ФОНД НАУЧНИ ИЗСЛЕДВАНИЯ
МИНИСТЕРСТВО НА ОБРАЗОВАНИЕТО И НАУКАТА

25 години
ВИСШЕ УЧИЛИЩЕ ПО АГРОБИЗНЕС И РАЗВИТИЕ НА РЕГИОНИТЕ
Юбилейна международна научна конференция БЪЛГАРИЯ НА РЕГИОНИТЕ
Перспективи за устойчиво регионално развитие
27-28 октомври 2017 г., Пловдив, България

ВУАРР ПЛОВДИВ

25 years
UNIVERSITY OF AGRIBUSINESS AND RURAL DEVELOPMENT
Jubilee International Scientific Conference BULGARIA OF REGIONS
Sustainable Regional Development Perspectives
27-28 October 2017, Plovdiv, Bulgaria
http://regions.uard.bg

Analysis of Business Structures on Capacity Usage in Determining Encountered Problems of Red Meat Industry in Turkey

Celal Demirkol[1], Mecit Omer Azabagaoglu[2]

[1]Namik Kemal University, Vocational School of Social Sciences, Tekirdag, Turkey, Email: celaldemirkol@nku.edu.tr
[2]Namik Kemal University, Agricultural Faculty, Department of Agricultural Economy, Tekirdag, Turkey, Email: azabagaoglu@nku.edu.tr

Abstract: Meat and meat products currently represent an important sources of protein in the human diet, and the consumers are becoming more aware of the relationships between diet and health and this has increased consumer interest therein. Capacity usage and the problems of red meat firms in Turkey are presented in this study through a survey carried out with 54 firms. It can be said that a large part of the red meat industry is largely owned by European Union standards in terms of the production technologies they use and the physical conditions they have in Turkey. The main problem faced by the red meat industry is the inadequacy of raw materials and the inability to provide them regularly. This problem causes firms to work with lower capacity. The firms with capacities below 19 tons are small-scale firms and profitability comes first in the strategies they follow. These types of firms focus on production, they are primarily focused on producing affordable and quality products. Firms whose daily capacity is between 20 tons/day and 50 tons/day are grouped as medium-sized firms. A great majority of these firms are carcass meat producing firms. There are also high-capacity firms concentrated on a single product but producing on a national scale. These mid-sized firms offer products to the domestic market as well as they do contract manufacturing for the other large-scale firms. In these firms, market demand is again the first criterion to be considered in production. The large scale firms (producing over 51 tons per day) are working on increasing their market share close to all, on growth and profitability strategy. At the most important strategies of these firms are image, personnel-focused practices and quality issues. The most important reason for the implementation of these strategies is that these firms are nationally operating and branded firms.

Key words: Red meat, industry, capacity usage, problems, Turkey.

Introduction

Meat as a component of a mixed and healthy diet contains important and essential micronutrients. The adequate intake ensures a normal function of the immune system, the mucous membranes and the general metabolism of substrates. At least a sufficient intake ensures that during time periods of higher need e.g., diseases, pregnancy, this need is adequately covered. Especially in risk groups (elderly, pregnant women, growing children) meat should be consequently recommended (Biesalski, 2005).

Countries are developing different policies and strategies to meet the rising demand for animal protein in parallel with the rapid growth of the world population. Meat consuming level is an indicator of development of countries. Parallel to developing countries' social and economic advancements, meat consuming structure changes and consuming level rises (Arisoy and Bayramoglu, 2015).

In Turkey, where population and economic growth are increasing, consumers are increasingly aware of the increasing demand for animal protein, depending on the increase in income level. Consumer requirements for food which is safe, healthier, of consistent eating quality, diverse and convenient is increasing. In response, the food industry, supported by the research community, continues to drive new opportunities to address the needs of the consumer. In addition to consumer related issues, increased globalization, reduced commodity prices, World Trade negotiations, increased animal welfare concerns, the need for traceability and environmental legislation have increased pressure at various points across the food chain. The primary producer in particular, has been most affected with considerable reductions in profit margins (Scollan et al, 2006).

Livestock sector; Besides contributing to the nutrition of the population, has undertaken important economic functions such as raw material supply to various branches of production, value increases provided by the development of employment, logistics sector and retailing, realization of rural development and foundation of development finance.

