

Evaluation of Effectiveness of Strawberry Marketing Organization in Mersin/Turkey¹**Arzu Secer^{1*}****Burak Oztornacı¹****Faruk Emeksiz¹**¹ Cukurova University, Faculty of Agriculture, Department of Agricultural Economics

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ABSTRACT

Mersin has strawberry cultivation areas significantly in Turkey. The production type of strawberry cultivation makes a significant contribution to rural development with the added value it provides. The aim of the study is to define socio-demographic status of strawberry producers and general characteristics of farms, reveal efficiency of marketing organization and stand for strengths, weaknesses, opportunities and threats and present proposals to contribute to development of the sector. Totally, 100 strawberry producers were interviewed. In the research area, the share of strawberry area in the total land is 73,7% in the open-field production and 63,0% in the greenhouse production. Strawberry production is 186.040 kg/da the open-field and 285.804 kg/da in the greenhouses. Producers sell their products mostly to intermediates and traders. The remaining producers sell their products directly for export. It can be said that there are some shortcomings in terms of collection, market preparation, transportation and competition. To overcome these shortcomings, the establishment of producer organizations and the export chain for export should be expanded.

INTRODUCTION

Strawberry (*Fragaria* sp.), which has an important place in berry fruits, is grown in many parts of the world. Strawberry which is a perennial herbaceous, evergreen plant entered the diet of millions of people around the world with its flavor, vitamin and mineral substance content. Strawberry has become popular within the last 50 years. The most important factor in the development of strawberry cultivation especially in recent years in the world and in our country is that it can be grown in different climatic and soil conditions economically. In addition, strawberries have a good market advantage because they ripen during periods when fresh fruits are less in the market. It is a fruit which is rich in vitamins that can be consumed by processing as well as being consumed fresh. This fruit is also suitable for small family business due to the rapid return on investment (Nacar, 2012).

Between 2001-2017 in Turkey, the production of strawberry increased due to the increase in strawberry cultivation area and yield. During this period, the cultivation areas increased from 97.000 decares to 153.198 decares; yield increased from 1,206 kg/da to 2,690 kg/da; production volume increased from 117,000 tons to 415,150 tons (TÜİK, 2018). The increase in yield is due to the planting of more productive varieties and improvements in the production technique. In 2017, 41.8% of the greenhouse strawberry production areas were in Mersin, 28.4% were in Aydın and 26.8% were in Antalya.

When Turkey's foreign trade of strawberries is examined, it is understood that it is an important source of foreign currency and it has a clear potential for improvement. In the examined period, the export amount of strawberries (fresh, frozen and canned total) increased from 11.2 thousand tons to 27.6 thousand tons and the value increased from \$ 10.3 million to \$ 40.2 million. In other words, during this period, strawberry imports increased by 2.5 times and the value increased by 3.9 times. While the export of strawberries at the beginning of the period

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was made with mostly frozen and canned and low amount of fresh fruit, the export of fresh and frozen strawberries increased over time and the export of canned strawberries decreased. In 2017, 67.4% of strawberry exports were made with fresh fruits, 30.5% were made with frozen fruits and 2.1% were made with canned fruits (TÜİK, 2018). Strawberry production in Turkey is made significantly in Mersin. 41.8% of Turkey's strawberry cultivation sites and 29.8% of the production take place in Mersin. In other words, 1/3 of the Turkey's production of strawberries are met by Mersin (TÜİK, 2018).

There are studies in literature conducted about the strawberry production costs (Sarılı, 2010; Ağır et. al., 2014; Polat, 2005; Akın, 2008) and marketing in Turkey (Aygören et al., 2014; Nacar, 2012; Akbulut et al., 2016; Gecer et al., 2016; Ertürk et al., 2016; Günes, 2017, UİB, 2017; Serçe ve Özgen, 2018). On the other hand, there is no study showing the strawberry production, marketing structure and problems in the sector in Mersin province. It is known that some problems are encountered in the region especially in strawberry marketing (preservation, access to markets, quality, packaging-handling etc.). In this respect, the general structure of this products should be put forward. At this point, this study that will be conducted in the study area will allow to obtain original data and provide concrete suggestions for the solution of problems.

