

## Araştırma Makalesi

### THE IMPACTS OF WEIGHT AND PRICE MARGINS ON THE INCOMES IN KIVIRCIK LAMB FATTENING

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Geliş Tarihi : 25.05.2006

Kabul Tarihi : 31.08.2006

#### Kıvırcık Irkı Kuzu Besisinde Ağırlık ve Fiyat Marjlarının Gelire Olan Etkileri

**Özet:** Araştırma, kuzu besisinden elde edilen gelir içinde canlı ağırlık artışından sağlanan gelir ile kuzu alış ve satış fiyatları arasındaki farktan sağlanan gelirin paylarını belirlemek amacıyla yapılmıştır.

Araştırmanın materyalini 90 günde süttten kesilen ve her birinde sekiz baş Kıvırcık ırkı erkek kuzu bulunan beş ayrı kuzu grubu oluşturmuştur. Bu gruplara içerikleri farklı olan rasyonlar 84 gün süre ile verilmiştir.

Gruplar itibarıyla besi başı canlı ağırlıkları sırasıyla 26.2 kg, 26.6 kg, 25.6 kg, 28.0 kg, 27.5 kg ve ortalama 26.78 kg; besi sonu canlı ağırlıkları sırasıyla 40.1 kg, 41.8 kg, 42.3 kg, 45.0 kg, 43.1 kg ve ortalama 42.46 kg; sağlanan canlı ağırlık artışları ise 13.9 kg, 15.2 kg, 16.7 kg, 17.0 kg, 15.6 kg ve ortalama 15.68 kg olarak belirlenmiştir.

Fiyat marjı gruplara göre sırasıyla %3.00, %2.81, %2.46, %2.65, %2.83 ve ortalama %2.74; ağırlık marjı ise yine sırasıyla %97.00, %97.19, %97.54, %97.35, %97.17 ve ortalama %97.26 olarak hesaplanmıştır. Bu çalışma sonucunda işletme gelirlerinin çok büyük oranda canlı ağırlık artışlarından sağlandığı belirlenmiştir.

**Anahtar Kelimeler:** kuzu besisi, fiyat marjı, ağırlık marjı.

**Summary:** The aim of this study was to determine the proportion of income resulting from live body weight gain and from difference between the purchase and sale prices of lambs in the total income.

Forty male, weaned Kıvırcık lambs (90 day-old) were randomly and equally allocated to five groups at a mean weight of 26.7 kg. During the study (84 days), experimental groups were fed diets which contained different levels of dietary crude protein (10, 12, 14, 16, 18%).

Initial live-weight of lambs were 26.2 kg, 26.6 kg, 25.6 kg, 28.0 kg, 27.5 kg, respectively; final live-weight of lambs were 40.1 kg, 41.8 kg, 42.3 kg, 45.0 kg, 43.1 kg, respectively; total live-weight gain of lambs were 13.9 kg, 15.2 kg, 16.7 kg, 17.0 kg, 15.6 kg, respectively; price margins were 3.00%, 2.81%, 2.46%,

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2.65%, 2.83%, respectively; weight margins were 97.00%, 97.19%, 97.54%, 97.35%, 97.17%, respectively. Average initial live-weight, average final live-weight, average total live-weight gain, average price margin and average weight margin were 26.78 kg, 42.46 kg, 15.68 kg, 2.74% and 97.26%, respectively.

As a result of this study, it was indicated that great part of income of enterprise was obtained from live weight gain.

**Key Words:** lamb fattening, price margin, weight margin.

#### Introduction

Generally, in Turkey, lamb fattening is applied in farming enterprises, and in regions which are suitable to provide lamb and pasture (8). Many of fattening enterprises are existing as small scale enterprises having traditional production (6). After fattening period, animals are sold in unqualified enterprise or in various animal bazaars by producers or mediators (9).

Several studies were carried out in different enterprises about weight and price margins. In a study carried out in cattle enterprises in Elazığ province by Kabukçu (10), these enterprises were investigated according to their animal numbers in five groups having 1-25, 26-50, 51-75, 76-100 and 101 heads, respectively. Price margins were 50.79%, 45.57%, 47.25%, 48.18%, respectively. Weight margins were 49.21%, 54.43%, 52.75%, 51.82% and 53.81%, respectively.

In a study carried out by Sakarya and Günlü (11) in Ankara University, Veterinary Faculty, Training-Application and Research Farm, animals were divided into two groups of breed. It was determined that 19,19% and 80,81% of income from first group resulted from price margin and weight margin, respectively. However, 24,25% and 75,75% of income from second group resulted from price margin and weight margin, respectively.

