



Organic Grape Production and Producer Status in Adıyaman Province; Example of Besni District

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ARTICLE INFO	ABSTRACT
<p><i>Research Article</i></p> <p>Received : 12/05/2020 Accepted : 05/08/2020</p> <p>Keywords: Grape Organic farming Innovation Environment Adıyaman Province</p>	<p>This study was carried out to evaluate the socio-economic structure and organic farming activities of grape producers in Besni. A face-to-face survey was conducted with producers producing organic grapes. Data were obtained by interviewing a total of 50 producers. The number of organic products grown between 2005 and 2018 increased from 205 to 213 in Turkey. The number of producers engaged in cultivation in this area has increased more than 5 times compared to 2005. It reached nearly 80.000 in 2018. The area of organic vegetable production increased from 203.811 to 626.884 hectares in Turkey. While the production area increased 2.5 times, the production amount increased almost 4 times. Today, a variety of products in organic vegetable production, planting area, the number of farmers has increased in Turkey. The findings were obtained education level of the producers, the number of individuals in the family, record keeping, annual total income, newspaper reading, grape yield, grape cultivation area, property and rental land, credit usage, weed control, organic farming knowledge level, organic farming by using variables such as thoughts and grape variety. There are serious differences between conventional agriculture and organic farming. The family structure is effective in production activities. It has been determined that the thoughts of organic farming have changed depending on the age and experience of the producers. Organic grape producers have turned to organic farming due to their desire to sell their products at higher prices with state supports. Also, it has been suggested that organic farming is important in terms of the sustainability of living life all over the world. Increasing producer income and environmental awareness are among the main reasons for the transition to organic farming.</p>

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Adıyaman İlinde Organik Üzüm Üretimi ve Üretici Yapısı; Besni İlçesi Örneği

MAKALE BİLGİSİ	ÖZ
<p><i>Araştırma Makalesi</i></p> <p>Geliş : 12/05/2020 Kabul : 05/08/2020</p> <p>Anahtar Kelimeler: Üzüm Organik tarım Yenilik Çevre Adıyaman İli</p>	<p>Bu çalışma Besni İlçesi'ndeki üzüm üreticilerinin sosyoekonomik yapısı ve organik tarım faaliyetlerini değerlendirmek amacıyla yapılmıştır. Organik üzüm üretimi yapan üreticilerle yüz yüze anket çalışması yürütülmüştür. Toplam 50 üretici ile görüşülerek veriler elde edilmiştir. Türkiye'de 2005-2018 yılları arasında yetiştirilen organik ürün sayısı 205'ten 213'e çıkarken; bu alanda yetiştiricilik yapan üretici sayısı da 2005 yılına göre 5 katının üzerinde bir artış göstererek 2018 yılında yaklaşık 80.000'e ulaşmıştır. Organik bitkisel üretim alanı ise 203.811 dekadardan 626.884 dekara yükselmiştir. Üretim alanı 2,5 kat artış gösterirken, üretim miktarı ise neredeyse 4 kat artmıştır. Günümüzde Türkiye'de organik bitkisel üretimde ürün çeşitliliği, ekim alanı, çiftçi sayısı artış göstermiştir. Elde edilen bulgular; üreticilerin eğitim seviyesi, ailedeki birey sayısı, kayıt tutma, yıllık toplam gelir, gazete okuma, üzüm verimi, üzüm ekim alanı, mülk ve kira arazi, kredi kullanımı, yabancı ot ile mücadele, organik tarım bilgi düzeyi, organik tarım üzerine düşünceler ve üzüm çeşitliliği gibi değişkenler kullanılarak elde edilmiştir. Konvansiyonel tarım ile organik tarım arasındaki ciddi farklılıklar olduğu, aile yapısının üretim faaliyetleri üzerinde etkili olduğu saptanmıştır. Üreticilerin yaş ve tecrübesine bağlı olarak organik tarıma yönelik düşüncelerinin değiştiği belirlenmiştir. Organik üzüm üreticileri devlet destekleriyle birlikte ürünlerini daha yüksek fiyata satabilme isteğinden dolayı organik tarıma yönelmiştir. Ayrıca tüm dünyada canlı yaşamının sürdürülebilirliği bakımından organik tarımın önemli olduğu öne sürülmüştür. Üretici gelirini arttırmak ve çevre bilinci, organik tarıma geçişin temel nedenleri arasında gösterilmiştir.</p>

