Key Challenges Faced by Olive Growers in Türkiye and Proposed Solutions: The Case of Balıkesir, Bursa and Çanakkale

Burçin BAŞARAN[1] **Gülen ÖZDEMİR**[2]

[1] Asst.Prof.Dr., Department of Agricultural Economics, Faculty of Agriculture, Tekirdağ Namık Kemal University, Türkiye, bbasaran@nku.edu.tr , ORCID: 0000-0001-9906-5776

[2] Prof.Dr., Department of Agricultural Economics, Faculty of Agriculture, Tekirdağ Namık Kemal University, Türkiye, gozdemir@nku.edu.tr, ORCID: 0000-0003-3107-972X

Abstract: This study was conducted through face-to-face interviews with a total of 264 producers in Bursa, where table olive production is intensive, and in the provinces of Balıkesir and Çanakkale, where oil olive production is predominantly carried out. The study aims to reveal the socio-economic characteristics of olive producers, the sectoral problems they face, and potential solutions to these issues. Producers in the research area are experienced but represent an aging population (average age 53), with a significant proportion having a low level of education (45% are primary school graduates). They predominantly carry out production activities on their own land (86.3%), operating on fragmented and small-scale holdings (74.7% possess olive groves ranging between 3 and 49 decares; 78.9% own between 1 and 5 parcels). High input costs, insufficient government support, marketing challenges, and a lack of organization emerge as the main problems of the sector. A large proportion of producers have additional sources of income outside olive cultivation, yet their income satisfaction remains quite low. Furthermore, insufficient technical knowledge and the persistence of traditional production methods limit both productivity and quality. The study suggests that, in order to enhance producer welfare and ensure the sustainability of the sector, input support mechanisms should be restructured, producer training programs should be expanded, cooperatives should be professionalized, and branding strategies should be developed. In this context, the formulation of comprehensive policies for the olive sector is considered a strategic necessity for enhancing Türkiye's agricultural competitiveness.

Keywords: Olive growers, Türkiye,

1. INTRODUCTION

Olives and olive oil constitute one of the key branches of agro-based industries. Agro-based industries are defined as industrial sectors that add value to agricultural raw materials by transforming them into marketable, usable, or consumable products (Anonymous, 2003). The olive sector provides a broad range of economic activities, both through the direct consumption of table olives and through the extraction and utilization of olive oil. The economic value of olives is not limited to cultivation and harvesting activities; it also encompasses numerous value-added processes such as transportation, crushing, grinding, oil extraction, storage, packaging, and marketing. Furthermore, by-products generated after olive oil production—such as pomace, wood, leaves, and olive pits—also constitute significant economic value (Anonymous, 1997). The olive and olive oil sector holds a significant position within Türkiye's agricultural economy due to its structure, which involves a wide range of stakeholders from raw material production to final consumption. The sector provides employment to a broad spectrum of actors, including producers, olive pressing facilities, machinery and equipment manufacturers, table olive processors, storage and logistics companies, collectors, wholesalers, and traders. This extensive network clearly demonstrates the sector's importance both in terms of value creation and employment. In addition, the sector stands out as a strategic field offering competitive advantages due to its high export potential (Özışık, 2010).

One of the most distinctive characteristics that differentiates the olive tree from other agricultural crops is its longevity, along with its adaptability and resilience. Its ability to grow in regions with favorable climatic conditions—even on steep and less fertile soils—has enabled olive groves to be concentrated in areas unsuitable for other crops. Since the substitution of olive groves with alternative agricultural products is nearly impossible, olive trees become the primary source of income for many producers (Anonymous, 2006a). This characteristic makes olive cultivation particularly indispensable for small and medium-scale farmers.

