

# Cooperation tendencies and alternative milk marketing channels of dairy producers in Turkey: A case of Menemen

## *Družstevní tendence a alternativní marketingové kanály využívané producenty mléka v Turecku: případová studie Menemen*

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**Abstract:** The aims of this study are to determine the cooperation of milk producers and to analyze the milk marketing structure in Menemen-Izmir, West Turkey. According to the results of this study, 70% of the producers are the shareholders of the cooperatives, 49.2% of the producers are members of the National Chamber of Agriculture. In this study, 47.20% of total milk production in the farms is marketing to street sellers, 36.11% is marketing to small scale milk processing plants, 10.1% is marketing directly to consumer and 6.6% is marketing to dairy factories. Also, feed prices in the market are 5% higher than the prices of cooperatives. The main problems related to organization and marketing together are the lack of knowledge in production, low milk prices and the high cost of production.

**Key words:** milk production, milk marketing, cooperative, organization

**Abstrakt:** Cílem této studie je analyzovat družstevní spolupráci a marketingovou strukturu producentů mléka v Menemen-Izmiru v Západním Turecku. Podle výsledků této studie je 70 % producentů podílníky družstev a 49,2 producentů je členy Národní zemědělské komory. 47,2 % celkové produkce mléka zemědělských podniků je prodána pouličním prodáváčům mléka, 36,11 % menším zpracovatelským podnikům, 10,1 % je prodáváno přímo spotřebitelům a 6,6 % mlékárnám. Tržní ceny krmiv jsou o 5 % vyšší než ceny družstev. Hlavním problémem ve vztahu k organizaci a marketingu je nedostatek znalostí v produkční oblasti, nízké ceny mléka a vysoké náklady produkce.

**Klíčová slova:** produkce mléka, marketing mléka, družstvo, organizace

Milk production is an important industry of the agricultural sector in Turkey. During the period 2000–2005, the number of cows decreased from 10 761 000 to 10 526 000. In spite of this, 14.82% increased in cows milk production from 8 732 000 to 10 026 000 t/year, 13.42% increased in the total milk production from 9 794 000 to 10 800 000 t/year (TURKSTAT 2006). In Turkey, the milk production value is 11% of total agricultural production value in 2004 (TURKSTAT 2007). The ratio of milk processing plants in the total food processing plants is 7.7% in

2004 (MARA 2007). In Turkey, milk is being used by 40% on farm consumption, 24% in street sales, 27% in small scale processing plants, 9% in processing in large/modern plants (Uzmay 2004). The margin of dairy marketing of UHT milk (the price difference between producer and the consumer included processing cost) is 71% in Turkey in 2005. In Turkey, there are 1077 cooperatives and 120 208 of members in these cooperatives (MARA 2007). The cooperatives which are in milk production deal with collecting the milk from its members, processing the milk,

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provide inputs for the members and finally market the milk and the dairy products. The share of these cooperatives in milk processing (6%) is very limited in cooperatives (Demirbas, Tosun 2005).

Besides this general frame of milk sub-sector, Turkey, which is in the progression period in the EU membership, has some problems such as insufficient milk production, lack of raw material in high quality, unstable prices of input/output, high costs. But in the EU, milk sector is being supported since 1964 in the common market regime scope and succeeded the desired situation despite of some problems such as production surplus. Milk production takes place in all EU member states and presents a significant proportion of the value of the EU agricultural output (13.8%) in 2006 (EU 2006).

In recent years, many studies have been made on dairy production economics (Saner 1993; Talim et al. 2000; Sahin 2001; Karaaslan, Karkacier 2001;

Candemir, Koyubenbe 2006; Demircan et al. 2006; Uzmay et al. 2006). Nevertheless, there is still need to study in this sector to improve milk production in Turkey. In this study, the subject is investigated with a case study from Izmir. It is aimed at the structure of the production and marketing with its general frame, to determine the organization condition and the deficiencies of the subject, to find out solutions in the macro level to the problems in the view of the established determinations with the field studies.