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Introduction

The rapidly increasing world population brings with it the demand for foodstuffs (vegetable and animal). However, it is impossible to increase the amount of land required for the current production. For this reason, production is tried to be increased with yield obtained from the unit area. However, as well as increasing productivity is important, the health of humans and other living things is also important.

Today, practices carried out in agricultural activities disrupt the natural balance. It poses a life-threatening life that can reach all living things besides human beings through the food chain (Turhan, 2005; Ayla and Altıntaş, 2017). It is applied in agriculture, activities such as good agricultural practices and organic farming to reduce environmental damage (Ak, 2004; Merdan, 2014). However, it should not be considered that combating disease and pests, fertilization is not done in these applications (Kirimhan, 2005). In Turkey, both biological and genetic diversity that is suitable for the organic farming system (Kızılaslan and Olgun, 2012).

According to 2016 data in the world, it is known that organic production is made by 2.7 million producers in an area of 57.8 million hectares in 178 countries (Willer and Lernoud (Ed.), 2018). Organic farming has emerged since the mid-1980s, under the leadership of European organic farming companies in Turkey. It started with the production of dried grapes, dried figs, dried apricots, and hazelnuts for export with the contracted agriculture system. The first organic raisin production project was initiated in 1986. This was followed by the organic fig project in 1987. In the following years, the variety of products has increased in this regard. Production and export have started on hard and dried fruits, frozen fruits and vegetables, fresh fruits and vegetables, spices, and legumes. It also gained rapidness in rose water, rose oil, olive oil, cotton, and textile products. The improvement in organic cotton production has also increased in the organic textile sector (Anonymous, 2019). Consumers' concerns about food safety, the effects of conventional agriculture on the environment, regulated policies, and incentives have drawn attention to organic farming production. However, there are differences between the production costs, cost items, and profitability of traditional and organic farming practices (Yercan, 2003).

Grape is a *Vitis* genus plant of the vine family (Vitaceae). It is one of the most widespread cultivars in the world due to reasons such as being suitable for cultivation in Anatolia, which is a part of its homeland and is not very selective in terms of climate and soil requirements, being easy to reproduce and being consumed in a variety of ways (Taşkaya, 2005; Özbağ, 2010). Also, grapes are among the products with high added value that can be consumed in the form of a table, wine, dried, vinegar, molasses, confectionery, fruit juice, and other products. About 40% of the grapes grown dried evaluated, 25% is consumed as a table in Turkey. Also, 20% of the grapes produced are evaluated by making vinegar, molasses, and fruit pulp. Approximately 15% of the production is used in the alcoholic beverage industry. However, approximately 90% of the product is used in wine production in western countries (Duran, 2003).

Organic grape production areas are increasing in the world. Countries such as Spain, Italy, France, and China have the largest share in 2014 among organic grape growing countries. Turkey is located on the fifth-largest after those countries. According to data from 2014, 21.7 thousand tons of organic fresh grape in Turkey, while production was 5.6 thousand tons of organic dried grape. While Manisa comes first among the provinces with the highest organic grape production; continues as İzmir, Mersin, Niğde, Tekirdağ, and Çanakkale respectively. This value corresponds to 61.7% of the total organic grapes was produced in Turkey. It corresponds to 94% of organic dried grape (Mısır and Pezikoğlu, 2016).

This study covers the production of grapes in Besni District of Adıyaman, one of the important grape producer provinces of the Southeast Anatolia Region. It was made to reveal the socio-economic status of organic grape-producing enterprises and their thoughts on organic farming.

Material and Method

The main material of the research consists of the data obtained from the surveys conducted with organic grape producers and the observations of the researcher in Besni District of Adıyaman Province. Also, secondary data were used on the subject received from the database Turkey Statistical Institute (TURKSTAT). The change between these data analyzed over the years has been put forward by a simple index method. In the scope of the research, Besni District Agricultural Directorate data was used to collect the necessary data.