Periodicity, which is inherent in olive cultivation—characterized by high yields in one year ("on-year") and low yields in the following year ("off-year")—is one of the main challenges faced by the sector. This fluctuation in production affects various aspects, ranging from producer incomes to market stability. However, the storability of olives and olive oil partially mitigates the extent to which these fluctuations are reflected in prices (TEAE, 2006). Nevertheless, this situation creates irregularities in income flows, particularly for small-scale producers, making financial planning more difficult. In Türkiye, olive cultivation constitutes the primary livelihood for approximately

400,000 farming households. Assuming an average household size of five individuals, nearly 2 million people depend directly on this sector. When related industries—such as olive processing, refining, packaging, and soap production—are included, the olive sector provides direct or indirect employment to approximately 8 million people. These figures clearly demonstrate the critical importance of olive cultivation for Türkiye in terms of agriculture, industry, trade, and employment (Boyraz et al., 2010). In a sector that affects such a large population, identifying and addressing the problems faced by producers is of vital importance for the country's socio-economic welfare. This study was conducted to reveal the current conditions, expectations, and potential solutions to the problems faced by small and medium-scale agricultural enterprises engaged in olive production. In particular, there is a need for research that analyzes these issues in depth from the perspective of producers and develops solution proposals in line with their expectations. The three provinces selected as the research area—Balıkesir, Çanakkale, and Bursa—represent a highly relevant sample, accounting for 19.3% of Türkiye's total olive cultivation area and approximately 17% of the total number of olive trees. This study aims to highlight the challenges faced by producers and to provide a guiding framework for policymakers, researchers, and sector stakeholders.

2. MATERIALS AND METHODS

The main material of the study consists of data obtained from questionnaires designed to identify the socio-economic structures of olive producers, their production practices, the problems they encounter, and their expectations regarding possible solutions. The methodology of the research was designed as a descriptive and analytical field study. The population of the study comprises olive producers registered in the Farmer Registration System (FRS) in 2008, located in the provinces of Balıkesir, Bursa, and Çanakkale, which are among Türkiye's major olive-producing regions. A total of 1,005 villages engaged in olive cultivation across these three provinces were defined as the main population. The sample size was calculated using the proportional sampling formula, taking into account a 95% confidence interval and a 10% margin of error. As a result of this calculation, 88 villages were included in the sample to represent the main population. It was planned to conduct surveys with a total of 264 olive producers, with three producers selected from each village, and this target was successfully achieved. The distribution of the sample across provinces was as follows: 93 producers from Balıkesir, 90 from Bursa, and 81 from Çanakkale (Table 2.1).

Table 2.1. Sample size by province

Provinces	Number of Villages Engaged in Olive Cultivation	Number of Sampled Villages	Number of Surveyed Olive Producers
Balıkesir	355	31	93
Bursa	344	30	90
Çanakkale	306	27	81
Total	**1005**	**88**	**264**

The questionnaire form consisted of sections including closed-ended questions, open-ended questions, and 5-point Likert scale items. Through this instrument, data were collected across a wide range of topics, from producers' demographic characteristics and farm structures to production and marketing problems, as well as their level of organization. In deriving the findings presented in this study, descriptive statistical methods—such as frequency distributions and percentages—were employed to reveal the producer profile and the distribution of sectoral problems.

3. PRODUCER PROFILE AND FARM STRUCTURES

In light of the data obtained from surveys conducted with 264 olive producers operating in Balıkesir, Bursa, and Çanakkale provinces, the profile and farm structures of these producers are examined in detail. An analysis of the age distribution of the producers included in the study reveals that the sector is characterized by an experienced yet gradually aging demographic structure. The average age of producers is 53. In similar studies, the average age of producers was found to be 52.4 by Tunalıoğlu and Gökçe (2002), 55.1 by Gençler (2009), 57.60 by Artukoğlu et al. (2010), 57.55 by Çukur et al. (2013), and 48.40 by Apaydın et al. (2014). The highest concentration is observed in the 43–52 age group (30.8%) and the 53–62 age group (26.8%), which together account for more than half of the producers (57.6%). The proportion of producers aged between 63 and 89, at a considerable level of 18.3%, highlights the importance of intergenerational knowledge transfer, while also indicating the necessity of increasing the interest of younger populations in olive cultivation (Table 3.1). While this age profile contributes

to the continuation of traditional production practices, it may also pose potential challenges in adapting to new technologies and modern agricultural techniques.

