Acta Agraria Kaposváriensis (2002) Vol 6 No 2, 231-235
Kaposvári Egyetem, Állattudományi Kar, Kaposvár
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Some characteristics of egg production on small farms in Somogy county

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ABSTRACT

In the small farm animal production is so caracteristic in Hungary. One of them the egg production, wherein is nearly the falf of the all yearly production. There is a lot of question, how the small farms manage. In our examination we try to find some answer.On our result the small farms have positove and negative side also, and have chance to survive the joining of the EU.
(Keywords: egg production, small farm)

INTRODUCTION

Nowadays it is more and more obvious that the developed industrialised countries of the integrating Europe head for a direction that would cease the laying battery system through limiting this technological solution. In the background it is the strengthening of green movements and the pressure of animal welfare groups who fight for "animal welfare."

The more and more stringent animal protection laws of the EU will induce severe changes in laying hen management (*Botos*, 1999; *Szekeres*, 1999).

Out of the animal management tightenings we should highlight the increase of floor space per laying hen, the tightening of mechanical feeder and drinker system and other animal management conditions. Besides these things the product marketing conditions will also change (*Latouche*, 1999; *Sandoe*, 1999). Since the current Hungarian requirements are much more permissive than in the EU when we become member of the Union the sector should make very heavy investments to implement intensive production. It should be mentioned that the requirements are not valid for laying hen stocks below 300 heads that would be of paramount importance for small farms.

The preparing Hungary has several features, characteristics. Out of these perhaps the most important is that a serious proportion of egg production volume (about 50%) is produced by individual farmers by extensive and semi-intensive, periodical production. According to the statistical office and the product council the role of small farms seem to decrease, a marketing problem still exists in the domestic market. It is caused by the periodical production since the production of the very high proportion of stocks around the house is concentrated to the long-day period (from spring to autumn). One of its consequences is the serious fluctuation of the egg price in the different periods of the year that has influence on the profitability of the intensive farms.

The aim of the experiment was to examine whether the small farms playing significant role in the production volume comply with the animal protection

requirements in egg production of the EU and what kind of possibilities and reserves they have. We examined the profitability issues of the production, too.

MATERIALS AND METHODS

We chose the following methods for the issues determined in the aims.
The survey of the basic parameters of egg production on small farm:
- We performed 200 questionnaire surveys at county level (Somogy County).
- The survey was representative on the basis of the county settlement structure and population distribution.
- Contingency is provided by the "random walk" process.
- The experiment was performed in 1999-2000.

The examined parameters
The survey of egg production on small farms:
The examined parameters in egg production on small farms were grouped into four sections, the questionnaire aimed at the following issues.
- Basic data: hen stock at farmer, production capacities, survey of stocks according to type of use, produced eggs, stock purchase.
- Animal nutrition: daily quantity of used feed, the content of daily used feed, annual quantity of feed per laying hen, annual cost of feed per laying hen.
- Other factors of production: produced quantity for own consumption, for sales, working hours of production, original cost of animals, direct costs per laying hen.
- Calculated values: cost price of produced eggs, proportions of costs per laying hen, specific profit in the case of sales.

Processing of experiment data
In the case of surveying the basic parameters of egg production on small farms
- Data input into computer (Microsoft Excel)
- Ranging of data lines
- Calculation of basic statistics (mainly mean value, class frequency)
- Comparison of results from the point of view of animal welfare (mainly on the basis of number of laying hens per m^2)
- Evaluation of the received economic and breeding indicators.

At the end of the Material and methodology Chapter we should mention that this survey on egg production on small farms is beyond example so we did not have the possibility to compare the data. We also had troubles with elaborating the methodology of the experiment.

RESULTS AND DISCUSSION

The number of hens was 22 on the average at the farms. In the survey we paid special attention to the m^2 per laying hen that is one of the most important factors in animal welfare. On the basis of it we grouped the farmers: those who are able to comply with the „free range" (organic) way of production – at least as regards the m^2 per laying hen. The base of comparison is provided by the current requirements: minimum 2.5 m^2 run per laying hen is necessary. For this we examined and measured the size of the area for hen management then we divided it by the stock sizes. On the basis of the received values we can say that 75% of the stock produces under such "happy" conditions. We

placed the use classification of animal livestocks to the farmers. According to their answers out of the hens in the examined farms 57% was laying hen, 37% dual-use and about 6% hobby poultry.

We found large differences in the annual egg production per laying hen (minimum 110 pieces/year, maximum 230 pieces/year). The indicator was 163 pieces per laying hen on the average, the farmers determined the average production intensity as 53.3% while the peak intensity indicator as 87%.

Feeding

A significant proportion of egg production is feed cost. We calculated the feed quantity per laying hen as 201.5 g/laying hen/day; it was much higher than in the case of livestocks kept intensively in batteries: 120-130 g/laying hen/day. The reason is, on the one hand that all the examined stocks were kept in free run; on the other hand the heterogeneous genotypes and age of the stocks.

Economic parameters (calculated values)

We converted the annual feed consumption per laying hen into costs. In the first case we calculated with the purchasing costs of feed (provided by the farmers) and in the second case we used the cost prices of cultivation. We performed both calculations and found that the purchase prices by the farmers were much less than the cultivation cost prices given by the AKII (5.6). The reason for it that in 1998 the selling price of the cereals did not cover the costs of production. So the calculated average annual feed cost per laying hen was HUF 1.097 in the case of purchase and it was HUF 1.353 in the case "burdened" by the cost price.