Besni District Agriculture Directorate was used to collect the necessary data within the scope of the research. It was examined through the farmers' lists that received organic farming support and cultivated grapes. According to these lists, a survey was conducted in the villages of Besni district using the full count method. In this context, 50 producers producing certified organic grapes were interviewed face to face. In this study conducted with organic grape producers of Besni District, which was determined as the target audience, the minimum level of producers could not be reached.

The survey of the research was applied in the summer of 2017. The survey forms prepared within the scope of the research were pre-tested. After the necessary arrangements were made, data were collected from the research area. Field observations and group interviews were also used to develop and support the data set. The methods to be used in data evaluation were chosen for the research. The analysis of the study was evaluated using the SPSS package program. Categorical variables in the form of frequency and percentage ratio; numerical variables are given as average.

Results and Discussion

General Information about Research Area

Besni district, which constitutes the research area, has a characteristic between the Mediterranean climate and the eastern continental climate. With the construction of the

Atatürk Dam, a noticeable difference occurred in the climate of the district. In particular, a significant increase was observed in the amount of moisture and precipitation (Anonymous, 2018). The region has a total area of 1,327,000 da, together with 490,986 fields, 228,803 vineyards, and gardens. More than half of this area is used as agricultural land (54%). During the last 20 years, significant changes have occurred in the district's crop pattern and production style. It is known that a large amount of dry farming system was applied in crop production before the 1980s. Today, it is a region where approximately 30-32% irrigated agriculture system is applied (Anonymous, 2017a).

According to the Statistics Data Network (IVA) data, total field crop production in Besni was 187,023,000 tons, 28,707 tons of vegetable production, and 3,385,615 tons of vineyard and garden production in 2017. Total grapes (vineyard) produced 17,916 tons of planting area of 30.200 decares. There are 5,575 producers in the Besni District Agricultural Directorate connected to the farmer registration system. While the number of farmers engaged in organic farming in the field of research was 20 producers in 2015, it increased to 370 producers in 2016. The number of producers growing grapes is 676 in total. While Adıyaman is 983 producers across the province, Besni district realizes the majority of production alone. In 2016, 1,727,301.66 ₺ was paid to the producers registered for organic farming support (Anonymous, 2017b).

According to the data on grape production between the years 2006-2016 the grape cultivation area increased from

13,500 decares to 23,910 decares in Besni district. Between the specified years, the production amount increased from 3,500 tons to 10,916 tons and exceeded 3 times. Besides, the grape yield has increased significantly from 259 kg/da to 457 kg/da. By years, the planting area of Besni table-seed grape production has increased steadily. However, fluctuations are observed in production and yield values (Table 1).

The planting area for the production of dried-grape grapes in Besni district increased from 5,000 decares to 6,100 decares between 2006 and 2016. The amount of production increased significantly from 1,050 tons to 5,490 tons between the specified years. The grape yield was realized from 210 kg/da to 900 kg/da. It is seen that the increase in the production of Dried-seed grape in the district is mostly due to the increase in yield (Table 2).

Today, organic product variety, production area, and the number of farmers have increased in Turkey. Due to all these factors, there is a serious increase in the production amount of organic products. The number of organic products grown according to the Turkey Statistical Institute data has increased from 205 to 213 in the years 2005-2018. The number of producers engaged in cultivation in this area has increased more than 5 times compared to 2005. It reached nearly 80.000 in 2018. The area of organic vegetable production increased from 203.811 to 626.884 hectares in Turkey. While the production area increased 2.5 times, the production amount increased almost 4 times (Table 3).

