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Grape Production Costs and Marketing Margins in Turkey (The Example from Tokat Province)

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Abstract

In the present research, for the purpose of investigating the effects of marketing structure of grapes on the consumers, the marketing margin was calculated based on the producer sale price and the market price (the consumer price) of grape. Besides, in order to evaluate the success level of the grape production activities, the profitability of the grape production per unit area was determined. The enterprises included in the study were determined with Neyman's method and the data from 70 enterprises were obtained by means of direct interview. In the examined agricultural enterprise, it is seen that decare yield of grape is 381.66 kg, its production cost is 78.77 TL, its gross production value is 232.81 TL, its gross profit is 174.40 TL and its amount net profit is 154.04 TL. While the cost of a kilo grape is 0.21 TL, its selling cost is realized as 0.61 TL. In this condition 2.96 TL have been profited contrary to the expense involving 1 TL made in grape production. According to these results, it can be said that the production of grape is a profitable activity. But it has been determined that the mediators between producers and consumers provide a higher income when compared to producers. The margin of mediator is found to be as 77.05%. For this condition to be profitable for the producer, the marketing chain between the producer and the consumer to be short and an effective organization to be between the producers, should be provided.

Key Words: Grape, grape production cost, marketing margin, Tokat, Turkey.

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1. Introduction

The grapes are also an important agricultural product for industries. They provide a number of agricultural raw materials for industries. Arrack, which is produced from the seeded raisins obtained by drying the grapes; wine, which is produced by means of fermentation of grape juice; and products produced by processing grapes through various processes, such as grape molasses, dried grape pulp sheets, vinegar, etc., each comprises an industrial sector in itself. Besides, grapevine is also used as an ornamental plant in landscaping [1].

Grapery, which has an important place in agriculture in Turkey and has a significant role in the social life and nutrition of the people, has problems still waiting to be solved [2].

Grape has become one of the most widespread cultivated plants since it is not too selective in terms of climate and soil demands, it is perennial and the propagation methods are easy to apply [3]. The approaches lacking of marketing strategies are also increasing the losses of producers every year. In Turkey, the marketing methods for agricultural products differ depending on the products. The problems in agricultural structure in Turkey reflects the marketing organization of the products as well, and a marketing system emerges in which the marketing services cannot be fulfilled adequately due to the long marketing channels which generally include too many middlemen and high marketing margins are seen. A marketing structure the products change many hands until they reach the consumer brings along problems in terms of the decrease both in the product quality and in the profitability of the producer [4]. According to the 2006 data, there are approximately 26 million hectares of agricultural land in Turkey, 3.628 million hectares of which comprising vegetable gardens, fruit orchards, olive groves and vineyards. Of the total agricultural lands, 6 % is fruit orchards, 3 % vegetable gardens, 3 % olive groves and 2 % vineyards [5]. More than 1200 types of grapes have been determined in Turkey which is accepted as the homeland of grapevine. However, only 70-80 of these has economic significance, being widely cultivated [6]. Of the grapes produced in Turkey, about 30 % is used as table olive, 37 % for raisin production, 30 % for grape molasses, dried grape pulp sheets, grape paste or grape juice production, and 3 % for wine production. Turkey has one of the leading countries especially in raisin production [7].

2. Materyals and Methods

In pre-examinations carried out on Central County of Tokat Province, research area of the study, total number of districts and villages in the research area was determined. In determination of the sampling volume, Neyman's Method formula, which is the stratified sampling method, has been used [8]. It has been determined that only 70 enterprises are suitable among 300 in 2008 production year. Sample enterprises have been determined randomly.

For the purpose of investigating the effects of marketing structure of grapes on the consumers, the marketing margin was calculated based on the producer sale price and the market price (the consumer price) of grape. Besides, in order to evaluate the success level of the grape production activities, the profitability of the grape production per unit area was determined. The costs of labor and farm vehicles, costs of materials and circulating capital interests were taken as changing expenditures. In determining the expenditure items constituting the changing expenditures group, while the raw materials and auxiliary products procured from outside was based on cost price, the items provided within the enterprise was based on farmyard prices [9]. 3