## MATERIAL AND METHODS

This study was carried out in Menemen-Izmir, in the Aegean Region, West Turkey. The region has a Mediterranean climate where July is the warmest month and January is the coldest month. The Aegean Region supplies 13.2% of milk production of Turkey. Izmir supplies 19.5% of the Aegean Region milk production and 2.6% of milk production of Turkey in 2003 (Uysal, 2006). The Menemen County has 4.8% in the dairy production and 5.4% in the number of cows of Izmir. Twelve villages are selected from Menemen (Cavuskoy, Emiralem, Gunerli, Harmandali, Kesikkoy, Maltepe, Musabey, Seyrekkoy, Suleymanli, Turkelli, Tuzcullu, Ulukent) with 65 dairy farms which have animal records and herd-book (Table 1).

Data were collected by face- to face- interviews with dairy farmers who live in those villages in Menemen, the head of the milk production cooperatives and managers of small scale milk processing plants in the research area. It was thought to test dairy farms from different approaches to the subject with the categorizing of the dairy farms due to their size. For this purpose, the dairy farms are classified due to their number of animals, the number of dairy cows and the amount of dairy production. However, it was decided that it would be more appropriate to choose the amount of dairy production for getting more reliable results. The dairy farms are divided into four groups according to the amount of dairy production (Table 1).

## RESULTS

### Socio-economics characteristics of dairy farms

The average cultivated area is 9.35 ha in the studied farms. Most of the fields are property owned (58.4%) and followed by rental (36.7%), and sharecropper (4.9%). The household size of the farm is approximately 6 people. The education level which is accepted as

Table 1. The number of animals in farms

Groups	Number of farms	Number of animals in farms (head)		
		cow	yearling, heifer, calf	sheep
1	17	3.9	4.8	6.0
2	18	5.8	7.8	3.3
3	16	10.8	12.8	2.7
4	14	16.6	22.1	14.6
Total	65	8.9	11.3	6.3

Group 1 = < 9 000 l/year; Group 2 = 9 001–20 000 l/year; Group 3 = 20 001–50 000 l/year; Group 4 = > 50 001 l per year

Table 2. The production of animal products in farms

Groups	Average	
	milk production (l)*	red meat production (kg)
1	4 742.7	226.5
2	14 851.4	183.5
3	33 801.6	506.3
4	89 541.1	1 056.4
Total	32 959.2	462.2

\*The total amount of both cattle and sheep milk

Group 1 = < 9 000 l/year; Group 2 = 9 001–20 000 l/year; Group 3 = 20 001–50 000 l/year; Group 4 = > 50 001 l per year

the most important factor of progress in Turkey in the rural areas is 5.9 in average.

In Table 2, the milk production increases with the dimension of the farm. This reason can be connected to the fact that the farms are in a better position for their cattle breeding, veterinarian facilities and for their approach to conscious managing.

To test the relationship between the education level and the amount of the production, a variance analysis has been done and the *F* value is 5%, the importance level is 3.45 what shows that there is a difference between the groups. For this result, it can be said that the amount of production is higher in the farms of the producers who have a higher education level. The educated producers can adopt and practice new technologies more easily and this makes them work more consciously.

### The cooperation positions of dairy farms

In a study which was done in Izmir (Saner 1993), 78.90% milk producers were the members of the National Chamber of Agriculture. In the research area, the producers are organized especially in the National Chamber of Agriculture and cooperatives. The 49.2% of the producers are members of the National Chamber of Agriculture. The producers who are not the members of this organization said that they would not attend the next year because they think this organization has no proper function, they do not have any economic advantage and also it cannot defend the benefits of the producers because of the lack of political efficiency. The members said they had no alternative to solve their problems. The 70% of the producers are the shareholders of the cooperatives.