The educational profile of producers is a critical factor that directly influences the dissemination of knowledge and innovation within the sector. According to the findings, 45% of the producers are primary school graduates, while 44% have completed secondary or high school education. Previous studies similarly report primary school graduation rates of 62.1% (Anaç, 2005), 42.29% (Yapıcı, 2006), 56.95% (Adıgüzel and Kızılarslan, 2019), and 55.10% (Özalp et al., 2016). These two groups together constitute nearly 90% of the sample. In contrast, the proportion of producers holding a university degree (associate or bachelor's level) is only 10.6%. The occupational distribution of the surveyed olive producers clearly demonstrates the central role of agricultural activity in their livelihoods. A majority of the producers (71.1%) stated that farming is their primary occupation. This is followed by retirees (13.6%), indicating that olive cultivation is often continued after retirement either as a supplementary source of income or as a continuation of a family tradition. The presence of other occupational groups, such as self-employed individuals (6.6%) and traders (4.6%), suggests that olive cultivation is also practiced by individuals engaged in different professions. An examination of family structures shows that the majority of households (73.1%) consist of nuclear families, and more than half of the households (56.8%) comprise 3–4 members. Similarly, Olhan (1997) reported that 55.90% of families in olive farms consist of 3–4 members. This structure indicates that family labor continues to play a significant role, particularly during labor-intensive periods such as harvest; however, it also implies the need for seasonal external labor (Table 3.1).

Table 3.1. Demographic characteristics of olive producers

Variable	Category	Frequency (n)	Percentage (%)
Age	22–32	21	7.8
	33–42	43	16.3
	43–52	81	30.8
	53–62	71	26.8
	63–72	33	12.4
	73–82	11	4.3
Education Level	Primary school	119	45.0
	Secondary school	58	22.0
	High school	58	22.0
	Associate degree	5	1.9
	Bachelor's degree	23	8.7
	Postgraduate	1	0.4
Household Size	1–2 persons	43	16.3
	3–4 persons	150	56.8
	5–6 persons	62	23.5
	7 and above	9	3.4
Occupation	Farmer	188	71.1
	Retired	36	13.6
	Self-employed	17	6.6
	Trader	12	4.6
	Civil servant	5	2.0
	Engineer	2	0.7

The landholding structure of olive producers constitutes one of the most fundamental factors determining their production capacity and economic scale. The study reveals that 62.1% of producers own total land ranging between 10 and 49 decares. The average farm size of the examined enterprises is 66 decares, which is above Türkiye's national average farm size of 55 decares (Anonymous, 2011i). When the share of olive groves within the total landholding is examined, the fragmented and small-scale structure of land becomes more evident. A significant majority of producers (74.7%) possess olive groves ranging between 3 and 49 decares. The average size of olive land is 58 decares (Table 3.2). Olive cultivation is generally carried out on small and dispersed plots. In fact, 78.9% of producers own olive groves consisting of 1–5 parcels, clearly reflecting the extent of land fragmentation. Regarding land tenure, 86.3% of producers carry out production on their own land. Previous studies reported the proportion of owner-operated land as 89.22% (Tunalıoğlu and Gökçe, 2002), 85.61% (Anaç, 2005), 99.27% (Yapıcı, 2006), and 77.48% (Gençler, 2009). The proportion of producers cultivating land belonging to family members (parents or spouse) is 10.3%, while only 2.1% operate on rented land (Table 3.2).

Table 3.2. Landholding and ownership status of olive producers

Variable	Category	Frequency (n)	Percentage (%)
Total landholding of producers (da)	5	5	1.9
	5–9	11	4.2
	10–19	63	23.9
	20–49	101	38.2
	50–99	50	28.9
	100+	34	12.9
Olive landholding of producers (da)	3–9	20	7.6
	10–19	73	27.7
	20–49	104	39.4
	50–99	46	14.4
	100+	21	7.9
Number of olive land parcels	1–5	209	78.9
	6–10	36	13.7
	11–15	5	2.0
	16–20	9	3.4
	21+	5	2.0
Ownership status of olive land	Owned by producer	228	86.3
	Owned by father	13	4.8
	Owned by spouse	9	3.4
	Rented	5	2.1
	Owned by mother	5	2.0
	Joint ownership	2	0.7
	Owned by sibling	2	0.7

A significant proportion of producers are observed to diversify their agricultural production. Among those cultivating crops other than olives, 50% produce fruits (such as pistachios, cherries, and peaches), 37.5% cultivate field crops (such as wheat, barley, and forage crops), and 7.1% engage in vegetable production (Table 3.3). This diversification can be interpreted as a strategy to mitigate income fluctuations arising from the periodicity of olive production (on-year and off-year cycles).