The objectives of the study can be listed as follows:

a) Determination of the effectiveness of strawberry marketing organization in Mersin (determination of marketing services, channels and intermediaries involved in marketing).

b) Determination of the strong and weak sides of production and marketing of strawberry in Mersin and threats and opportunities in the market and

c) It is aimed to provide recommendations that will contribute to the development of strawberry sector in Mersin.

MATERIAL AND METHOD

Material

The basic material was the primary data collected from the surveys answered by the strawberry producers. The study was conducted between 2016-2017 production seasons. The data were gathered at July and August 2017. The questionnaire was divided into 3 parts to collect necessary information about the demographic characteristics of farmers, general characteristics of the farms and cost elements

Method

The Method to Define Sample Size: Research area was defined as Mersin that meets 36.3% of Turkey's strawberry production in 2015. Anamur and Silifke districts were selected by "Purposeful Sampling Method", based on their shares in total area planted and production in this province. These two districts accounted for 98.5% total strawberry cultivation areas and 98.4% of total strawberry production in Mersin (TURKSTAT, 2018). The villages were selected in purposive sampling method according to their shares in total strawberry areas and productions (9 villages in Anamur and 8 villages in Silifke).

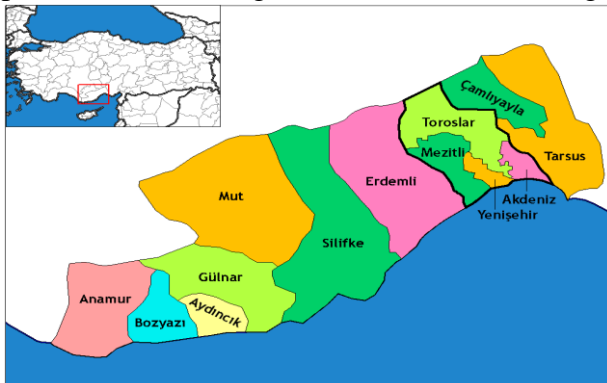


Figure 1: Mersin Province Map (Mersin District Plan 2017)

Strawberry producers in these villages consisted of frame list of the study. Number of sample producers was determined as 100 persons with 10% margin of error and 95% confidence limits by using "Stratified Sampling Method". Neyman approach was employed in distributing sample farms to the strata. With this approach, 62 farms for open-field and 38 farms for greenhouse strawberry producers were randomly selected and interviewed.

SWOT Analysis: It is a tool used for strategic planning and strategic management in organizations. It can be used effectively to build organizational strategy and competitive strategy. In accordance with the System Approach, organizations are wholes that are in interaction with their environments and consist of various sub-systems. In this sense, an organization exists in two environments, one being in itself and the other being outside. It is a necessity to analyse these environments for strategic management practices. This process of examining the organization and its environment is termed SWOT Analysis (Gürel and Tat, 2017).

RESEARCH RESULTS**General Characteristics of the Farms**

In the study area, the average operation size is 49.9 decares and the area used for strawberry production is 36.8 decares in the farms performing open-field strawberry production. The share of the strawberry production area in the total land is 73.7% decare. The average number of parcels in these farms is 2.1 and the parcel width is 23.8 decares. The average width of the farms raising strawberries under greenhouse is 366.6 decares and the area used for raising strawberry is 231.1 decares. In other words, in these farms the ratio of the field used for raising strawberry to the total width of the farm is 63.0%. The average number of parcels in the production of strawberries under greenhouse is 2.5 and the parcel width is 39.9 decares (Table 8).

