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THE READ MEAT PRODUCTION IN TURKEY

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Abstract

In Turkey, red meat production is mainly provided from cattle, buffalo, sheep and goats, and although there is a significant potential in terms of the number of animals, yields obtained those animals are low. Bovine fattening in Turkey is mostly done with dairy, combined and indigenous breeds which is carcass weights are lower than those of the beef breeds. It is noteworthy red meat per capita consumption in Turkey is fairly below the world average (19 kg / year) with 13 kg / year. In Turkey, a total of 1.15 m tons of meat produced in 2015 was obtained from bovine animals (87.8%) and from small ruminants (12.2%). In Turkey, 12.9% of the cattle and 96% of the sheep population are composed of low-yielding domestic races (Anonymus, 2015). In livestock production is very low. In order to improve red meat production and average carcass yield, besides animal breeding activities, it is important to develop management and feeding conditions, minimize breeding and early age animal slaughter, to develop and maintain support policies for the enterprises engaged in fattening activities

In this study, the present status of red meat production in Turkey and sitiuation of the last 10 years, the problems of red meat production and the recommendations for solution were presented.

Key words: *Red meat, cattle, buffalo, sheep and goat, carcass*

INTRODUCTION

Animal husbandry, , has an important place in Turkey and as with the whole world in terms of the sufficient and balanced nutrition of the growing population and its use as a raw material for many fields. However, unlike other sectors, the livestock sector contributes to the economy of the country because it has many sectors and it also provides solution to the social problems of the country.

The importance of animal products in human nutrition is an indisputable fact for a country's population. At the same time, in the development of the country's economy, a high profit in terms of unit investment is an important sector that provides employment opportunities at the lowest cost. A significant portion of the country's population is engaged in agriculture (Demirbaş and Talim, 1999).

Turkey's red meat production resources are cattle, sheep, goats and buffalo. For many years sheep and goats have provided most of the red meat production. However, in recent years, both red meat production has not increased to the desired extent and the consumer has preferred to beef. In addition to the thought that the beef is relatively fat-free, the preference change resulting from the fact that more diversity can be provided in presenting it to the market, naturally, is also reflected in the production.

The vast majority of animal production in Turkey is performed by small-scale enterprises, who have no knowledge of quality and price formation, and often lack the traditional methods and economic consciousness of breeding. The traditional and irrational structure in these enterprises weakens the bargaining power of producers.

In Turkey, 12.9% of the cattle and 96% of the sheep population are composed of low-yielding domestic races (Anonymus, 2015). In livestock production is very low.

Vast majority of Turkey's red meat supply is provided by fattening enterprises. As a result of the researches and examinations carried out on this area, it is seen that the fattening enterprises in our country can not work with efficient capacity and struggle with various problems.

At the forefront of the problems to increase red meat production and consumption in Turkey is the introduction of input and supply. It can be seen that the fattening input costs are mainly

composed of the following three main items (Anonymus, 2015).
Animal Material (50-60% of input costs),
Feed costs (25-40% of input costs), and
Other expenses (5-15% of input cost such as labor, loan interest, drugs, veterinary, etc.)

MATERIALS AND METHODS

In order to the evaluation of red meat production, the following indicators were used: number of bovine and small ruminant stock. The number of animal, red meat yield, meat production, meat consumption per head, the size of fattening enterprises. The data collected from Turkish Statistical Institute between the years 2005-2015 according to red meat were analysed.

RESULTS AND DISCUSSIONS

Beef cattle holding size was shown in Table 1, There are total 374.951 beef cattle holding and about 76% of fattening enterprises capacity is between 1-10 head. Enterprises rate having 50 or more animal feeding capacities is only 3.5% (Kayhan, 2012).

Table 1. Distribution of Beef Cattle Holding- Size

Holding-size (Head)	Holding Number	Rate %
1-5	210,532	56.2
6-10	76,084	20.3
11-25	58,917	15.7
26-49	16,339	4.4
50-100	10,720	2.9
100-200	1,770	0.5
201+	589	0.2
Total	374,951	100.0

According to the data of the year 2015, there are 13,994,071 head cattle, 133,766 head buffalo, 31,507,934 head sheep and 10,416,166 head goats in Turkey. The number of cattle, 10.5 millions head in 2005, increased by 24% in 2015 to 13.9 mil. head. In the same year, the number of buffalo increased by 21.5%. The number of sheep from small cattle animals increased by 19.5% from the beginning of 25.3 mil. head in 2005 to 31.5 mil. head in 2015. The number of goats increased by 37.4% in the same year from 6.5 mil. head to 10.4 mil. head in 2015 (Anonymous, 2015). These increases are believed to have been the result of state support for livestock farming and cattle imports in recent years (Table 2).