Meat production is the meat obtained from all animals of indigenous and foreign origin, slaughtered within the national boundaries. Meat production is usually reported as dressed carcass weight, which is the weight of the carcass after removal of parts such as the skin, the head, the feet at the joints, the large blood vessels, the genitourinary organs, the tail and slaughter fats other than kidney fats. Meat production includes meat produced not only by public and private slaughterhouses but also by unregulated slaughtering. Data on the former can be obtained from administrative records of the slaughterhouses while data on the latter must be approximated (Yavuz and Zulauf, 2004).

Turkey has diversity in terms of climate characteristics and geographical structure. This diversity also affects animal husbandry activities. Intensive dairy farming is used in western, southern and hinterland regions. Especially in eastern provinces, livestock breeding is done intensively. This region is the livestock supply center of Turkey.

Meat and meat products in Turkey have an important place in the food industry. The ratio of red meat and meat products industry in Turkish food industry is 10.4% between the years of 2006 and 2008. Red meat and meat products industry covers the whole process starting from slaughtering the animals in slaughterhouses to packing of the meat. Slaughterhouse and combines which belong to municipality and private sector, the Meat and Fish Organization combines and private sector facilities that produce meat products are the main enterprises in the industry (Tosun and Demirbas, 2012).

The aim of this research is to analysis of business structures on capacity usage in determining encountered problems of red meat industry in Turkey.

Materials and Methods

The original material of the study is the data from a survey conducted with the firms that processed red meat in Turkey. Secondary data are obtained by scanning domestic publications and foreign literature directly and indirectly related to the subject.

The numbers of the firms surveyed and their numbers and the production explanations are given in Table 1. Information about the firms where the surveys are conducted are obtained from the Chambers of the Turkish Chambers and Commodity Exchanges of Turkey.

These firms are the ones registered with the Chambers of Industry and Commerce and prepared the capacity report. Sampling method is not used with the firms that processed red meat in Turkey and survey studies are conducted with 54 firms. Marketing strategies followed by red meat processing firms are analyzed both on a province basis and on a regional basis.

Analysis of Business Structures on Capacity Usage

When the firms grouped according to capacities; daily capacity of 0-19 tons are small-scale firms, firms with 20-50 ton / day capacity are medium-scale and producing over 51 tons per day are large-scale firms. The summary information of these firms is given in Table 2.

Strategies followed by the firms show significant changes according to their scale. The firms with capacities below 19 tons are small-scale firms and profitability comes first in the strategies they follow. Because these types of firms focus on production, they are primarily focused on producing affordable and quality products. Some of these firms are small firms that are involved in the production of single products (Delicatessen products such as salami and sausage), as well as firms that only produce carcass meat. Small firms producing delicatessen products usually sell to markets in provinces and districts, while carcass meat producers sell their products to businesses and institutions that buy wholesale meat. These firms, which have not consumer products, are mostly sales-focused firms.

Table 1. Surveyed Firms on Provinces, Regions and Production Plans

Regions and Proviences	Carcass Meat	Delicatessen Products	Carcass and Delicatessen	Total
Eastern and Southeastern Anatolia Region				
Erzurum	1	-	1	2
Diyarbakir	2	-	-	2
Gaziantep	1	-	-	1
Malatya	1	-	-	1
Van	-	-	1	1
The Central Anatolia Region				
Ankara	4	2		6
Cankiri	-	-	1	1
Eskisehir	1	1	1	3
Kayseri	1	2	1	4
Kirşehir	1	-	-	1
Konya	1	-	-	1
Sivas	-	1	1	2
The Black Sea Region				
Amasya	-	-	1	1
Corum	1	-	-	1
Aegean Region				
Afyon	1	8		9
Izmir	-	-	2	2
Kutahya	-	1	-	1
Usak	-	-	1	1
The Mediterranean Region				
Adana	1	-	-	1
Icel	1	-	-	1
Antalya	-	1	1	2
Marmara Region				
Balikesir	1	1		2
Bilecik	1	-	-	1
Bursa	1	-	-	1
Istanbul	1	5	-	6
TOTAL	21	22	11	54