Table 1. Production Land Width in the Farms and Share of Strawberry Production Area (%)

Characteristics	Open field production	Greenhouse production
Farm width (da)	49.9	99.8
Strawberry production area (da)	36.8	61.9
Share of strawberry production area in total farm width	73.7	62.0
Number of Parcel (piece)	2.1	2.5
Parcel width in the farms (decare)	23.8	39.9

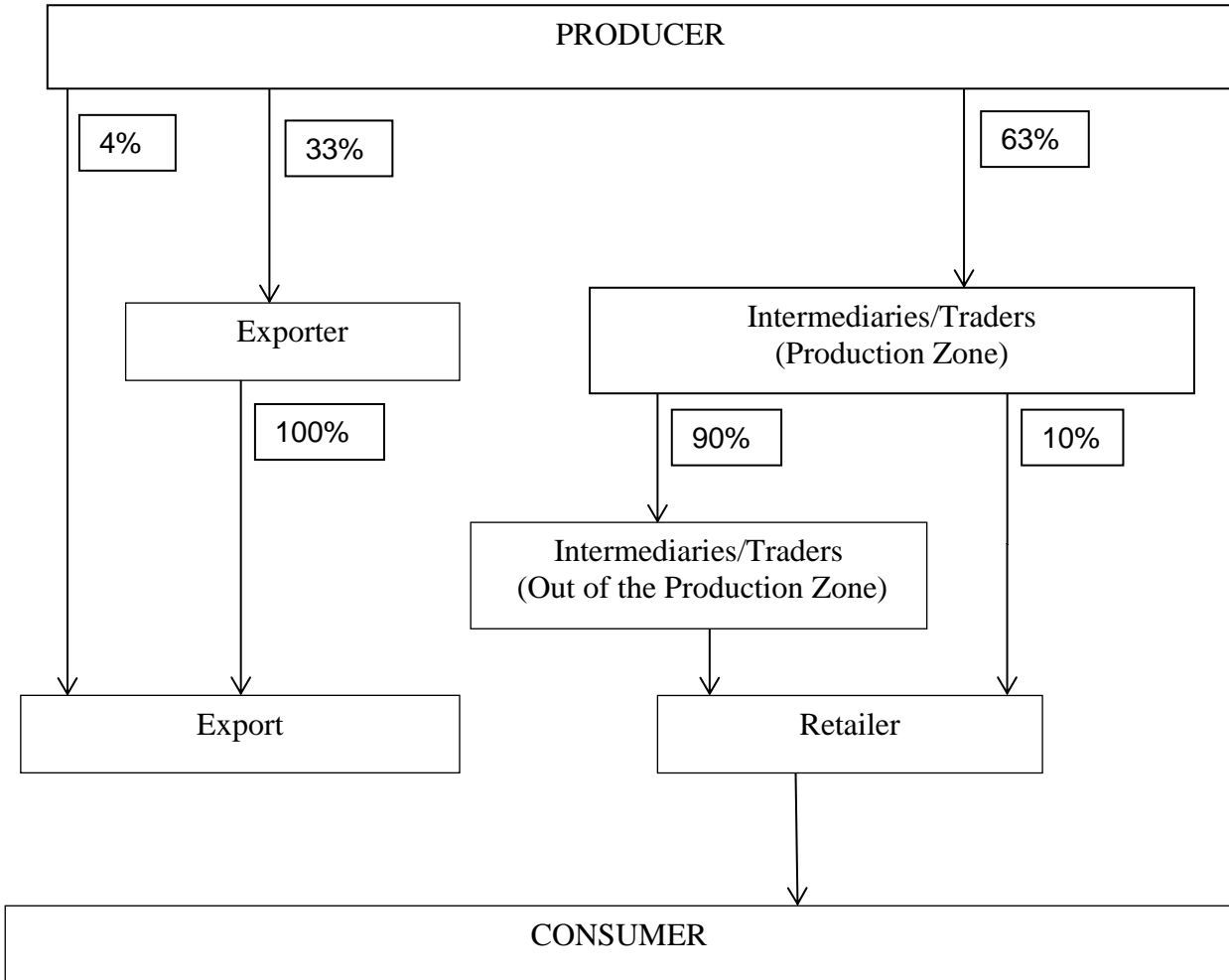
In the farms, 78.2% of the total field in the farms performing open field production is property, 19.0% are rental lands and 2.8% are common lands. In under greenhouse production, these rates are 82.7%, 16.9% and 0.4% (Table 9).

