

RESEARCH ON PRODUCTION PERFORMANCE OF CROSSBRED EWES PRODUCED FROM THE CROSSING WITH RAMS OF THE BREED TURCANĂ GERMAN BLACK HEAD INFLUENCE ON THE ECONOMIC EFFICIENCY OF FARM

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Abstract

The research aim was to highlighted the fact that by crossing the local sheep (Merinos) and meat production specialized breed there are obtained good quality meat production lambs with superior performances besides the local breed performances.

There were conducted two experimental groups, the control group consisting of 50 sheep were mated by the same breed rams and the experimental group consisting of 50 Merinos sheep mated by Ile de France rams. It was determined the body weight of lambs at birth, of one month age, two months age, three months age and at the age of delivery, at six months. 5 lambs were slaughtered in each group and there was calculated the slaughter yield

There conclusions were drawn:

- 1. The crossbred lambs, males and females had a larger weight than the lambs from the control group at all the ages the determinations were made.*
- 2. The slaughter yield was higher in crossbred lambs comparatively the ones in the control group.*
- 3. By industrial crossing there was achieved an improvement of the growth speed and the slaughter yield, obtaining superior quality carcasses, very well quoted in EUROP classifying system.*

Keywords: lambs, slaughter, carcasses

INTRODUCTION

Romania is according to the latest European statistics, third place in a ranking made according to the number of sheep and goats exploited.

The European Community does not occur as long as sheep meat is consumed, with a permanent deficit that is covered by imports from countries like New Zealand and Australia. Romania sheep breeders, can deliver meat on the European market and can cover a part of the current deficit, but is required to improve the quality of sheep meat produced in our country. Industrial crossings is a quick way to enhance and improve meat production, biological and economic effects of this cross is used whereby the phenomenon of heterosis, half-breeds showing a higher growth rate, better use of feed through Specific consumption per kg gain less,

compared with the products breeds paternal clues are sometimes even superior to those of ameliorative race (Calatoiu, 1986; Calatoiu and Vicovan, 1986).

The purpose of this paper is to conduct comparative research on improving production of meat, correcting housing defects, increase yield at slaughter etc., from simple industrial crossing between sheep breed and breed meat Turcana German Black Head.

MATERIALS AND METHODS

The research was conducted on a flock of sheep from a farm-bred Turcana in Sibiu, the two groups of sheep. Control group, consisting of 50 Turcana sheep were crossed with rams of the same race and the experimental group, consisting of 50 female Turcana were crossed with rams of the breed German Black Head.

All lambs were obtained for research use, except where the determinations of slaughter yield only five lambs were used in each batch.

Maintenance for sheep was 150-160 days and 205-215 days in grazing calves. During loose housing, sheep have been maintained properly furnished and provided with shelters paddocks. He pursued the creation of animal comfort, ensuring sufficient accommodation space of 1.5 m² per head adult sheep and 2.55 shelters m²/head in the paddock, with a front feeding of 0.5 m / head.

To ensure the vital functions were provided in three sheep rations 3 -2.5 kg dry substance, 1.5 to 1.6 UNL, 70-75 PDIN / PDIE, 4.5 g Ca, 2.5 to 3 g P per 100 kg live weight, supplementing these amounts are 15 - 20% in periods of preparation for mating and breeding, and by another 25-45% in the first 1-3 months gestation and lactation.

Administered daily ration was balanced in minerals and vitamins, to prevent metabolic disorders. Vitamin requirements of green fodder was provided by, when possible, or add the concentrated fodder premixes, and minerals providing necessary.

Feeding calves during the maintenance was made of vegetables, 0.5 to 1 kg / head / day, with succulent forage, fodder beet, 1.5 to 2 kg / head / day, with corn silage, 1.5 to 2 kg / head / day, with a mixture of concentrated feed in the structure came in, on average 25-30% barley, corn 50-60%, 8-12% of sunflower and soybean meal, 1% salt, 2% chalk feed.

Using pasture was grown on a longer period, it has positive effects on animal health and productive level, avoiding long and tiring road. Water was provided ad libitum at pasture and shady resting place. The need for water was 3-4 times greater than the amount of dry matter intake, 3-6 liters per day respectively. Special attention was given to lactating ewes, which were used to stimulate lactation feed, succulent fodder, corn silage, fodder beet or green mass (Jarige, 1990; Tafta, 2008).

During the grazing forage ration was supplemented with a fibrous filler fodder and concentrates.

Feeding was carried from youth aged 8-10 days, the lambs were provided in specially designed pens, good quality hay, vitamins and concentrates consisting of 50% corn, 40% and

10% oats or peas Oil cake, making the administration at their discretion. This feeding was continued until weaning of lambs, after which the system was performed semi fattening lambs, for a period of 180 days, alternating system maintenance, 105 days and 75 days grazing calves.

In the first period for calves lambs were feed with forage ration was 0.662 kg DS, 0.663 UNC, 62.20 g PDIE and 63.8 g PDIN the induction phase and 0.803 kg DS, 0.752 UNC, 72.3 g PDIN and 73.7 g PDIE, during growth and fattening. During the grazing lambs habituation phase were fed with a forage ration was 1.028 kg DS, 0.912 UNC, and 104.1 g PDIN ,112.2 g PDIE the induction phase and 1.495 kg DS 1 UNC 30, 143 g PDIN and 130 g PDIE, during growth and fattening.

In the second period for calves lambs were fed with forage ration was 1.30 kg DS, 0.749 UNC, 92.6 g PDIE and 100.6 g PDIN the induction phase and 1.59 kg DS, 1072 UNC , 130.3 g PDIE and 137.3 g PDIN the finishing phase.