Table 2. Business Structures on Capacity Usage

	Firms on Capacity Usage (ton/day)		
	0-19	20-50	51 and over
Average Capacity Usage Quantities	5,83	40,25	86,56
Average Number of Personnel	10,15	38,5	169,36
Distribution	Regional	Regional and national	National and international
Business Strategy	Production Focused	Production and customer focused	Consumer-focused
Brand Image	Not important	Important	Important
Products	Economic	Affordable and quality	High quality
Sales Strategy	Sales-Focused	Sales and marketing management	Fully focused on marketing management
Marketing Research	Not done	Sometimes	Regularly
New Product Development	Low Level	Medium level	High level
Promotional Activity	Low Level	Medium level	High level
Marketing Plan	Not done	Sometimes	Regularly

The criteria to be considered in production in these firms; demand level and price efficiency in the market. Stock status and storage capacity follow the order of importance.

These smaller-sized firms generally prefer cost-based pricing. They meet their financing needs from their own capital.

Promotional activities are minute amount in a large part of the firms. Firms usually focus on personal selling. The reason for this is that the buyer is the butchers and grocery stores. Firms with consumer products advertise in regional newspapers and magazines.

It has been determined that the marketing infrastructure of the firms is insufficient and that they do not conduct Research and Development activities and marketing researches. Trademarks used by firms are usually the same as the name of the firm and there is only one brand. Brand development studies are also not seen.

All of the firms have ISO 9001 quality assurance system certificates. HACCP applications are not applied in these small-scale firms. These firms are generally production-focused. These firms produce the affordable products and the brand image is important in the middle level for the firms. Because these firms are mainly sales-oriented, marketing management is not given importance, marketing plan and marketing research are not done. No new product development activities in these firms are to be tried.

Firms whose daily capacity is between 20 tons/day and 50 tons/day are grouped as medium-sized firms. A great majority of these firms are carcass meat producing firms. There are also high-capacity firms concentrated on a single product but producing on a national scale.

These mid-sized firms offer products to the domestic market as well as they do contract manufacturing for the other large-scale firms. In these firms, market demand is again the first criterion to be considered in production. The second criterion is emphasized by all medium-sized firms as price efficiency. The business capital criterion is listed as the third criterion to be considered in production.

These firms use competitive pricing as well as cost-based pricing as their pricing strategy. The most important reason for this is that some firms operate on national basis. Especially the firms that produce carcass meat have to compete with other companies for entering the tender. These firms are involved in regional promotional activities. They mainly use promotional and personal sales methods in brochure type. Another method used is in-store tasting panels.

Firms that produce consumer products generally prefer the advertising method as a means of promoting. Some of these companies, which operate on a regional basis, prefer local radios and televisions.

Medium-sized firms usually use a name as a brand and there are also firms using two different names according to their product range. Most of the firms have ISO 9001 quality assurance system certificate, but there are also firms that carry out HACCP system.

Medium-sized firms are not only focused on production but also produce customer-focused production. These firms are often attach importance to brand image. A great majority of firms produce both affordable and quality products in the region. The firms generally produce sales-intensive production. There are also firms that engaged in marketing management-oriented production, marketing plan and new product development activities. While firms often make regional distribution, they also make nationally distribution firms.

Increasing market share and growth strategies are the leading strategies of large scale firms which are producing over 51 tons per day. This is the reason why large-scale firms want to spread to the market and want to make the company a national brand. These firms are following many strategies. These firms are developed as a structure and they market their products at national and international level.

Large-scale firms produce carcass meat products as well as delicatessen products such as sausages, salami and dough products such as hamburgers, doner and meat ball. For this reason, it has been found that these firms have all sorts of advanced tools and equipment such as hamburger freezing, rotary tumbling as well as standard equipment such as cutter, mixers, cooking and fermenting chambers, automatic filling.

They pointed out that large scale firms are working on increasing their market share close to all, on growth and profitability strategy. At the most important strategies of these firms are image, personnel-focused practices and quality issues. The most important reason for the implementation of these strategies is that these firms are nationally operating and branded firms.

When the criteria considered in production in these firms are examined, it is determined that there is market demand in the first place. The second and most important criterion that firms take into account in production is inventory. Because these firms usually produce delicatessen products and work on orders, they act in accordance with the demand that they receive. Storing of delicatessen products in storage for a long time also caused deterioration of product quality, so the stock situation was emphasized as the second most important criterion for the firms. Since these firms are generally known to be large-scale and nationally recognized, they have stated that they attach importance to hygiene and customer satisfaction in addition to these two criteria.