Table 2. Land Ownership Status in the Farms

Properties		Open-field Production	Greenhouse Production
Property	da	39	82,5
	Ratio	78,2	82,7
Rent	da	9,5	16,9
	Ratio	19,0	16,9
Common	da	1,4	0,4
	Ratio	2,8	0,4
Total	da	49,9	99,8

Strawberry Marketing Channels

In the field of research, open field strawberry production was determined as 186,040 kg per farm. This amount is 285,804 kg in the farmlands conducting under greenhouse production. Manufacturers sell their products mostly to intermediaries and traders. The remaining producers direct their products to export. The intermediaries/traders sell the products they supply from the manufacturer mostly (90.00%) to intermediaries and merchants coming from outside the city, and the remaining product is offered to retailers.



Intermediaries

Intermediaries/traders: They refer to the agents in the wholesale market hall. These intermediaries buy the product produced by the producers with a specific commission or fee and offer to the retailers. These people fulfill the packaging, handling and storage services of the products they purchase. Intermediaries /traders in the research area sell a large portion of the product to intermediaries /traders from other cities. The rest of the product is offered to the retailers in the region.

Exporter: In the field of research in Silifke region, a company that operates both the manufacturer and exporter activities, conducts a contracted agriculture with some producers in the region. This company is supplying the necessary inputs to manufacturers and also buys their products. The company offers products purchased from the producers directly to the international market. During this process, it fulfills many requirements to meet the demands of

overseas buyers. Numerous operations such as standardization, packaging, handling, etc. are carried out by this company.

Retailers: These enterprises buy their products only from intermediaries /traders. There are no marketing services offered by these people. There are no producers who sell their products directly to retailers in the study field.

Price Formation

Manufacturers were asked for factors affecting prices. The most important factor affecting the product price in producer sales is the quality of the product. Manufacturers learn the sales price mostly by following the prices of the wholesale market hall and from the merchants who come to buy their products. A small number of producers - 3 producers who sell their products to the exporter- expressed that the resource they learned the prices are the companies they sold the products.

Evaluating the effectiveness of the marketing organization

Collection: The effective fulfillment of the aggregation service depends on 4 main factors (Emeksiz, 1994). The first is the status of the road connection of the agricultural farmland with the market. The transportation status of the farmlands included in the study is good and no events was encountered reducing the effectiveness. The second is the distance to the market. In the region, strawberries are collected in the wholesale market hall or in the exporting companies and the collection process is carried out by traders/ intermediaries and exporters. The average distance between the manufacturer and the collection locations is 5.81 km. It can be said that the producers' cultivation areas are close to the collection sites and the market distance is not a factor reducing the efficiency. The third is the amount of supply per cultivation area. The average amount of strawberries that are offered to the market is 186,040 kg in the farmlands conducting open field production and 285,804 kg in the farmlands conducting under greenhouse production. Although strawberry fruit is a rapidly perishable product, it can be concluded that the amount of marketing is not a factor reducing the efficiency. The fourth is the type and discoverability of the vehicles used in transport. During transport, 93% of the manufacturers use trucks and turntable, while the remaining 7% use frigorific vehicles. In this regard, it can be said that there is a number of deficiencies in the field of research. In short, there are some shortcomings that will reduce effectiveness during the collection service.

Preparing for the market: During the preparation of fresh strawberries to the market, the strawberries are packaged based on maturity and appearance and packaged products are sent to the market. The strawberries collected must be protected from the sun, wind and dust. A place must be assigned for this in the yard. Collected strawberries are quickly affected by high temperature and mold fungus if they are not stored. Keeping in cool places increases the durability of strawberries. Since strawberry is susceptible to bruising, harvesting and classification must be performed simultaneously (MEGEP, 2012).

The fruits should be immediately shade after the harvesting and should be transported to the cold storage store for pre-cooling as soon as possible. If the fruit is kept in an open area in the garden for a long time, the shelf life may fall for up to a few hours. Pre-cooling is carried out in warehouses at +4 °C with rapid cooling of the newly harvested strawberries from the land. In this way, the temperature on the fruits is reduced immediately; the selection and packaging processes are conducted thereafter.