Table 1. Table-seed grape production in Besni district (2006=100)

Year	Area (da)	Index	Production (ton)	Index	Yield (kg/da)	Index
2006	13,500	100	3,500	100	259	100
2007	21,500	159	6,675	191	310	120
2008	22,300	165	7,550	216	339	131
2009	22,800	169	7,650	219	336	130
2010	22,718	168	13,903	397	612	236
2011	22,718	168	14,994	428	660	255
2012	22,718	168	14,994	428	660	255
2013	22,760	169	15,402	440	677	261
2014	22,760	169	17,070	488	750	290
2015	23,760	176	13,187	377	555	214
2016	23,910	177	10,916	312	457	176

Source: TURKSTAT, 2017 (www.tuik.gov.tr)

Table 2. Dried-seed grape production in Besni district (2006=100)

Year	Area (da)	Index	Production (ton)	Index	Yield (kg/da)	Index
2006	5,000	100	1,050	100	210	100
2007	4,500	90	1,200	114	267	127
2008	5,100	102	1,197	114	235	112
2009	5,600	112	1,320	126	236	112
2010	5,600	112	3,696	352	660	314
2011	5,600	112	1,120	107	200	95
2012	5,600	112	3,696	352	660	314
2013	5,700	114	4,399	419	772	368
2014	5,700	114	4,275	407	750	357
2015	6,100	122	4,500	429	750	357
2016	6,100	122	5,490	523	900	429

Source: TURKSTAT, 2017 (www.tuik.gov.tr)

Table 3. Organic vegetable production in Turkey (2005=100)

Year	Products (pieces)	Index	Producers (person)	Index	Area (ha)	Index	Production (ton)	Index
2005	205	100	14401	100	203811	100	421934	100
2006	203	99	14256	99	192789	95	458095	109
2007	201	98	16276	113	174283	86	568128	135
2008	247	120	14926	104	166883	82	530224	126
2009	212	103	35565	247	501641	246	983715	233
2010	216	105	42097	292	510033	250	1343737	318
2011	225	110	42460	295	614618	302	1659543	393
2012	204	100	54635	379	702909	345	1750127	415
2013	213	104	60797	422	769014	377	1620387	384
2014	208	101	71472	496	842216	413	1642235	389
2015	197	96	69967	486	515268	253	1829291	434
2016	238	116	67878	471	523777	257	2473600	586
2017	214	104	75067	521	543033	266	2406606	570
2018	213	104	79563	552	626884	308	2371612	562

Source: TURKSTAT, 2019 (www.tuik.gov.tr)

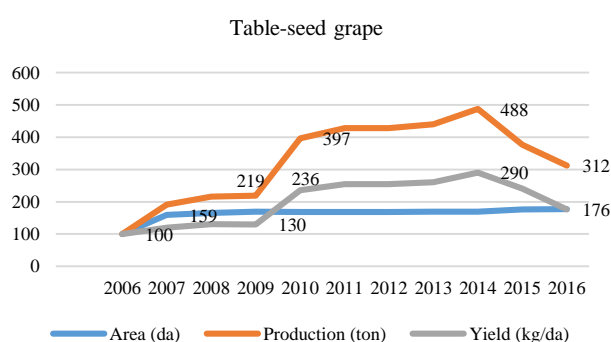


Figure 1. Distribution of table-seed grape production by index values in Besni (2006=100)

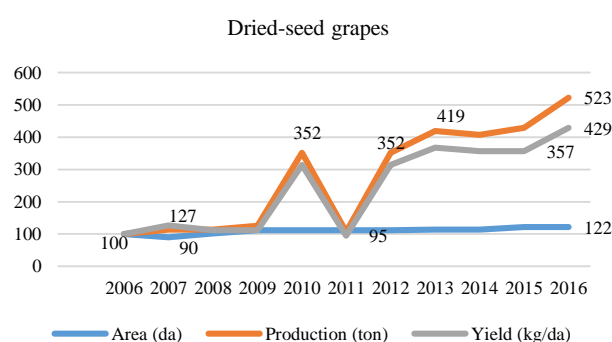


Figure 2. Distribution of dried-seed grape production by index values in Besni district (2006=100)