Table 3. Provision of feed from the cooperatives

Groups	Quantity of feed (kg)		(2)/(1) × 100
	demanding from cooperatives (1)	supplied by cooperatives (2)	
1	235.3	235.2	100.0
2	388.9	388.9	100.0
3	1 531.3	1 031.3	67.3
4	8 142.9	6 714.3	82.5
Total	2 300.0	1 869.2	81.3

Group 1 = < 9 000 l/year; Group 2 = 9 001–20 000 l/year; Group 3 = 20 001–50 000 l/year; Group 4 = > 50 001 l per year

In a study done in Izmir-Turkey (Saner1993), 56.88% milk producers were shareholders of the cooperatives, in the study done in Izmir, Balıkesir and Aydın in Turkey (Talim et al. 2000), 41.18% milk producers were shareholders of the cooperatives. The main reason of the high rate is due to the cooperatives' active supply of the inputs. As a matter of fact, 46% of the producers gave the reason of being a shareholder of the cooperatives that they can procure the input under the average price of the market. With the results of the studied cooperatives in the region, they have become so successful in this subject. For example, 88.70% of the demanded fertilizer is supplied by the cooperatives and 81.3% of the demanded feed is provided by the cooperatives (Table 3).

Although there is a difference of 5.6% in prices of fodder between cooperatives and private markets, farmers prefer the private market as they had a long forward payment change and they could buy as much as they wanted and at the time they needed.

As the membership of the farmers in the research area is examined, 26.1% are the members of only the TARIS (Union of Agricultural Sales Cooperatives), 21.6% are the members of only the Agricultural Credits Cooperative and 24% are the members of the Agricultural Development Cooperatives besides being members of both the Agricultural Sales and the Credits Cooperatives. The reason becoming a member of the TARIS for the farmers is to obtain good prices for the products, obtaining feed, fertilizer and credits are the reasons for becoming a partner of the Agricultural Credits Cooperatives. The most important problems of the partners are the high interests and short terms of the credits. The important problems of the partners of the TARIS are obtaining the sale very late and even if the cooperative sells their products at a higher price and has extra profit, they cannot get the *ristorno* commission at the end of the year as a partner of the cooperative. Partners of both cooperatives have declared that there are no democratic management conditions in the cooperatives.

### The marketing of milk in dairy farms

There are five kinds of agent in marketing of milk in farms: milk processing factories, small scale milk processing plants, milk processing and milk collecting cooperatives and street sellers (Figure 1).

The street sellers take the first place of milk marketing, they sell the milk produced by them and by small producers directly to the consumer (Table 4). They sell the milk in the Menemen county and the surrounding

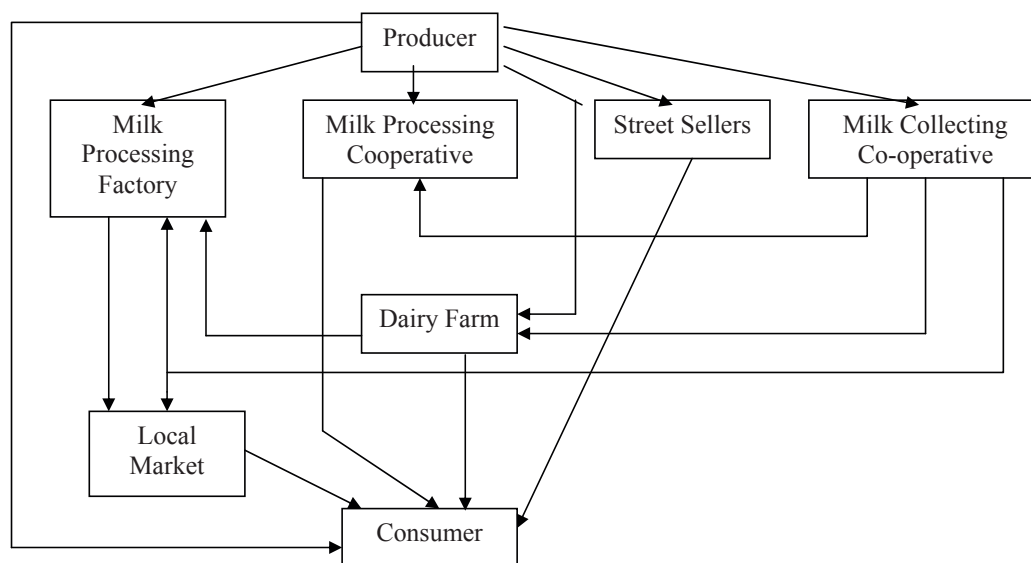


Figure 1. Marketing channels of milk in farms

districts, however, they also sell to the small, scale milk processing plants. The second important group is the small scale milk processing plants. These two groups take the ratio of 85% of the milk market in the region. Besides, it is stated that the milk produced in the region is sold to the milk processing factories and milk collecting cooperatives.