Table 2. Bovine and Small Ruminant numbers by the years 2005-2015

	Bovine			Small Ruminant		
Years	**Cattle**	**Buffalo**	**Total**	**Sheep**	**Goat**	**Total**
2005	10,526,440	104,965	10,631,405	25,304,325	6,517,464	31,821,789
2006	10,871,364	100,516	10,971,880	25,616,912	6,643,294	32,260,206
2007	11,036,753	84,705	11,121,458	25,462,293	6,286,358	31,748,651
2008	10,859,942	86,297	10,946,239	23,974,591	5,593,561	29,568,152
2009	10,723,958	87,207	10,811,165	21,749,508	5,128,285	26,877,793
2010	11,369,800	84,726	11,454,526	23,089,691	6,293,233	29,382,924
2011	12,386,337	97,632	12,483,969	25,031,565	7,277,953	32,309,518
2012	13,914,912	107,435	14,022,347	27,425,233	8,357,286	35,782,519
2013	14,415,257	117,591	14,532,848	29,284,247	9,225,548	38,509,795
2014	14,223,109	122,114	14,345,223	31,140,244	10,344,936	41,485,180
2015	13,994,071	133,766	14,323,941	31,507,934	10,416,166	41,924,100

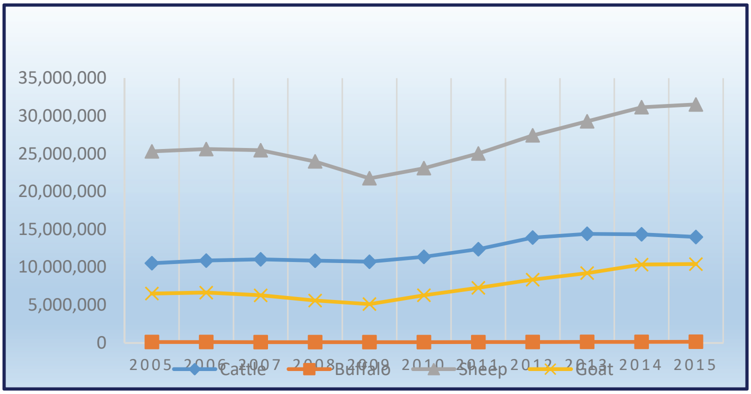

Figure 1. Bovine and Small Ruminant numbers

The number of slaughtered animals and quantity of meat by the years 2005-2015 was given in Table 3. Significant increases are observed in the last decade when the number of animals slaughtered and the amount of meat production per species are examined, While the bovine (cattle and buffalo) in meat production increased from 78.9% in 2005 to 87.8% in 2015, the ratio of small ruminants has decreased from 21% to 12.2% in the same years (Table 4).

Table 3. Number of slaughtered animals and quantity of meat by the years 2005-2015

	Bovine				Small Ruminant			
Years	Cattle		Buffalo		Sheep		Goat	
	Number of slaughtered (Heads)	Quantity of meat (tons)	Number of slaughtered (Heads)	Quantity of meat (tons)	Number of slaughtered (Heads)	Quantity of meat (tons)	Number of slaughtered (Heads)	Quantity of meat production (tons)
2005	1,630,471	321 681	8,920	1,577	4,145,343	73,743	688,704	12,390
2006	1,750,997	340 705	9,658	1,774	4,763,394	81,899	803,063	14,133
2007	2,003,991	431 963	9,532	1,988	6,428,866	117,524	1,256,348	24,136
2008	1,736,107	370 619	7,251	1,334	5,588,906	96,738	767,522	13,753
2009	1,502,073	325 286	4,857	1,005	3,997,348	74,633	606,042	11,675
2010	2,602,246	618,584	5,720	3,387	6,873,626	135,687	1,219,504	23,060
2011	2,571,765	644,906	7,255	1,615	5,479,546	107,076	1,254,092	23,318
2012	2,791,034	799,344	7,426	1,736	4,541,122	97,334	926,799	17,430
2013	3,430,723	869,292	2,403	366	4,958,226	102,943	1,340,909	23,554
2014	3,712,281	881,999	2,176	526	5,197,289	98,978	1,570,239	26,770
2015	3,765,077	1,014,926	1,391	326	5,008,411	100,021	1,999,241	39,990

Due to the relative increase in the average carcass weight of cattle slaughtered in recent years, the ratio of cattle in total meat production has increased (Table 5).