In the field of research, cooling to the harvested product is not very common. Only 3 manufacturers apply cooling process to the product before sales. 68,75% of traders have the facilities to conduct cooling process to the product in order to prepare for the market after the purchase of strawberries, but due to the rapid sales, they have expressed that they do not always fulfill this process.

Distribution: When the resulting products are collected and ready for consumption, they are transported to places where consumers will buy. Distribution of products includes the transportation to wholesale and retail sales units and distribution to consumers. This service takes into account the availability of potential markets in which the products will be presented, calculation of how many products these markets can handle and examination at what price the product can be sold (İnan, 2006).

Unlike other fruit types, strawberries cannot be preserved for a long time. The work of strawberry storage was carried out in order to determine the temperatures within the refrigerated truck while the products were sent to distant markets. Storage condition was determined as 5 days at 0 °C with 90-95% proportional humidity; 7-14 days in those treated at 0 °C with 15% CO₂ (DOKA, 2015). Goods are offered for sale at retail outlets in shopping malls, large stores and chain stores without removing them from their packaging in refrigerated shops (REGA, 2017).

63.0% of the strawberry collected by traders and exporters in the field of research are used in the domestic market while 37.0% of them are sold in the foreign markets. The products are transported with frigorific vehicles when transporting from brokers to other brokers or retailers in the field of research.

Packaging and Handling: Packaging is a bandage or container that protects the product from external factors, holds the products together and provides easy transportation, storage and distribution of the product from the production stage to the consumer. It is a known fact that packaging extends shelf life, reduces the risk of physical injury, and provides easy storage and transport. Generally the method of packaging fresh fruits and vegetables is associated with the development and living standards of countries. Although the use of packaging for fresh fruits and vegetables is very common in developed countries, it is still limited in developing countries (innovative approaches, project report).

Strawberry packaging containers should not be deep; if possible, fruits should be placed in a single row into the boxes. There must be holes in the bottom side of the boxes to allow ventilation. The strawberries brought into the packaging house with plastic fruit boxes are packaged to be shipped to remote markets with cardboard boxes after being selected and weighed after the pre-cooling process (DOKA,2015).

There is no standard container for the strawberries collected in Turkey. The packaging must be in the form of boxes or baskets, which are made to preserve the fruits in a good condition during the transport, and should be large enough to contain a net 500 grams of fruit. Packaging material may also be plastic, cardboard and wood-chipping. The strawberries that are collected and shipped to the packaging locations are sorted and placed in the packaging containers according to their sizes (MEGEP, 2012).

Transparent plastic containers and wooden and plastic boxes with the capacity of half a kg or 1 kg are used in the study area. Intermediaries supply packaging and handling materials to manufacturers at the beginning of the season. Manufacturers use these materials to perform packaging and handling services. In this case, the intermediary undertakes the costs of this service.

Transportation: It is expressed in "Notification about the procedures and principles of the standard applications that must be followed in the wholesale and retail trade of vegetables and fruits" dated October 3, 2017, 30199 that cold chain should be protected in the transportation of the products from the wholesale fruit halls in the production places or from the sorting and packaging facility to the consumption places. This notification also indicates that after the goods are pre-cooled, they should be transported with refrigerated vehicles suitable for pallet use. It was observed in the study area that the brokers follow this rule.

Storage: Vegetables and fruits should be stored in cold storage or in areas with appropriate heat and humidity environments that will not cause deterioration of goods or loss

of quality (REGA, 2017). However, strawberries cannot be preserved for a long time, such as other types of fruit. Strawberry storage studies is made to determine the temperatures within refrigerated vehicles when transporting them to distant markets. Storage conditions were determined as 5 days at 0 °C with 90-95% proportional humidity; 7-14 days in those treated at 0 °C with 15% CO₂. After the strawberries are moved from the manufacturer to the wholesaler in the field of research, they are generally transported right away and rarely after keeping in cold air storages with refrigerated vehicles.

Grading and Standardization: After harvesting and collection, agricultural products are generally graded and classified. Grading is the grouping of the products which are the same in terms of grades such as weight, volume, color, taste, smell, etc. (Inan, 2006). It is an important marketing service to ensure that the product requested in the market is easily found by consumers and helps reduce marketing costs.