As an enterprise pricing strategy, they have often stated that they apply competitive pricing as well as cost-based pricing. They pointed out that a single pricing strategy would be inadequate because of the fact that manufactured products are oriented to consumers and that they market their products at national scale. In particular, chain-based retailers are compelling to make price determinations below their costs by taking advantage of the intense competition. In addition to this, some firms have also stated that they apply demand-pricing strategy during certain periods.

Large-scale firms in carcass meat production do not pay much attention to promotional activities, and large-scale firms that produce delicatessen products are engaged in promotional activities such as television, magazine and newspaper advertisements nationally.

The firms in carcass meat production do not engage in research and development activities, and those who produce consumer products are engaged in research and development activities.

Firms generally use the same brand names as their company names. These brands are usually recognized on national basis. Because these firms are very old and they are known by their company names, they do not prefer to use different brands in their product range.

All of these large scale firms have ISO 9001 quality assurance certificate and HACCP system is applied.

Direct sales also emerged as the most important distribution channel in these firms. The direct selling method is usually performed by the dealers of the firms. There are also firms that own distribution company. The second preferred distribution channel after direct sales is to deliver the product to retailers through wholesalers. These firms, working at the national level, are distributing their products in this way.

The majority of large-scale firms are customer-focused firms. The brand image is very important for all the firms. Most of the firms produce quality products. The majority of firms make marketing management intense production and marketing plan and marketing research are conducted regularly. In the vast majority of these firms, new product development activities are high and they do not only provide regional distribution but also national and international distribution.

The Encountered Problems of Red Meat Industry

Inadequacy of raw materials and inability to obtain raw materials regularly are at the top of the problems faced by the red meat industry that have been interviewed. Firms, especially the increasing demand in the months following the slaughter of the animals Feast of Sacrifice due to difficulties in finding raw materials. In addition, in the period following the school year, consumer demand for delicatessen products such as sausage, salami and sausage is increasing and the supply of raw materials is causing problems for the enterprises to get ready for this turnover.

Turkey cattle breeding farms engaged in small family businesses have yet to complete their organization and to be the low efficiency of carcass of animals raised in these businesses, unable to provide adequate and regular raw materials sector.

The number of beef cattle breeds in Turkey is quite low. Meat production is ensured by cutting off male and female animals in excess of necessity in milk-growing as well as compulsory cuts. In addition, the number of farms specializing in beef cattle is very limited. The prices of beef cattle are very high and the limited supply and feeding with expensive mixed feed is a serious problem.

Because most of the farmers in Turkey are small scale and animal production is done with vegetable production, live animals are sold in the animal markets within the enterprise or around the enterprise (Emeksiz et al, 2005).

The fact that the production volumes of agricultural enterprises in Turkey are small and scattered and the reasons such as the need for cash in the enterprises cause leading to a surplus of sales in places where the marketing organization is not a feature. The marketing agencies that growers and animal collectors take to market live animals are the local animal markets, animal fairgrounds and livestock stock exchanges. These purchases are made by cattle breeders, merchants and cattle dealers. In these terms, prices do not occur under real competition conditions (Gunes and Albayrak, 1998). According to a research, the price paid by the consumer for the red meat in the retail market was 37%, the wholesaler's share 38% and the retailer's share 25% (Saner and Kaya, 2002).

Unqualified and weak rangelands in Turkey is preventing cattle breeding based on rangeland. Planting of first or second forage crops on agricultural land is extremely limited. Expensive commercial mixed food based breeding is quite common.

One of the most important inputs for livestock breeding is feed. The fact that the legal problems related to rangelands in Turkey have not yet been resolved has caused these areas to be used in agricultural production or other forms, or to be used out of purpose due to lack of care (Sayin et al, 1996).

In Turkey, the lack of rangelands, the low education level of producers, high feed prices, price instability in the market, decrease the profitability level in the existing enterprises and decrease the number of fattening enterprises.