Table 4. Quantity of meat production and ratio by the years 2005-2015

Years	Bovine Quantity of Meat (Tons)	Rate (%)	Small Ruminant Quantity of Meat (Tons)	Rate (%)	Amount of Red Meat (Tons)
2005	323,258	78.96	86,133	21.04	409,391
2006	342,479	78.10	96,032	21.90	438,511
2007	433,951	75.39	141,660	24.61	575,611
2008	371,953	77.10	110,491	22.90	482,444
2009	326,291	79.08	86,308	20.92	412,599
2010	621,971	79.67	158,747	20.33	780,718
2011	646,521	83.22	130,394	16.78	776,915
2012	801,080	87.47	114,764	12.53	915,844
2013	869,658	87.30	126,497	12.70	996,155
2014	882,525	87.53	125,748	12.47	1,008,273
2015	1,015,252	87.88	140,011	12.12	1,155,263

Table 5. Carcass weight by the years (2005-2015)

Year	Cattle	Buffalo	Sheep	Goat
2005	197.29	176.79	17.79	17.99
2006	194.58	183.68	17.19	17.60
2007	215.55	208.56	18.28	19.21
2008	213.48	183.97	17.31	17.92
2009	216.56	206.92	18.67	19.26
2010	237.71	242.48	19.74	18.91
2011	250.76	222.61	19.54	18.59
2012	286.40	233.77	21.43	18.81
2013	253.38	152.31	20.76	17.57
2014	237.59	241.73	19.04	17.05
2015	269.56	234.36	19.97	20.00

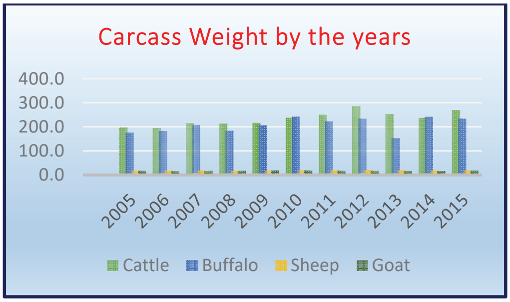

Figure 2. Carcass weight by the yeras 2005-2015

It was observed that meat prices did not increase much between 2005-2008 (Table 8). However, since the second half of 2009, meat prices have moved to a rapid increase. The meat prices which were 20.4 TL/kg in 2009 were 37.9 TL/kg in 2015. During the last decade between 2005 and 2015, meat prices increased by three times. In the same year, sheep prices also showed similar increases (Table 6).

Table 6. Red meat price change by the years 2005-2015

Products	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Beef Meat (TL)	12.1	13.2	14.2	15.3	20.4	24.1	24.3	23.8	25.9	28.4	37.9
Mutton Meat (TL)	10.8	11.5	11.6	13.6	20.8	26.3	26.8	24.0	25.8	26.8	30.8

Despite the high animal production potential in Turkey, population growth has increased by 16.2% over the last 10 years to 67,743,000 to 78,741,000 and domestic demand for meat products has led to an increase in meat prices.

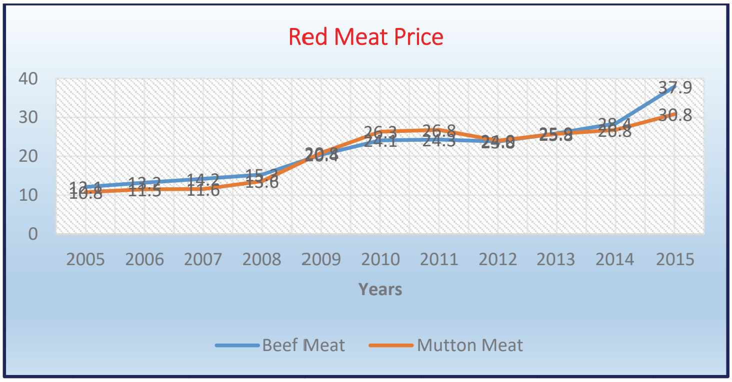

Figure 3. The Consumer red meat price change by the years 2005-2015

The greatest reason for the price increase is the inadequacy of animal material supply. However, there has been an increase in input prices due to the fact that feed and feedstocks are largely dependent on imports and the exchange rate is rising.