The product is graded before the sale. All manufacturers fulfill the grading process based on the ripeness and appearance of the product. 90% of the producers divide the product into 3 classes, 7% divide the product into 2 classes and the remaining 3% divide into 4 or more classes.

Market Transparency: Market transparency is defined as the accessibility of market conditions by everyone involved in the market. For any product, market transparency is possible with the accessibility of the following information

- ✓ The supply and demand quantities of the product and substitute materials in different regions,
- ✓ Future trends of supply and demand for storable products (Plate and Böckenhoff, 1984 referred by Emeksiz, 1994).

Market-related problems can be resolved in a clearer and healthier way, in the full presence of marketplace information. The market information is originally provided from producers, marketing-related marketing channels and consumers in terms of supply. Information about the future of the market, long-term plans and programs are extremely important for the farmers, marketing firms and cooperatives. Only in this way, marketing organizations may be able to guide the product into processing and marketing according to consumer preferences (İnan, 1998).

The basic condition for a transparent market is to comply with the rules related to the grading and standardization set by the Turkish Food Codex (Emeksiz, 1994). The organization of strawberry marketing has been assessed in this aspect. The second important condition is the effective collection and dissemination of market news. In order to determine how the market news was gathered and spread in strawberry marketing, various questions were asked to the market participants (producers and intermediaries) and the answers were evaluated. The sources of people receiving news are intermediaries. As a result, the marketing organization can be said to be inadequate in terms of market transparency.

Competition: 96% of the manufacturers stated that only 1 buyer came to them during the sales period and they accepted the price of this buyer. Due to rapid rotting nature of strawberries and since they required to be harvested in a short time after ripening, the producers are disadvantageous in waiting for new buyers. Two or more buyers come to a small number of the remaining manufacturers.

88% of the producers get credits from the buyers at the beginning of the production season in order to meet the input costs. Getting credit is taking place under the condition of paying back the depth at the end of the harvest. However, given the shortage of buyers and the number of varieties, the bargaining power of the producers across intermediaries is quite weakened.

The intermediaries interviewed expressed mostly that there was no competition among themselves. 75% stated that there was no competition while the remaining 25% stated that there was a partial competition between them.

Strawberry cultivation and marketing problems

The main problems the producers are faced are the unreliable mediators (77%), high debts (47%) and low prices (37%). Besides, producers also complain about political instability (7%) and the small number of intermediaries (1%).

Table 3. Problems Faced With Strawberry Marketing

Problems	Persons*
In the unreliable intermediaries	77
Excess debts	47
The lack of price	37
Political instability	7
Lack of recipients	1

* Multiple options are selected.

Producers' Thoughts on Marketing Cooperative

The majority of the producers (97,00%) believe that a cooperative to be established for strawberry production and marketing in the region will be beneficial. These producers believe that the cooperatives to be established will benefit primarily in reducing unethical behavior in sales (79.38) and receiving timely payment (76.29).

Table 4. The Benefits Of Marketing Cooperatives

Benefits	Persons*	Rate (n/97)
A reduction in the non-ethical behavior on sale	77	79,38
Timely payment of payment	74	76,29
Ease of input	14	14,43
Easy to find buyers	13	13,40
Recovery of grading-standardization	12	12,37
Better prices	10	10,31
Having a marketing alternative	8	8,25
Trademark and convenience in branding	4	4,12

* Multiple options are selected.

1. Evaluation of strawberry production and marketing with SWOT analysis

In this part of the study, the strawberry industry in Mersin province was evaluated using SWOT analysis (Table 17).

Table 5. Evaluation of Strawberry Production and Marketing With SWOT Analysis

Strengths	Weaknesses
1.Manufacturers have been in strawberry production for many years, 2.The stability of overseas demand, 3.The strong transportation facilities in Mersin, 4. Geographical proximity of the production region to export markets, 5.The increase in the production of strawberries, 6. The realization of strawberry production in accordance with export, 7.To follow the new production techniques of producers,	1. The small size of enterprises, 2. Low level of education of operators, 3.The young population should not leave the production area and continue to agricultural production, 4. The lack of efficient producer organizations in the production and marketing of strawberries, 5.The production of strawberry production is a labor intensive production branch, 6. Lack of marketing services at the manufacturer stage.
Opportunities	Threats
1. Increasing R & D activities of Çilek, 2. To have research institutions operating in the production area related to strawberry production (Alata, CU, etc.), 3. Low worker wages in the sector.	1. The instability of exchange rates, 2. Instability in foreign trade policies, 3. Non-tariff barriers to exports to some countries, 4. Fast increase in input prices, 5. Non-objective use of agricultural land.