Benefited from grazing lambs seeded plots, which was used a mixture of 70-75% grasses (*Dactylis glomerata*, *Festuca pratensis*, *Lolium perenne*) and 25% perennial legumes (*Medicago sativa*, *Trifolium repens*). Fattening lambs was structured in three stages: 1 - Loose housing with an accommodation period of 15 days and a period of growth and fattening of 35 days; 2 - grazing, with an accommodation period of 15 days and a period of growth and 90 days fattening; 3 - Loose housing with an accommodation period of 10 days and finishing 35 days. Switching from one pasture to fatten the calves was achieved by an induction phase of 15 days, increasing the daily intake of feed concentrates and volume. During the calves were fed ad libitum lambs, with the unique blend of feed ratio was 30% and 70% concentrated fibber. Water and salt lumps were provided ad libitum, both at pasture and in calves. Monthly weighing of animals was done by the end of the fattening period.

RESULTS AND DISCUSSIONS

After registering births and weighing lambs were calculated main indices take the groups of sheep breeding (Table 1).

Table 1. The main indices of breeding

Group	Mounted sheep	Sheep have given birth	Lambs obtained	Fecundity (%)	Prolificacy (%)
T*T	50	46	49	92.00	106.52
T*BHG	50	47	56	94.00	119.14
Average	100	93	105	93.00	112.90

From the table are playing a number of breeding indices determined. The batch of ewes with rams German black head cross was so high fecundity and prolificacy Turcana lot. If fertility is high with only two points, 94% in group Turcana the sheep rams were crossed with black head and 92% in German Turcana group, the sheep prolificacy in group Turcana rams were crossed with German Black Head was by 119.14% from 106.52% to just Turcana group.

Table 2. The daily average gain of lambs during lactation

Group	n	Average daily gain (g / day)		
		0-30 days	30-60 days	0-60 days
		X ± sx V%	X ± sx V%	X ± sx V%
T*T	49	181.66±7 20.22	170±6 17.16	175.83±7 23.16
T*BHG	56	201±7 17.26	194.66 16.86	197.83±7 19.38

Table 2 plays an average gain of lambs weight, sex, birth to age one month and at weaning. Ewe lambs from group Turcana rams crossed with German Black Head, as both males and females had higher weight gains in lambs produced from ewes Turcana group. Similar results in weight gain and Black Head Teleorman breed (Roşu, 2011).

Table 3. Evolution of body weight of lambs to weaning

Group	n	Weight at birth	weight group in 30 days	60 days weight
		X ± sx V%	X ± sx V%	X ± sx V%
		T*T	49	3.31±0.08 3.6
T*BHG	56	4.44±0.08 1.26	10.47±0.10 14.30	16.31±0.22 18.36

In Table 3 it is presented the body weight of lambs at birth, at age one month and two months of age (at weaning). Both males and females as the group of ewes from rams crossed with German Black Head, had higher body weight both at birth and age as one month

and two months. Lambs from that batch of sheep rams crossed with German Black Head had an average birth weight of 4.44 kg body while lambs of group coming Turcana had at birth weight 3.31 kg. At weaning lambs from that batch of sheep crossed with German Black Head rams had an average body weight of 16.31 pounds, while lambs of group coming Turcana weaning had an average weight of 13.86 kg, 2.45 kg less.

In Table 4 is given weight recorded at the end of fattening period and average daily gain during fattening achieved. If lambs derived from crosses rams sheep with German black head Turcana achieved a mean increase 109.6 g / day, derived from group Turcana lambs were made only an average gain of 89.6 g / day. Thus at the end of fattening lambs derived from crosses rams german sheep with black head Turcana reached a mean body weight 36.04 kg, while lambs derived from ewes Turcana group achieved an average weight reached only 29.98 kg.

Table 4. Dynamics of growth in semi fattening period (180 days)

Group	n	Weight group in the early end of fattening	Fattening weight	Average daily gain (g / day)
		X ± sx V%	X ± sx V%	X ± sx V%
T*T	49	13.86± 0.22 17.02	29.98±0.40 19.62	89.6± 5 16.84
T*BHG	56	16.31±0.24 17.92	36.04±0.36 20.16	109.6±4 13.08

Table 5. Slaughter yield

Specify	MU	Group	
		T*T	T*BHG
Live weight	g	30.56±6.35	37.68±7.89
Chilled carcass weight	g	13.35±4.58	17.84±5.42
Slaughter yield	%	43.71±1.04	47.37±0.01

MU – measuring unit

Yield obtained from the slaughter of five lambs from each group, was 47.37% in lambs derived from the sheep Turcana group were German black cross with rams head and only 43.71% of lambs derived from the group of sheep Turcana.

CONCLUSIONS

1. Sheep crossing with rams Turcana German black head lead to an increase in prolificacy sheep Turcana with 12.62%, compared to the group of sheep Turcana.
2. Lambs, both women and male, coming from the group of sheep with rams Turcana German black head cross, higher weight gains realized throughout the life.
3. Average weight at the end of the fattening period was higher by 6.06 kg in lambs derived from crosses of sheep with rams Turcana German Black Head (36.04 kg) than lambs of ewes Turcana consignments coming from.
4. Return lamb to the slaughter of sheep coming from the group Turcana rams crossed with German black head, is higher by 3.66% compared to lambs derived from ewes Turcana group.
5. If you perform calculations in the two groups of sheep studied, the amount of meat in case

they can sell more for each sheep is greater than 6.27 kg for sheep crossed with rams of the breed German Black Head, at a price selling 14lei/Kg of housing, resulting in a higher income per ewe 87.78 lei meat only, not taking into account the possible higher price can be obtained with improved meat quality and carcass conformation.

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