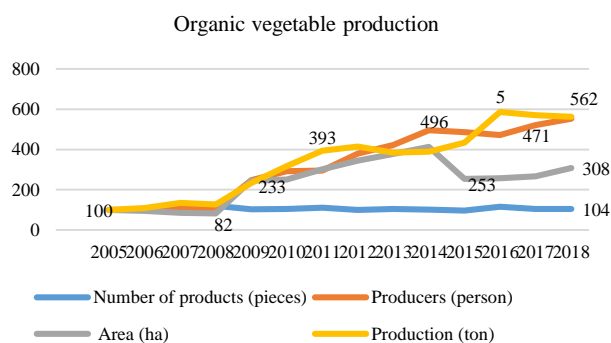


Figure 3. Distribution of index values based on organic vegetable production in Turkey (2005=100)

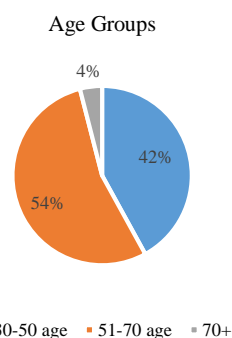


Figure 4. Distribution of producers by age ranges

Findings Obtained as a Result of the Research

Within the scope of the research conducted in the region, 50 producers voluntarily participated were interviewed face to face. According to the findings, it has been determined that organic grape producers in Besni district mostly concentrate in regions such as Çorak, Suvarlı, Pınarbaşı, Çakallı. Approximately 95% of the producers, who are generally in the middle age group, are individuals between the ages of 30 and 70. Producers growing organic grapes are usually in the 30-80 age range. The average age was determined to be 52 (Figure 4).

Considering the training levels of the producers; it is seen that most of them are at the primary school level. The low level of training of producers causes them to adopt

innovations late. This situation significantly affects both the sustainability of production and product variety (Figure 5).

Considering the distribution of producers according to the number of individuals in the family; While 16% constitute families of 1-3 people, 74% have 4-7 people and 10% have 8 or more individuals. The number of individuals in the producers' family is between 2-8 people and on average consists of families of 5 people. Approximately 90% of the producers participating in the research have more than 10 years of vegetable production experience. The vegetative production experience of the producers varies between 5-65 years and on average 27 years. Also, the vast majority of producers are very experienced in grape growing. It has been determined that the grape-growing

experience of the producers varied between 5-42 years and the grape growing for an average of 20 years. Organic farming experience of producers varies between 1-6 years. Organic farmers have an average of 3 years of experience in this field. Also, it has been determined that 70% of the producers have started this activity in the last 3 years.

According to the findings, the vast majority of producers reported that they did not receive any training on grape growing. Only 10% stated that they received training on this subject. It has been observed that the producers who are not trained about grape cultivation grow with the

traditional methods learned from the family, as they see from the environment. It was observed that the producers who did not receive training on grape production cultivate as they see from the environment with traditional methods learned from the family. In a study carried out by Roitner-Schobesberger et al. (2008) has revealed that a lack of information on organic farming is a serious problem. Besides, it was determined that 8% of the producers kept the enterprise's records and recorded the activities they carried out, and 92% did not keep the records.

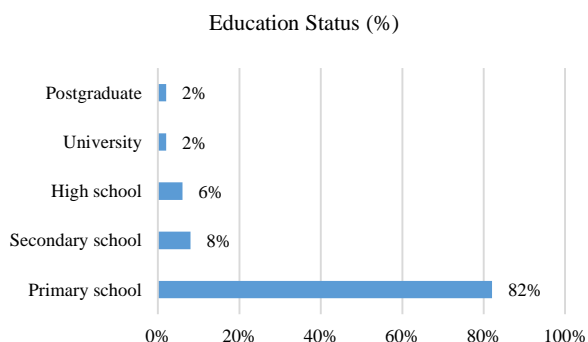


Figure 5. Distribution of producers by educational status

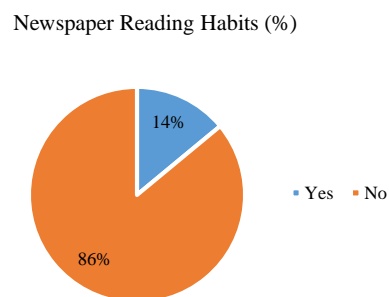


Figure 6. Distribution of producers according to newspaper reading habits (%)

Besides agricultural production; 12% of producers also operate in non-agricultural professions such as doctors, headmen, workers, and drivers. Most of the producers stated that they did not carry out any activities other than agricultural production. The monthly income of non-agricultural businesses varies between 1,400 ₺ and 10,000 ₺. It has an average monthly income of 3,950 ₺.