Despite the large number of animals in Turkey, carcass weight and low yield limit production. The lack of livestock and the difficulty in providing livestock are a major problem in terms of supply. On the other hand, the number of sheep has also declined over the years. Red meat production cannot be done regularly during the year due to fluctuations in the supply of butchery animals. It has been determined that these plants are not used for the same purpose due to the privatization of the Meat and Fisheries Institution which is red meat market organizer in Turkey. Domestic demand for red meat and processed red meat is increasing. Annual red meat demand growth is estimated to be around 6-7% per year, while meat products demand growth is 0.5%. Production-consumption balance is deteriorating as production cannot meet demand increases (Gunes, 1998).

The other problem faced by the red meat industry is unlicensed butchering. This is a negative impact on the firms' aspects of capacity utilization rates in the industry. Unlicensed butchering cannot be avoided due to insufficient number of personnel to carry out inspections of the Ministry of Agriculture, which causes unfair competition in the sector.

Due to economic reasons in Turkey, the purchasing power is low and the share of meat prices in disposable income is high, causing the consumption of meat per capita to be low. Value added tax rates of meat prices vary according to the sales pattern of meat. Value added tax rate is 1% when red meat is sold as a wholesale, Value added tax rate is 8% if it is sold as retail and 18% if it is sold as a delicatessen product. The high rate of Value added tax causes consumers to have fewer requests for delicatessen products. On June 1, 2007, a new decision was taken to make a deduction of value added tax on certain food products. Value added tax rates of meat products (sausage, salami, canned food, etc.) have been reduced to 8%. This red meat can be regarded as a positive development for the industry. With this discount, both informal production can be avoided, and consumers' demand for these products can be increased due to cheaper prices.

In recent years, the decline in red meat prices for various reasons in the EU has reduced the profitability in the sector (Sorensen and Ostergaard, 2003). The lack of consumer awareness, depending on the purchasing power, also affects the sector negatively. Consumer demands for cheap and unbranded products encourage informal productions. The sale of an important food such as meat, cheaply and without trademark, especially in the district markets, and the consumers unconsciously purchasing these products cause a great health problem, causing the registered enterprises in the sector to be negatively affected from the lack of competition. Another factor affecting the sector is the competition of substitute goods with the white meat sector. The fact that similar products can be substituted for red meat products in the white meat sector as a part meat product and as a delicacy product, and the cost and sales prices of these products are cheaper and affordable products than the red meat, they affect the red meat reducing demand.

The fact that red meat contains saturated fat and cholesterol in recent years and it causes cardiovascular diseases is a frequent occurrence of images of firms producing on conditions which are not suitable for human health cause consumers to change their eating habits and use their preferences for white meat. A research by Verbeke and Ward found that such images reduce meat consumption. These negative news and images on the media also affect the production and sales volumes of these firms by affecting the modern enterprises which give importance to health and hygiene in the negative direction (Verbeke and Ward, 2001).

In the red meat sector, the number of small and medium-sized enterprises is high, along with large-scale enterprises with modern and production capacities. Small firms are more affected by negatives in the sector. The fact that the measures that encourage and support the growth of these small firms have not yet been taken by the government, is affecting the red meat industry and especially the small firms negatively.

Some of the firms interviewed indicated that the unions such as Meat Producer's Union and Milk Producer's Union in the sector cannot work effectively and that they cannot solve the problems of the firms in Turkey.

In particular, illegal animals entering the border, from the eastern and southeastern part of the country, have been identified as another problem affecting the sector.

Some companies that produce delicatessen products in the sector use soya or poultry in their products in order to reduce the costs of them, causing unfair price competition with other companies. In fact, since the use of soya and chicken is expensive, these companies have even attempted to use mixtures obtained from other parts of the chicken meat.

Firms operating in the red meat industry are unable to work at full capacity due to the lack of regular and healthy raw material supply, competition is an intensive industry and other negative conditions mentioned above. The low capacity utilization rates cause the profit margins in the sector to be low and the profitability levels of the firms to decrease so that they cannot work efficiently.

Conclusions

Red meat contains high biological value protein and important micronutrients that are needed for good health throughout life. It also contains a range of fats, including essential omega-3 polyunsaturated fats (Williams, 2007). Meat continues to be an important food group in the diet for many consumers, particularly in the developed world. Many factors such as wealth, volume of livestock production and socioeconomic status of consumers could explain the higher consumption pattern of meat by Western populations. Red meat consumption contributes many vitamins and minerals to the diet that are essential for health. It is a major source of protein, providing about 20 g/100 g of beef or lamb consumed. In comparison to vegetarians, omnivores have greater intakes of protein (McAfee et al., 2010).