CONCLUSION

In Turkey, a significant proportion of strawberry cultivation fields are in Mersin. The aim of this study was to determine the socio-demographic characteristics of the strawberry producers, general properties of the enterprises, the effectiveness of the marketing organization as well as the strong and weak sides of the strawberry production and marketing along with the threats and opportunities in the market. In addition to these objectives, it is aimed to provide recommendations to contribute to the development of the strawberry industry in Turkey.

In Turkey, a significant proportion of strawberry cultivation fields are in Mersin. In 2017, 28.7% of strawberries cultivation fields and 35.2% of the production in Turkey took place in Mersin. In other words, 1/3 of the strawberry productions of Turkey are made in Mersin. It can be said that strawberry production in Turkey has an important place in the development of rural area in Mersin province.

The production of strawberries per cultivation area in the field of research is 186,040 kg in open field cultivation and 285,804 kg in greenhouse production. Manufacturers sell their products mostly to intermediaries and traders. The remaining producers direct their products to export. Intermediaries/Traders sell the products they supply from the producers mostly to intermediaries and traders who are from outside the city. The rest of the product is offered to retailers.

It can be said that there are some shortcomings in the field of research in terms of collection services. In summary, there are some shortcomings that will reduce effectiveness during the collection service. In preparing the product to market, cooling to the harvested product is not very common. Only 3 manufacturers apply refrigeration before sales. The 2/3 of the merchants have said that they have facilities for cooling the strawberries to prepare for the market after the purchase, but they do not always fulfill this process due to the rapid realization of the sales. 63.00% of the strawberries collected by traders and exporters are used in the domestic market and 37% were used in foreign countries. The products are transported with

frigorific vehicles while being transformed from brokers to other brokers or retailers in the study field.

In packaging, half a kilo or 1-kilogram of transparent plastic containers and wooden and plastic boxes are used. Packaging and handling materials are supplied to producers by intermediaries at the beginning of the season. Manufacturers use these materials to perform packaging and handling service. It was seen in transport that the brokers follow the necessary rules. After the strawberries are moved from the manufacturer to the wholesaler in the field of research, they are generally transported right away and rarely after keeping in cold air storages with refrigerated vehicles. The products are graded before the sale. All manufacturers fulfill the grading process based on the ripeness and appearance of the product. 90% of the producers divide the product into 3 classes, 7% divide the product into 2 classes and the remaining 3% divide into 4 or more classes. The main problems faced by producers in the marketing of strawberries are the fact that the intermediation is unreliable, excess of debts, low prices and political instability

Problems Encountered in Strawberry Production and Marketing and Solution Proposals;

1. The producers in the region mostly have small farmlands. The contract production model is able to provide advantages in the provision of input, credits and new technologies to producers. This model can also help producers to receive higher prices and reduce the price risk. Expanding contractual production in the region can be beneficial for the development of production, processing and exports.
2. There are no producer organizations or cooperatives actively operating in the marketing of strawberries. The absence of such organizations adversely affects the quality and quantity of production, decreases the effectiveness of marketing services and weakens the market position of the producers against buyers. With cooperatives or similar organizations to be established in the region, low-cost input and low-interest loans can be offered to the producers, marketing related problems can be reduced and marketing services can be conducted in more effective way.
3. Given the scattered and small-scale structure of strawberry producers, entrepreneurs should be informed, encouraged and supported on the creation and management of a common trademark. In this way, the creation of a common brand in the region will contribute to improving the quality of the product as well as the more effective fulfillment of marketing services.
4. There are deficiencies in terms of market transparency. In terms of the amount of supply and demand in the market, problems are felt in the collection and dissemination of information. An effective communication and information network should be established to collect domestic and overseas market information and spread it to all sector stakeholders.
5. Strawberry is a product that is frequently subject to exports. In this context, it is possible to help these producers by helping them to reduce risks, ease of entry into the market and share mutual resources for producers who want to export their product, but are not able to do so.
6. Manufacturers must consider the direct marketing method. In cases where marketing is made in line with a channel, a number of incidents occur in both retail and wholesale stages and marketing margins increase.