In Konya province, Cevger (5) reported that 29,92%; 23,05% and 26,73% of income resulted from price margin, and 66,75%, 73,04% and 71,47% of income resulted from weight margin for small, medium and large scale lamb fattening enterprises, respectively. However, in the other study, fifty-four male crossbred Brown Swiss cattles aged 20-22 months were subjected to 138 days fattening period and Cevger et al. (7) reported that 18,71% and 81,29% of income resulted from price margin and weight margin, respectively.

The aim of this study was to determine the proportion of income resulting from live body weight gain and from difference between the purchase and sale prices of lambs in the total income.

## Materials and Methods

The study was carried out in clinical boxes of Istanbul University. Forty male, weaned Kıvırcık lambs (90 day-old) were randomly and equally allocated to five groups at a mean weight of 26.7 kg. During the study (84 days), experimental groups were fed diets which contained different levels of dietary crude protein (10, 12, 14, 16, 18%). Animals were weighted in two week intervals and consecutively for two days, on an empty stomach.

To determine the effects of price and live-weight margins on income of the enterprise, the average purchase price of a lamb at the beginning of the fattening period, the average sale price of a lamb at the end of the fattening period, the difference between the purchase and sale prices per kilogram live-weight, and the average live-weight gain per lamb during the fattening period were calculated. The formula used for evaluation of data were shown below (5, 7, 10, 11):

$$I = W_b \times (P_s - P_p) + P_s \times (W_e - W_b)$$

I: The average income from the selling of a lamb at the end of the fattening period (New Turkish Liras, NTL),

W<sub>b</sub>: The average live-weight (LW) of a lamb at the beginning of the fattening period (kg),

W<sub>e</sub>: The average LW of a lamb at the end of the fattening period (kg),

P<sub>p</sub>: The average purchase price paid for per kilogram LW of the lamb at the beginning of the fattening period (NTL),

P<sub>s</sub>: The average sale price of per kilogram LW of the lamb at the end of the fattening period (NTL).

## Results and Discussion

The average initial and final live-weights of lambs, initial and final live-weight prices per kg and calculated price and weight margins data of experimental groups were presented in Table 1.

Table 1. Price and weight margins of groups.

Tablo 1. Grupların fiyat ve ağırlık marjları

Group No	W <sub>b</sub> (kg)	W <sub>e</sub> (kg)	P <sub>p</sub> (NTL*)	P <sub>s</sub> (NTL*)	Price margin (NTL*)	Price margin (%)	Weight margin (NTL*)	Weight margin (%)	Income (NTL*)
Group 1	26.2	40.1	2,80	2,84	1,23	3.00	39,53	97.00	40,76
Group 2	26.6	41.8	2,80	2,84	1,25	2.81	43,22	97.19	44,47
Group 3	25.6	42.3	2,80	2,84	1,20	2.46	47,49	97.54	48,69
Group 4	28.0	45.0	2,80	2,84	1,31	2.65	48,34	97.35	49,66
Group 5	27.5	43.1	2,80	2,84	1,29	2.83	44,36	97.17	45,65
Average	26.8	42.5	2,80	2,84	1,26	2.74	44,59	97.26	45,84

\* 1\$ = 1,40 NTL.

As it is shown in Table 1, for Groups 1, 2, 3, 4, 5, initial live-weight of lambs were 26.2 kg, 26.6 kg, 25.6 kg, 28.0 kg, 27.5 kg, respectively; final live-weight of lambs were 40.1 kg, 41.8 kg, 42.3 kg, 45.0 kg, 43.1 kg, respectively; total live-weight gain of lambs were 13.9 kg, 15.2 kg, 16.7 kg, 17.0 kg, 15.6 kg, respectively; price margins were 3.00 %, 2.81%, 2.46%, 2.65%, 2.83%, respectively; weight margins were 97.00%, 97.19%, 97.54%, 97.35%, 97.17%, respectively. Average initial live-weight, average final live-weight, average total live-weight gain, average price margin and average weight margin were 26.78 kg, 42.46 kg, 15.68 kg, 2.74% and 97.26%, respectively.

In this study, average weight margin and average price margin were 97.26% and 2.74%, respectively.

In this study, it was indicated that weight margins were greater and price margins were lower than those of these researchers (5, 7, 10, 11).

In animal breeding, there are many factors affecting income of enterprise, such as prices of produced products, prices of input used for production, physical outputs obtained from each animal and number of animals (3).

Increasing of income obtained from weight margin can be explained as a result of suitable breeding and feeding conditions. However, decreasing of income obtained from price margin can be explained as a result of rising of cost and reducing of selling price of lamb.

Mostly, animal and animal products are gone up in price under conditions without competing in which few dealers and many purchases take part. Generally, prices are not formed in favour of producers as producers are unorganized (1, 2, 4, 12).

As a result of this study, it was indicated that great part of income of an enterprise was obtained from live-weight gain. When producers could provide fattening materials with low price and sell them with high price, it will be possible to increase their price margin and income.

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