MARKET RESERVES IN RELATION TO SEASONALITY

REZERVELE PIEȚEI ÎN CORELAȚIE CU SEZONALITATEA

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The European Union permanently relies on import of lamb and goat. More than 90% of the Hungarian sheep meat export goes to the Italian market, while the majority of the rest to Greece. More than 90% of the turnover of sheep sector (12-13 billion HUF) is from lamb sales. Based on the data of Hungarian lamb export, it can be stated that farmers achieve the highest and lowest prices at Christmas and in May, respectively. Prices fluctuate the most in the Easter period, since the supply is the greatest at this time. The average selling weight at Easter and at Christmas is 1-2 kg lower than the 21 kg average weight of eight years.

Key words. lamb export, seasonality, purchase price, average weight

Introduction

The meat products of the Hungarian sheep sector are mainly sold to Italy. The average weight of live lambs sold is between 19-20 kg. In some periods, the market demands lambs of higher weight, at these times, lower price is paid for lambs of smaller weight.

In our study, we analysed the seasonality of live lamb export sales (prices, average weight, number of lambs sold) for the period of 1998-2005 based on the database of the Sheep Product Council.

Our aim is to support the farmers in decision-making, so that they breed and produce according to the market requirements, that they sell for demand, thereby, the present instability of sales could be reduced and the profitability of sheep keeping would improve.

Among the exported sheep products, lamb (slaughter lamb) and live animal export are of determining importance. It should be noted that sales within the EU are not considered export since 1 May 2004 (Nábrádi et al, 2006).

The market for live slaughter lambs in the 1960s and 1970s was the Middle East, which has changed. Today, only some tens of thousands of animals are sold to outside the EU (Croatia, Bosnia, Switzerland) (Nábrádi,1998). More than 90% of the Hungarian sheep meat export goes to Italian markets. Consequently, the product supply and demand, the selling weight and the level of processing are very limited (Jávor et al., 2001).
Animals sold from Hungary are exported partly as sucking and mostly as weaned lambs, therefore, the average net weight of exported animals has been between 19-21 kg for years, so the majority of sales is in the categories of 16-20 and 20-24 kg (Békési, 2006). Regarding slaughter weight a small reduction can be observed during the studied years (Kukovics, 2006). This is mainly due to the fact that very few farmers fatten lambs to higher weight, because they consider it expensive. In addition, according to Békési (2006), there is no demand for animals of small weight in certain periods, or the Italian traders buy it for considerably lower prices. Based on the analysis of the data from the period 1998 and 2005, it can be stated that the export reduced by 2224 animals on average. In 2005, 788 591 slaughter lambs were exported, which is, similarly to previous years, practically equal to Italian export.

Materials and Methods

In studying the seasonality effect, we tried to determine to what extent seasonality diverts the values of the time series from the basic trend. In some time series, data for periods shorter than one year show a repeating, constant periodical pattern. It is a frequent phenomenon in business, especially in agriculture, which has an effect on the profitability of farming (Ertsey, 2002).

In the analysis, we have studied to what degree or what proportion the values of the time series deviate from the basic trend.

Results and Discussions

Slaughter lamb export has three main seasons, Easter, Ferragusto and Christmas. According to the Hungarian breeding traditions, the largest supply of slaughter lambs is at around Easter, since propagation happens generally at the end of summer or beginning of autumn and lambs become ready for sale by Easter (Békési, 2006). Based on the available data, we have studied the sales data of different seasons (amount, price, average weight) and observed how they changed as compared to the basic trend. When studying the number of exported animals (Figure 1), it can be stated that peaks in demand in March-April and December have a strong impact on the exported volume, but the effect was different among years. The most intensive export period was Easter in all years.

![Figure 1: Changes in the number of exported animals between 1998 and 2005](image-url)
**Source:** own calculations based on the data of the Sheep Product Council

Based on the data of the period 1998-2005, the seasonal deviation shows (Figure 2), that in the second quarter of the year the number of animals sold was 29,720 higher on average than the basic trend. In the third quarter of the year, the sold amount was slightly lower than the trend values, while in the first and fourth quarters, the sales were lower.