Strategies followed by the firms show significant changes according to their scale in Turkey. The firms with capacities below 19 tons are small-scale firms and profitability comes first in the strategies they follow. Because these types of firms focus on production, they are primarily focused on producing cheap and quality products. Promotional activities are minute amount in a large part of these firms. It has been determined that the marketing infrastructure of the firms is insufficient and that they do not conduct Research and Development activities and marketing researches. These firms are generally production-focused. These firms produce the affordable products and the brand image is important in the middle level for the firms.

A great majority of medium-sized firms whose daily capacity is between 20 tons/day and 50 tons/day are carcass meat producing firms. There are also high-capacity firms concentrated on a single product but producing on a national scale. Medium-sized firms are not only focused on production but also produce customer-focused production. These firms are often attach importance to brand image. A great majority of firms produce both affordable and quality products in the region.

The Large-scale firms producing over 51 tons per day are following many strategies. Large-scale firms produce carcass meat products as well as delicatessen products such as sausages, salami and dough products such as hamburgers, doner and meat ball. At the most important strategies of these firms are image, personnel-focused practices and quality issues. These firms are generally known to be large-scale and nationally recognized, they have stated that they attach importance to hygiene and customer satisfaction. The brand image is very important for all the firms. Most of the firms produce quality products. The majority of firms make marketing management intense production and marketing plan and marketing research are conducted regularly. In the vast majority of these firms, new product development activities are high and they do not only provide regional distribution but also national and international distribution.

In Turkey, it can be said that a large part of the red meat industry in the process of accession into the European Union is largely owned by European Union standards in terms of the production technologies they use and the physical conditions they have. The most of the firms have quality certificates such as ISO and HACCP which are necessary for entering these tenders.

The main problem faced by the red meat industry is the inadequacy of raw materials and the inability to provide them regularly. This is mainly because the breeding animals are derived from the offspring of dairy animals and only the breeding farms are very few. This is why the firms work with low capacity. First of all, it is necessary to develop policies that encourage establishment of large breeding farms which will provide healthy and regular raw material supply to the industrial sector.

According to the research studied by Artukoglu and Olgun, the producer organization level is very low for animal breeding in Turkey. Farmers buy the inputs at a high price level; however, they cannot sell their products at real values. The price of the fodder is by 5.6% higher in private markets than the price level in cooperatives. But another important point is that the cooperatives are not effective in covering the input needs of their members. On the other hand, the Agricultural Credit Cooperatives are incapable of credits services to the farmers. Besides cooperatives, other agricultural institutions do not have a good communication with the producers. As a matter of fact, the producers have problems such as decreasing productivity, high veterinary fees, ineffective remedies, delayed remedy return payments, lack of information about animal breeding (Artukoglu and Olgun, 2008).

Over the years, economic crises and sectoral policy changes (such as the red meat importation decision) have created uneasiness in the livestock sector in Turkey. Lowering the input costs of producers, such as feed and fattening materials, will increase production and productivity in livestock farms (Aydin et al, 2011).

In order to solve the problems in the red meat sector in Turkey with a holistic approach, horizontal and vertical integration should be established and developed along the chain starting from live animal breeding to reaching the consumer of meat and meat products. Companies in the meat and meat products industry in Turkey should be provided with low interest business loans to improve their existing technology levels. They should also be encouraged to receive quality assurance system documentation and support and focus on AR-GE work (Tosun and Demirbaş, 2012).

There is a marketing structure in red meat industry in Turkey that varies according to the region and the number of agents. Producer organizations are not effective enough in this point. For this reason, the producers are not provided with price and purchase guarantee in the existing system, and the industry is having difficulties in regular raw material flow. The introduction of illegal meat and live animals from country borders is still a serious problem for animal husbandry (TZOB, 2008).

Extending the contract producing model can increase the number of cattle breeding farms. Expansion of the cultivation areas of feed plants and lowering of feed prices require the feed to be supplied to producers at more affordable prices.