% of the changing expenditures were calculated as general administrative expenses. Circulating capital interests were calculated by applying half of the interests charged for the agricultural production credits by Ziraat Bank to the changing expenditures. The interest for bare land value was determined as 5 % of the current purchase and sale value of bare lands in the area investigated [10]. Preliminary expenses comprises the labor cost, preparation of the land, planting, fertilization, irrigation, weeding, disinfestations, raw and auxiliary materials, saplings, fertilizers, pesticides, others, land tenure expenses, tools-machines charter fare and other direct expenditures [9]. Preliminary expenses were calculated by dividing the annual depreciation by the relative economic life of the total organization expenses realized during the organization period. Organization capital interest was calculated by applying 5 % interest to the half-value of the total preliminary expenses. The formulas used in the calculation of the gross production value per unit area, the production expenditures, the gross profit, the net profit, relative profit and unit product cost are given below [10; 11].

Gross Production Value (TL da^{-1}) = Yield (kg da^{-1}) x Sale Price (TL da^{-1})

Production Expenditures (TL da^{-1})=Changing Expenditures (TL da^{-1}) + Fixed Expenditures (TL da^{-1})

Production Expenditures (TL kg^{-1}) = Production Expenditures (TL da^{-1}) / Yield (kg da^{-1})

Gross Profit (TL da^{-1}) = Gross Production Value (TL da^{-1}) – Changing Expenditures (TL da^{-1})

Net Profit (TL da^{-1}) = Gross Production Value (TL da^{-1}) – Production Expenditures (TL da^{-1})

Relative Profit = Gross Production Value (TL da^{-1}) / Changing Expenditures (TL da^{-1})

3. Findings and Discussions

According to the averages of the enterprises in terms of amount, 87.17 % of the grapes in produced are sold, and 12.83 % are consumed within the enterprise. In terms of value, sold grapes have a ratio of 88.21 % in the total production. This results show that the grape production in the region is market oriented.

Size-grading is one of the most important processes in the marketing activities both in terms of the demands of the consumers and middlemen in the marketing chain and in terms of the determination the price of the product. Among the enterprises investigated, it was found that all of the producers performed size-grading for the grapes, while 97.78 % perform it for the vine leaves. Additionally, buyer preference and increase in the price were determined as the reasons for performing size-grading for both products.

It is vital to give the due importance to the packaging of the product and choosing the appropriate packaging type both in terms of the protection of the quality and properties of the product and increasing the acceptance of the product in domestic and foreign markets. In the enterprises investigated, it was determined that, according to the average for enterprises, 81.82 % of the producers were using plastic cases and these cases were being procured by the companies processing the grapes. The 18.18 % using wooden cases were the producers who sell their product as table grapes.

Storage is an important process in terms of increasing the durability of the products after the harvest. Since the sale of grapes and vine leaves are carried out in a short time as fresh after the harvest in the region, there was found no facilities for storage.

The problems encountered during marketing can be solved in the cases where the information for the market can be fully accessible. Market information comprises the information regarding the prices of the products and the information regarding the supply and demand in the market. Among the enterprises investigated, according to the average of enterprises, it was determined that 62.12 % of the producers perform market research for grapes, while 37.88 % do not.

It was found that 68.18 % of the producers market their product within their own province, while 31.82 to the other provinces. Additionally, of the enterprises investigated, 81.82 % preferred their farmyard as the point of marketing for their products, 12.12 % the local market, and 6.06 % the wholesale vegetable-fruit market halls.

During the marketing stage, in accordance to the average of the enterprises, it was determined that of the producers, all complained of the low prices, 77.27 % from the insufficiency of the product processing facilities, 75.76 from the inorganization of the market structure and 1.52 % that they couldn't find buyers when they wanted. As for the vine leaves, it was found that 66.67 % of the producers complained of the low prices, while 2.22 % from the inorganization of the market structure.

The six marketing channels were determined for the marketing of grapes (both fresh and processed) in the Center County of the Province of Tokat. In the first three channels, the grapes reach to the consumers as fresh directly from the producers or through the commission brokers, retail dealers and supermarkets. On the other hand, in three other channels the fresh grapes are sold the wine factories in the region and then the processed products (wine) reaches to the consumers through the wholesale dealers, retail dealers, exporters and supermarkets.

The profitability of the grape production in terms of the average of the enterprises for the enterprises investigated is given in Table 1.