A decision was made on the necessity of intervening meat market with importation to regulate supply and demand balance in meat market and regulation of prices by reason of high meat prices. Turkey has been obliged to import duty-free meat and live animals from Europe within the framework of the Customs Union agreement signed by the European Union. Import value from different countries starting 2011 up to now was shown Table 7. As it seen, the imported meat quantity is much more than the exported read meat between the years 2001and 2015.

Table 7. Cattle Red Meat Supply and Use in Turkey (Tons)

	2011	2012	2013	2014	2015
SUPPLY					
Production	775.3	914.1	995.7	1007.7	1014.9
Import	110.7	25.5	6.2	648	9.4
Total Supply	886.0	939.6	1002.0	1008.3	1024.4
USE					
Consumption	885.8	939.3	1001.6	1008.0	1024.1
Export	216	324	390	386	263
Per head Consumption	11.9	12.4	13.1	13.0	13.1

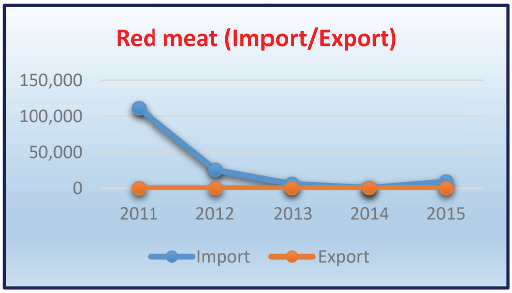

Figure 4. Foreign Trade of Red Meat

CONCLUSIONS

There has been an increase in bovine and small ruminant numbers in Turkey over the years. This situation is not parallel to the yields per animal. The red meat sector is the livelihood sector. Problems such as high input costs caused excessive increase in meat prices in our country and imports made from countries where production costs were low in order to meet domestic demand victimized the beef producers.

In order to improve red meat production and average carcass yield, besides animal breeding activities, it is important to develop management and feeding conditions, minimize breeding and early age animal slaughter, to develop and maintain support policies for the enterprises engaged in fattening activities (Anonymus-a, 2011).

In animal production, the need for roughage and concentrated feed which plays an important role in profitable and efficient production must be provided in abundance, quality and inexpensiveness according to needs. This is possible by improving and managing the meadow and pasture areas in terms of quantity and quality, giving the required seed to the production of feed crops and maintaining the support provided (Anonim-a, 2011).

The presence of infectious animal diseases in our country affects the red meat production negatively and causes economic loss. In this context, efforts to control and eradicate animal diseases should be accelerated.

One of the current and important problems of the sector is the need for loans and financing. In order to benefit from the economic development of the sector, appropriate loan and financing facilities should be created and priority should be given to especially for existing small and medium-scale fattening enterprises (Anonim-a, 2011).

Considering the geographical and ecological conditions in our country, importance should be attached to the breeding of suitable beef breeds in the regional basis. It is observed that only about 43% of Turkey's sheep and goats have declined in the last 20 years.

It is also possible for Turkey to take measures to increase the small ruminants number to reduce the pressure on beef in red meat production.

The increase in consumption demand due to developments such as the population increase and the level of social welfare in the world and Turkey in recent years have directly affected the red meat sector. Red meat prices have risen in the market, and as a result, interest in the red meat sector has increased. In order to meet the increasing demand, the producers have searched for a more productive production. As the statistics confirm, in recent years the most productive countries in the world in terms of meat yield per unit have been the European Union countries. The widespread culture in EU countries and the use of modern production techniques are seen as the most important reason for the EU's successful position in red meat production efficiency. Turkish red meat market has also developed in line with world trends in terms of production and consumption. However, these developments in Turkey have not been realized at the same level of developed countries due to their structural problems.

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