References

1. Arisoy H., Bayramoglu Z. (2015): Consumers' Determination of Red Meat and Meat Products Purchase Behaviour – City of Ankara Sample, *Turkish Journal of Agriculture - Food Science and Technology* 3(1), 29.

2. Artukoglu M, M., A., Olgun., (2008). Cooperation tendencies and alternative milk marketing channels of dairy producers in Turkey: A case of Menemen, Agric. Econ. – Czech, 54, Volume (1): 32–37.

3. Aydin E., Aral Y., Can M. F., Cevger Y., Sakarya E., İşbilir S., (2011). Türkiye'de son 25 yılda kırmızı et fiyatlarındaki değişimler ve ithalat kararlarının etkilerinin analizi, Veteriner Hekim Dergisi Volume: 82(1), page: 3-13.

4. Biesalski H.K. (2005): Meat as a component of a healthy diet – are there any risks or benefits if meat is avoided in the diet?, Meat Science 70, 520.

5. Emeksiz, F., Albayrak, M., Güneş, E., Özçelik, A., Özer, O. O, Taşdan, K., (2005). Türkiye'de Tarımsal Ürünlerin Pazarlama Kanalları ve Araçlarının Değerlendirilmesi, Tarım Haftası VI.Teknik Kongre, 3-7 January, page:1155-1171, Ankara.

6. Gunes, T., (1998). Türkiye'de Kırmızı Et Pazarlama Sistemleri, Verimlilik Dergisi, Milli Prodüktivite Merkezi Yayını, Volume 3, Ankara.

7. Gunes, T., Albayrak, M., (1998). “Hayvansal Üretimde Pazarın Düzenlenmesi ve Arz-Talep Dengesizliğine İlişkin Çözüm Önerileri”, Hayvansal Üretimi Artırmada Yeni Yaklaşımlar Sempozyumu, T.C. Ziraat Bankası Kültür Yayını, No:34, Sayfa 279-300, Ankara.

8. McAfee A. J., McSorley E. M., Cuskelly G. J., Moss B. W., Wallace J. M.W., Bonham M.P., Fearon A. M., (2010). Red meat consumption: An overview of the risks and benefits, Meat Science 84 Volume 1–13.

9. Saner, G., Kaya, F., 2002, Kırmızı Et Piyasası, İşleyiş Şekli ve Sorunları Üzerine Bir Değerlendirme, Türkiye V. Tarım Ekonomisi Kongresi, 18-20 September, Erzurum.

10. Sayin, C., Ceyhan, V., Bozoglu, M., 1996, “Hayvancılığı Teşvik Politikaları Nasıl Olmalıdır?”, Ondokuz Mayıs Üniversitesi Ziraat Fakültesi Dergisi, Volume 11-1, page 195-202, Samsun.

11. Scollan N., Hocquette J. F., Nuernberg K., Dannenberger I. R., Moloney A. (2006): Innovations in beef production systems that enhance the nutritional and health value of beef lipids and their relationship with meat quality. *Meat Science Volume 74,* 18.

12. Tosun D., Demirbas N. (2012): Türkiye'de Kırmızı Et ve Et Ürünleri Sanayiinde Gıda Güvenliği Sorunları ve Öneriler, *Journal of Agricultural Faculty of Uludag University, Issue 26, Volume 1*, 94.

13. TZOB. (2008). Türkiye Kırmızı Et Sektör Değerlendirmesi 2008 Yılı ve Sonrası Beklentiler, Türkiye Ziraat Odaları Birliği Yayınları, Haziran, Ankara.

14. Williams P. (2007): Nutritional composition of red meat, *Nutrition & Dietetics, 64 (Suppl. 4),* 113.

15. Sorensen, J.T., Ostergaard, S., 2003, Economic consequences of postponed first insemination of cows in a dairy cattle herd. Livestock Production Science. Vol: 79 145–153.

16. Verbeke, W. ve Ward, R.W, 2001, A fresh meat almost ideal demand system incorporating negative TV press and advertising impact. Agricultural Economics, Vol: 25, 359–374.

17. Yavuz F., Zulauf C. R., (2004). Introducing a New Approach to Estimating Red Meat Production in Turkey, Turk J Vet Anim Sci 28 (2004) 641-648.