The ratio of the milk in the local was market calculated in the previous similar studies in Turkey. For instance, in a study which was done in Izmir, the ratio of the milk in the local market was 85% (Saner 1993), in the studies in Izmir, Balikesir and Aydın, the ratio of the milk in the local market was determined to be 91.08% (Talim et al. 2000), in a study done in Kayseri, the ratio of the milk in the local market was 88.32% (Kasim 2001), in a study done in Burdur, the ratio of milk in the local market was 97.53% (Demircan et al. 2006).

When the price formed in the region is examined, the highest price is given by the milk processing factories. The second highest price is the direct sales price to the consumers. The lowest price is given by the small scale processing plants as they have the guaranty for paying. The middleman pays in cash, weekly, 15 or 25 days period in general.

## DISCUSSION AND CONCLUSION

According to the results of this research, the producer organization level is very low. 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

Table 4. The marketing channels of milk in farms

Groups	To milk processing factory		To small scale processing plants		By street sellers		Directly to consumers		Total	
	(l/farm)	(%)	(l/farm)	(%)	(l/farm)	(%)	(l/farm)	(%)	(l/farm)	(%)
1	1 173.5	25.9	504.4	11.1	1 835.3	40.5	1 023.5	22.5	4 536.8	100.0
2	1 156.6	7.8	5 880.6	39.6	6 582.0	44.3	1 233.3	8.3	14 851.4	100.0
3	6 300.0	18.6	4 267.2	12.6	19 064.1	56.4	4 170.3	12.4	33 801.6	100.0
4	–	–	42 153.6	47.1	39 566.1	44.2	7 821.4	8.7	89 541.1	100.0
Total	2 177.7	6.6	11 890.0	36.1	15 517.3	47.2	3 320.4	10.1	32 905.4	100.0

Group 1 = < 9 000 l/year; Group 2 = 9 001–20 000 l/year; Group 3 = 20 001–50 000 l/year; Group 4 = > 50 001 l/year

the input needs of their members. As the cooperatives cover 81.3% of the fodder demand, the farmers cannot obtain the input they need at time. Besides the mistrust of the farmers against the cooperatives, the cooperatives in the region are not paying the roles in strengthening the cooperative trust and have no education and extension activities. Almost all (97.8%) of the farmers have no idea about principles of cooperatives and some did not join any general meeting of the cooperative. This situation is clarified by the help of these results: 20.5% of the farmers do not know how the general assembly of the cooperative is formed, 67.4% have no idea about the upper organizations of their cooperatives, and only 11.9% have knowledge about the history of their cooperatives.

On the other hand, the Agricultural Credit Cooperatives are incapable of credits services to the farmers. Certainly, this situation occurred because the number of cooperatives in that region is not sufficient. Moreover, the limited number of the Agricultural Development Cooperatives collects the milk and their collecting capability is limited.

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.

The producers sell their milk without processing as liquid milk. Clearly, here the important factor is that the cooperatives and corporations do not have processing establishments. In the research area, as a result of the experiences there is a negative attitude towards cooperatives. In recent years, this attitude has changed. However, the producers still are waiting for the government to establish cooperatives. However, for an effective and democratic cooperative, the producers should establish a cooperative by their own will. Cooperatives and producer corporations will obtain important benefits in providing inputs and selling the products. Furthermore, these cooperatives and corporations should be administered by professional directors. In solving the financial problems of cooperatives, it can be proposed to transform these cooperatives into a more democratic and producer participated structure. Producers can also evaluate their accumulations in the cooperatives. As a matter of fact, in the research 61.9% of the producers want to have a cooperative in that region and if this cooperative will act like bank, they can lend their money to the cooperative. Furthermore, cooperatives will obtain benefits on the behalf of the producers in marketing the products. On the other hand, public organizations

which serve producers should make a sufficient and efficient extension. It is necessary to transmit these services to producers when they need it.

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