References

- Ağır, H. B., Saner, G., Adanacıoğlu, H., 2014. Risk Sources Encountered by Farmers in the Open Field Production of Strawberry and Risk Management Strategies: A Case of Menemen- Emiralem District of Izmir. *Tarım Bilimleri Dergisi*. 21: 13-25.
- Akın, A., 2008. Akşehir İlçesinde Organik Çilek Yetistirciliginin Benimsenmesi Ve Yayılması Üzerine Bir Arastırma. Ankara Üniversitesi. Fen Bilimleri Enstitüsü. Tarım Ekonomisi Anabilim Dalı. Yayınlanmamış Doktora Tezi.
- Aygören, E., Sancak, A. Z., Akdağ, E., Demirtaş, M., Dönmez, D., Sancak, K., Demir, A., 2014. Türkiye’de Meyve Suyu Üretim Sektörü. XI. Ulusal Tarım Ekonomisi Kongresi 3-5 Eylül. Samsun.
- Akbulut, M., Yazıcı, K., Şavşatlı, Y., 2016. Üzümsü Meyveler Raporu. Doğu Karadeniz Kalkınma Ajansı. DOKA Yayınları Arastırma Raporları Serisi No: 7. Trabzon.
- Gecer, M.K., Gündoğdu, M., Ertürk, Y.E. 2016. Üzümsü Meyvelerdeki Antikanserojen Fenolik Bileşikler. V. Uluslararası Katılımlı Üzümsü Meyveler Sempozyumu, 27-30 Eylül 2016, Adana.
- Güneş, N. T., Horzum, Ö., Güneş, E., 2017. Economic and Technical Evaluation of Fruit Sector in Turkey. *Balkan and Near Eastern Journal of Social Sciences*. 3 (2): 37-49.
- Gürel, E. and Tat, M., 2017. SWOT Analysis: A Theoretical Review. *The Journal of International Social Research*. 10 (51): 994-1006.
- Ertürk, Y.E., Geçer, M.K., Karadaş, K. 2016. Türkiye’de Çilek Üretimi ve Pazarlaması. V. Uluslararası Katılımlı Üzümsü Meyveler Sempozyumu, 27-30 Eylül 2016, Adana.
- Megep, 2012. Gıda Teknolojisi-Taze Sebze ve Meyveleri Satışa Hazırlama. Millî Eğitim Bakanlığı. Ankara.
- Nacar, Ç., 2012. Çilek Yetistirciliği. Gıda, Tarım Ve Hayvancılık Bakanlığı, Tarımsal Arastırmalar ve Politikalar Genel Müdürlüğü, Alata Bahçe Kültürleri Arastırma İstasyonu. Mersin.
- Polat, 2005 - Ankara (Ayaş) Koşullarında Organik Çilek Yetistirciliği Olanaklarının Arastırılması. Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Bahçe Bitkileri Anabilim Dalı. Yayınlanmamış Doktora Tezi.
- Sarılı, M., 2010, Silifke Yöresinde Açıkta Çilek Yetistirciliğinde Mekanizasyon Girdileri ve Maliyet, Çukurova Üniversitesi, Fen Bilimleri Enstitüsü, YL Tezi, Adana.
- Serçe, S., Özgen, M., 2008. Turkish soft fruit production. XXX. International Horticultural Congress. 12-16 August. İstanbul
- TURKSTAT, 2018. <http://tuik.gov.tr>. (Erişim Tarihi: 01.02.2018)
- UİB, 2017. Çilek Raporu. Uludağ İhracatçı Birlikleri Genel Sekreterliği AR&GE Şubesi.