42% of the interviewed farmers sold the proportion above the own consumption. It is interesting that the above-mentioned farmers possessed 54% of the stock, it means that they had stock size above the average. As regards capacity, the same farmers would like to enlarge their stocks.

The daily working time per laying hen was 3.13 minutes. If we tried to convert these figures into costs and we used HUF 200/hour hourly wages as the cost of the work of the farmers then we would reach a cost that is much higher than the feed cost is.

In terms of costs we were not able to calculate with the amortization costs of buildings since the average age of the buildings in the examined small farms were above 20 years. Similarly, we were not able to calculate with the amortization costs of the machinery, too.

At the costs we took into account feed costs, purchase costs of animals, costs of renovation and disinfection of buildings, electricity costs (lighting, grinder). We calculated the proportions of annual costs per laying hen on the basis of these direct costs and the different feed costs. The direct cost is HUF 1.724 in the case of own-produced feed while HUF 1.468 in the case of purchased feed (laying hen/year).

As knowing the average egg production/hen we calculated the cost price per egg. Besides the differences in feed purchase we also took into account that in many cases the examined small farms used the culled hens so we calculated the direct costs decreased by the hen cost, too. *Figure 1* shows that feed cost has the largest influence on the cost price per egg, nevertheless the use of culled hens increases the profit.

We compared the cost price figures with the average market prices in 1999 (Source: Statistical Office, Somogy County: Monthly consumer prices at the markets in Kaposvár) so we received the specific profitability indicators (*Figure 2*).

Figure 1

Average cost price per egg of the examined small farms

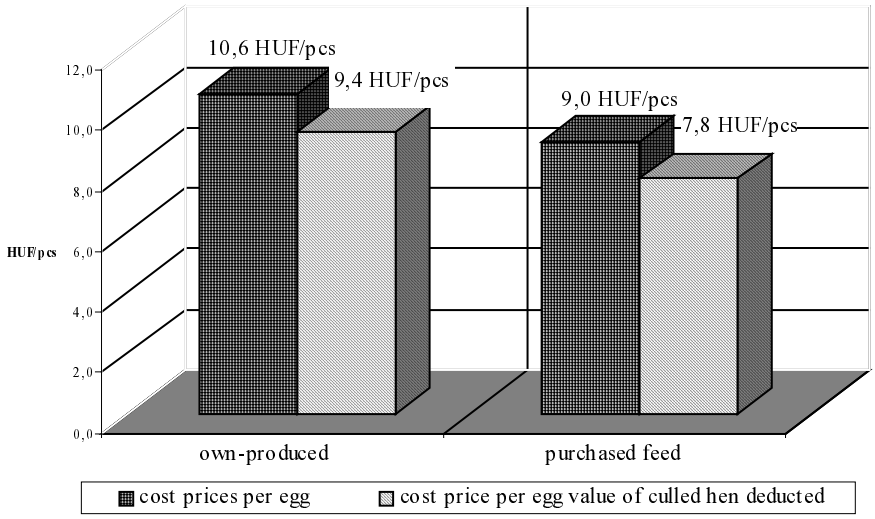
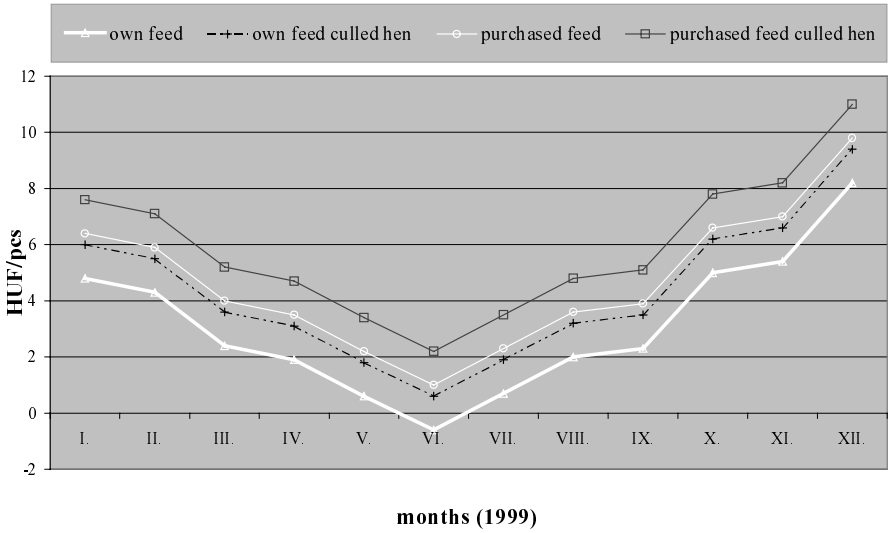


Figure 2

The development of specific profit at the examined farmers with different cost price calculations



Source of market prices: Statistical Office, Somogy County monthly consumer prices at the market in Kaposvár, 1999

The results showed that specific profits were very high. Farmers realised average HUF 3.08/pieces in the least favourable case, and HUF 5.9/pieces in the most favourable case. At the same time one should know that cyclical effects significantly bias these relatively good average figures.

CONCLUSIONS

Besides its negative features (cyclical effects and their consequences), egg production on small farms has many advantages compared to factory farms. We should mention the quick reaction to market conditions and the fact that it is able to produce special products due to the extensive management.

In spite of the low production indicators the farmer (if he sells the product himself) could gain significant (gross) income. It would be the most successful to reduce seasonality to a minimal extent (e.g. use of lighting). Due to the small stock, however, it would be, anyway, the rational increase of livestock; in this case not only the specific profits would be higher but also the bulk of profit.

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