Table 1. The profitability of the grape production in terms of the average of the enterprises (2008)

	Average for Enterprises (70)
Yield (kg da^{-1})	381.66
Sale Price (TL da^{-1})	0.61
Gross Production Value (TL da^{-1})	232.81
Changing Expenditures (TL da^{-1})	58.41
Fixed Expenditures (TL da^{-1})	20.36
Production Expenditures (TL da^{-1})	78.77
Production Expenditures (TL kg^{-1})	0.21
Gross Profit (TL da^{-1})	174.40
Net Profit (TL da^{-1})	154.04
Relative Profit	**2.96**

According to the Table 1, the yield of grape per decare is 381.66 kg for the enterprises investigated, while the cost of 1 kg of grapes is 0.21 TL. The average sale price of grapes in the research region was determined to be 0.61 TL. For the investigated enterprises, the gross

production value per decare for the grape cultivation was calculated as 232.81 TL, while the gross profit was calculated as 174.40 TL. For the investigated enterprises, the net profit was found to be 154.04, while the relative profit to be 2.96. In other words, a profit of 2.96 TL was earned for every 1 TL spent in the grape production.

The margin for 1 kg of grapes according to the average of enterprises is given in Table 2.

Table 2. Marketing margin for 1 kg of grapes

	Average for Enterprises (70)
Farm gate price of 1 kg of grapes (TL) (A)	0.61
The market price of 1 kg of grapes* (TL) (B)	1.08
Marketing margin (TL) (B-A)	0.47
Marketing margin (TL) (%)	**77.05**

**[12].*

As is seen in the Table, while the producers supply 1 kg of grapes for a price of 0.61 YTL, a price of 1.08 YTL is demanded from the consumer in the market. Of the 1.08 YTL price the consumers pay for 1 kg of grapes, 77.05 % is left to the middlemen as marketing margin. According to these results, the middlemen between the producers and consumers obtained a profit at a rate of 77.05 %. Based on similar studies carried out in other products, the middleman margins were determined to be 70 % in red meat marketing system in Turkey [13], and 77.90 % for the red meat marketing system in the U.S.A. [14]. Topçu [15] calculated this rate to be 32.86 % as the average of livestock enterprises, Uzunoz et al. [16] to be 42.18 % in the livestock enterprises raising domestic breeds, 41.18 % in the livestock enterprises raising hybrid breeds, and 42.18 % in the livestock enterprises raising foreign breeds. In the studies carried out by Kaygısız [17;18], the middleman margins were determined to be 33.40 % in the marketing of butchery cattle and beef, to be 21.30 % in the marketing of butchery sheep and mutton. In the study carried out by Birinci and Er [9] on the production and marketing of organic and conventional peaches, the middleman margins were found to be 63.64 % for the organic peach marketing, and to be 12.10 % for the conventional peach marketing.

4. Conclusion

The price for the table grape breeds is determined by the domestic consumption market. Since the early and late grape types are distributed to few and definite vineyard areas, they generally yield high prices. The abundance of the table grape types, which are harvested in the middle maturation stage, make it harder for them to be utilized properly both in domestic and foreign markets, causing sale prices to be low. Thus, it is necessary to cultivate and popularize the types of grape which are high in market value, preferred by the market consumers and suitable to the ecology of the region.

In order to prevent the product and quality losses during the processes carried out after the harvest and develop the market opportunities for the product, cold storage depots, packaging facilities and appropriate transport infrastructures should be built in the region.
A marketing structure in which the product changes many hands until it reaches from the producers to the consumers is the most important factor increasing the marketing margins, i.e. the difference between the price the consumers pay and the price the producers are paid. And this means a decrease in the profitability of the producers. Thus, organization of the producers in

production and marketing should be supported in order to allow them be able to find solutions to their common problems, to better utilize their products, to obtain their input requirements in a cheaper and sufficient way, and to increase their marketing power.

It can be said that the grape production is a profitable production activity in the research region. However, it was determined that the middleman between the producers and consumers are providing a higher income comparing to the producers. In order to change this situation in favor of the producers, the marketing chain between the producers and consumers should be rather short and an effective organization should be developed among the producers. Additionally, since the number of the studies on grape cultivation is significantly few, the results from the present study should be evaluated and used for the benefit of the region.

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