![Figure 2: Seasonal deviation in the number of animals sold based on the data of 1998-2005](image)

**Source:** own calculations based on the data of the Sheep Product Council

Considering the eight years, four months should be mentioned. March of 1999 (207,804 animals), April (212,629 animals) and December of 2001 (177,541 animals), and April of 2003 (175,826 animals). Based on the monthly data of the seasonal deviation, the three main seasons can be distinguished (Figure 3). In the studied period, the number of animals sold in March, April, August and December was 57,737, 51,252, 21,137 and 67,943 higher than the trend values. Sales drop considerably after main seasons and no significant changes can be observed until the next peak. Sales minimums can be observed in January and October, when the exported amount is not or slightly higher than 20,000 animals.

![Figure 3: Seasonal deviations in the number of animals sold based on the monthly data of the period 1998-2005](image)

**Source:** own calculations based on the data of the Sheep Product Council

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In sum, it can be stated that the cycles within the year were similar in all years (Figure 3). The largest export happens at Easter and Christmas, which make up for 30% and 20% of the total export, respectively.

The average weight of the eight years was 21 kg. Based on the seasonal deviations, it can be stated that the average selling weight was 1.4 kg, 2.15 kg and 1.26 kg lower in March, April and December, respectively. The average weight of August was around the same as the trend (Figure 4).

When studying the seasonality of prices (Figure 5), it can be observed that the highest positive and negative deviations from the trend were at Christmas and in May, respectively. When studying the monthly prices, it can be stated that recently, the rise of prices starts already in October.

![Figure 4: Seasonal deviations in the average weight based on the monthly data of the period 1998-2005](image)

*Source:* own calculations based on the data of the Sheep Product Council

![Figure 5: Seasonal deviations in the prices based on the monthly data of the period 1998-2005](image)

*Source:* own calculations based on the data of the Sheep Product Council

When studying the prices of the three main seasons (Figure 6), we can observe that the prices are more favourable at Christmas than at Easter or in
August, in spite of the fact that farmers received highest price per kg meat in April 2002 and the lowest price in December 1998. In most years, prices were 30-100 HUF higher per kg at Christmas, the case was the opposite only in 1998.

![Figure 6: Export prices of slaughter lambs in the main seasons](image)

*Source:* own calculations based on the data of the Sheep Product Council

The most fluctuating season as regards the prices was Easter. The reason for this is that products of the competitors appear on the export market at Easter, the quality of which is better and the farmers are competitive even at lower prices as they have received higher support for years.

**Conclusions**

Among the eight studied years, 2001 and 2003 should be mentioned both in the respect of prices and the number of animals sold. In both years, our competitors were partly ousted from the market due to animal health problems, therefore, the smaller supply resulted in higher prices. At the beginning of 2001, the reduced beef consumption due to the BSE infection in England was replaced by lamb and turkey, by a smaller and larger extent, respectively.

Based on the data of Hungarian lamb export, it can be stated that the highest and lowest prices were obtained by the farmers at Christmas and in May, respectively. Prices fluctuate most in the Easter period, since the supply is the greatest at this time. The average selling weight of Easter and Christmas periods were 1-2 kg lower than the 21 kg average weight of the eight years.

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În Uniunea Europeană în permanență se importă miei și izei. Mai mult de 90% din producția de oaie din Ungaria se exportă spre piața italiană, iar restul spre Grecia. Mai mult de 90% din randamentul sectorului de creștere a ovinelor provine din vânzările de miei. Bazați pe datele referitoare la exportul mieilor din Ungaria, s-a observat că cele mai înalte, respectiv cele mai scăzute prețuri de vânzare s-au înregistrat de Crăciun, respectiv în luna mai. Prețurile înregistră fluctuații cel mai mult în perioada sărbătorilor de Paști, când rezervele de carne de miel sunt mari. Media vânzărilor de Paști și de Crăciun a înregistrat cu 1-2 kg mai puțin decât valoarea de 21 kg carne de miel din ultimii 8 ani.

Cuvinte cheie: export de miei, sezon, preț de cumpărare, media greutății.