amount of fuel used and its price.

Electricity , required for the functioning of feeding, watering , heating and washing installations , registered Euro 1,852 for S1 and Euro 2,010 .

Watering cost was Euro 265 for S1 and Euro 377 for S2.

Labor cost registered Euro 5,661 for S1 and Euro 5,377 for S2. The farm has 6 full time employees (4 workers , 1 zootechnician and an accountant) and also part time employees on the occasion of broilers out and loading in the trucks, manure and straw bed out and fattening blocks cleaning and disinfection.

Table 1

Variable Costs by broilers fattening series in the year 2008 (Euro)

Crt. No	Cost Item	S1	S2	Differences S2-S1
1	One Day chickens supply	24,640	24,084	- 556
2	Medicines , disinfectants , veterinary services	2,037	2,005	- 32
3	Straw Bed	463	503	+40
4	Feeding	98,796	113,550	+14,754
5	Fuel	3,187	4,647	+1,460
6	Electricity	1,852	2,010	+158
7	Watering	265	377	+112
8	Labor force	5,661	5,377	- 284
9	VARIABLE COSTS	136,901	152,553	+15,652

Table 2

Fixed Costs by broilers fattening series in the year 2008 (Euro)

Crt. No	Cost Item	S1	S2	Differences S2-S1
1	Rent	2, 400	2, 400	-
2	Interest	2,381	2,381	-
3	Depreciation	1,310	1,310	-
4	Communication	529	529	-
5	Environment Tax and other taxes	220	220	-
6	FIXED COSTS	6,840	6,840	-

The Fixed costs registered Euro 6,840 in case of S1 and Euro 6,840 in case of S2. They included rent cost Euro 2,400 (Euro 1,200 per month x 2 months /series), interest to the credit line Euro 2,381 per two months /series , phone calls costs Euro 529 per two months, environment tax and other taxes Euro 220 and depreciation of fixed assets Euro 1,310 (feeding equipment, watering equipment, heating equipment, ventilation equipment, assisting computer , sprayers etc) as shown in Table 2 .

The Incomes registered Euro 199,120 for S1 and Euro 183,365 for S2 , of which incomes coming from marketed broilers represented about 71.32 % for S1 and 85.52 % for S2 (Table 3).

The incomes coming from chickens were determined by the number of marketed broilers (64,020 heads in case of S1 and 66,006 heads in case of S2) , average live weight at delivery per series (2.36 kg/head in case of S1 and 2.64 kg /head in case of S2) , total live weight per series at delivery (151,087 kg for S1 and 174,256 kg for S2) and the market price per kilogram live weight (Euro 0.94 /kg for S1 and Euro 0.90 /kg for S2). Therefore , the income coming from marketed broilers counted for Euro 142,022 for S1 and Euro 156,830 for S2.

The income coming from subsidies represented Euro 27,098 for S1 and Euro 26,535 for S2. According to the regulation in force , the Government subsidy is Lei 1.6 per every chicken delivered at a live weight higher than 1.95 kg.

Table 3

Incomes in Broilers fattening by series in the year 2008

Crt No	Specification	M.U.	S1	S2	Differences S2-S1
1	Number of Marketed broilers	Heads	64,020	66,006	+1,986
2	Average broiler live weight at delivery	Kg/head	2.36	2.64	+0.28
3	Broilers total live weight at delivery	Kg	151,087	174,256	+23,169
4	Price per kg live weight	Euro/kg	0.94	0.90	- 0.04
5	Incomes from marketed broilers	Euro/series	142,022	156,830	+14,808
6	Incomes from subsidies	Euro/series	27,098	26,735	-563
7	INCOMES	Euro	199,120	183,365	-15,755

Financial Results are presented in Table 4 . Gross Margin recorded Euro 62,219 in case of S1 and Euro 30,812 in case of S2 . As a result , profit was Euro 55,379 in case of S1 and Euro 23,972 in case of S2. Therefore , the both series are profitable , but the series S2 is less profitable as costs are by 10.88 % compared to the costs registered by series S1 and incomes are by about 8 % lower compared the ones registered by S1.

Parameters of economic efficiency are presented in Table 5 . The data show that the incomes of the series S2 are lower in comparison with the incomes registered by the series S1. On the contrary, the costs are higher in case of S2 compared with the cost registered by S1.

Table 4

Financial Results in broilers fattening by series in the year 2008 (Euro)

Crt. No	Specification	S1	S2	Differences S2-S1
1	Incomes	199,120	183,365	-15,755
2	Variable Costs	136,901	152,553	+15,652
3	Gross Margin	62,219	30,812	- 31,407
4	Fixed Costs	6,840	6,840	-
5	Profit	55,379	23,972	-31,407

Table 5

Parameters of Economic Efficiency in Broilers fattening by series in the year 2008

Crt No	Specification	M.U.	S1	S2	Differences S2-S1
1	Income per marketed broiler	Euro/head	3.11	2.78	-0.33
2	Income per square meter	Euro/s.m.	49.78	45.84	-3.94
3	Income per kg live weight	Euro/kg	1.32	1.05	-0.27
4	Cost per marketed broiler	Euro/head	2.24	2.41	+1.07
5	Cost per square meter	Euro/s.q.	35.93	39.84	+3.91
6	Cost per kg live weight	Euro/kg	0.95	0.91	-0.04
7	Profit per marketed broiler	Euro /head	0.87	0.37	-0.50
8	Profit per square meter	Euro/s.m.	13.85	6.00	-7.85
9	Profit /kg live weight	Euro/kg	0.37	0.14	-.023
10	Costs to 1,000 incomes	Euro/1,000	722	869	+147
11	Incomes to 1,000 costs	Euro/1,000	1,385	1,150	-235
12	Profit Rate	%	38.52	15.03	- 23.49

As a result , profit per marketed broiler was Euro 0.87 in case of S1 and Euro 0.37 in case of S2, profit per square meter was Euro 13.85 in case of S1 and Euro 6 for S2 and profit per kilogram live weight was Euro 0.37 for S1 and Euro 0.14 for S2.

Finally , the profit rate was 38.52 % for S1 and just 15.03 % for S2.Therefore, the both series of broilers were profitable , but S2 registered a lower result . The causes could be found in the difference of exchange rate between Spring series and Fall series , the longer length of the second series (48 days for S2 compared to just 45 days for S1) , the increased prices for the second series leading to higher costs .

Conclusions

1.This comparison proved that the higher the chickens series size , the higher costs and incomes .
2.The both fatenning series have profitable but the series S2 registered lower financial performances due to the exchange rate (Romanian Lei depreciation) and the increasing input prices.
3.Also, the longer duration of fattening for S2 have had a deep inpact on feeding consumption and cost . Feed consumption per marketed broiler was 5.54 kg for 48 days in case of S2 compared to 4.72 kg for 45 days in case of F1 . The length of fattening was longer , because the slaughterhouse did not respect the contract concluded with the farmer to receive broilers at the specific date .
4.Microclimate conditions in case of series S2 were not so corresponding leading to higher mortalities compared to S1 , with a deep impact on the live weight delivered at the end of fattening and incomes coming from marleted broilers.
5.As a final conclusion, the farmers must continuously keep production costs under control and pay more attention to the selection of his clients .

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