Organic farmers with computers also have internet access. However, the vast majority of producers stated that they do not own computers and the internet (Table 4). This situation varies depending on the education level and occupational groups.

Table 4. Computer and internet ownership status of producers

Computer	Frequency	%
Available	4	8.0
Non-available	46	92.0
Total	50	100.0
Internet	Frequency	%
Available	4	8.0
Non-available	46	92.0
Total	50	100.0

Producers' reading habits are rather low. While 14% of the producers regularly read newspapers, 86% reported that they did not read it occasionally or at all (Figure 6).

Social security is a necessity for everyone while carrying out agricultural activities as in every field. Approximately 70% of organic grape producers also have social security. Producers take out agricultural insurance to guarantee their products and keep their losses to a minimum. It was determined that 42% of the producers participating in the study had agricultural insurance regularly and 58% did not make or renew their insurance.

Also, approximately one-third of the producers use loans from Ziraat Bank to purchase tractors and produce grapes.

All of the producers participating in the research receive organic farming support. Also, the producers stated that they benefited from diesel support, fertilizer, animal husbandry, and feed. Remarkably, 80% of organic farming producers benefit from animal husbandry support. While nearly two-thirds of the grape producers in the region find the support provided insufficiently, one third find it sufficient and 12% partially sufficient.

Many factors have been influential in the start of organic farming. It has been determined that the producers are aware of the village headmen, the district agriculture directorate, private companies that provide organic farming support through the chamber of agriculture and the agricultural advisor. Education levels of organic farmers in the region differ from each other as well as their level of knowledge. The vast majority of organic farmers find themselves sufficiently knowledgeable. Only 6.1% stated that they have a low level of knowledge.

The vast majority of the producers stated that they are not members of any organization related to grape growing, only 10% are members of the Chamber of Agriculture, Agricultural Credit Cooperative, and the Grape Growers Union that they established with their local facilities. Most of the grape varieties produced are Besni grape, Azezi, and Kilis land in the region. There is also a little Kabarcık and Ağ grape production. Approximately 80% of the product produced is purchased by broker-traders. Producers need to cooperate both during production and marketing. This also contributes to the increase in producer income and the development of the regional economy. Also, as in other agricultural activities, there are problems faced by producers in grape production. In this context, it has been

determined that almost all of the producers have labor problems. Also, most of the producers have suggested that there are insufficient markets and buyers, low product prices, struggling against diseases and pests, low government support, and 30% of their regions are not suitable for organic farming and still produce.

In a study carried out by Bahşi and Akça (2019) organic products market can not show sufficient progress, it is because of argued the lack of organic products market in Turkey. In a study carried out by Varoğlu and Turhan (2016) explained the reasons for not adopting organic products in terms of price high, lack of information, lack of advertising, insecurity for organic products and inability to find organic products everywhere.

Conclusion

The average age of the producers participating in the research is 52 and generally in the middle age group. Besides, the vast majority are low in education. However, Besni grape producers have turned to organic farming because of their state support and their desire to sell their products at a higher price. Also, it has been suggested that organic farming is important for the vital sustainability of all living beings, especially humans. Increasing producer income and environmental sensitivity are among the main reasons for the transition to organic farming. Organic farming contributes to the regional economy. It also prevents migration from rural areas to the city as an agricultural activity. Thus, organic farming supports the region in many areas, directly and indirectly. Producers find the input prices required for carrying out organic farming activities partially higher than conventional agriculture. However, producers argue that organic farming is less expensive than traditional agriculture. Producers state that the use of input is minimal and that organic farming is an inexpensive form of production compared to traditional agriculture. The production problem and the difficulty of accessing the chemicals used by the producers are among the main problems of the producers. Also, the marketing problem arises with these difficulties.

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