The question of whether olive cultivation alone constitutes a sufficient source of income is clearly addressed by the research findings. It was determined that 64.8% of producers have additional sources of income outside olive farming. Among these, pension income ranks first at 41.5%, followed by trade-related income at 20.5%. When the share of olive-derived income within total income is examined, only 22% of producers rely entirely on olive cultivation, while the largest proportion (29.9%) earn between 25% and 50% of their income from olives. As a natural consequence of this income structure, producers' levels of satisfaction with income derived from olive cultivation are notably low. Nearly half of the producers (49.6%) stated that they are "not satisfied at all" with their income. The proportion of those who are "somewhat satisfied" is 31%, whereas only 11.5% reported being "fully satisfied" with their income (Table 3.3). This high level of dissatisfaction clearly indicates that one of the fundamental problems in the sector is that producers are unable to obtain adequate returns for their labor, which also emerges as a significant factor discouraging younger generations from entering the sector.

Table 3.3. Income (economic) status of olive producers

Variable	Category	Frequency (n)	Percentage (%)
Products cultivated other than olives	Fruits	132	50.0
	Field crops	99	37.5
	Vegetables	19	7.1
	Vineyards	14	5.4
Sources of income other than olive cultivation	Pension income	71	41.5
	Trade	35	20.5
	Fruit production	9	5.3
	Livestock	8	4.7

	Field crops	8	4.7
	Civil servant salary	7	4.1
	Wage labor income	6	3.5
	Rental income	5	2.9
	Vegetable production	5	2.9
	Greenhouse farming	2	1.2
	Transportation (with horse)	1	0.6
	Not specified	14	8.1
Share of olive income in total income	Below 10%	24	9.1
	11%–25%	45	17.0
	26%–50%	79	29.9
	51% and above	58	22.0
	Entirely (100%)	58	22.0
Satisfaction with income from olive cultivation	Not satisfied at all	131	49.6
	Somewhat satisfied	82	31.0
	Satisfied	30	11.5
	Not satisfied	19	7.1
	Very satisfied	2	0.8

The level of organization, which reflects producers' potential to act collectively and enhance their bargaining power, was also examined within the scope of the study. It was found that a vast majority of producers (96.8%) are members of at least one producer organization. Among these organizations, the most common is the Chamber of Agriculture, with a membership rate of 36.5%. Membership in sector-specific cooperatives stands at 16.4% for Tariş and 12.1% for Marmarabirlik (Table 3.4).

Despite these high membership rates, the overall picture is less positive when satisfaction with cooperative membership is considered. While 52.6% of producers reported being dissatisfied with their cooperative membership, 47.4% indicated satisfaction. The main reasons for satisfaction include ease of product marketing (43.8%) and the provision of input supplies (38.4%). In contrast, the primary causes of dissatisfaction are fundamental economic concerns, such as delays in the announcement of product prices (27.2%), low price levels (24.7%), and insufficient protection of producer rights (21.0%) (Table 3.4).

Table 3.4. Organizational status of olive producers

Variable	Category	Frequency (n)	Percentage (%)
Producer organizations in which producers are members/partners	Chamber of Agriculture	96	36.5
	Agricultural Credit Cooperative	47	17.4
	Tariş	43	16.4
	Marmarabirlik	32	12.1
	Agricultural Development Cooperative	15	5.8
	Irrigation Cooperative	12	4.5
	Agricultural Sales Cooperative	7	2.5
	Other	4	1.6
	None	8	3.2
Satisfaction with cooperative membership	Yes, satisfied	73	47.4
	No, not satisfied	81	52.6
Reasons for satisfaction with cooperative membership	Easier marketing of products	32	43.8
	Provision of input supplies	28	38.4
	Cooperative management makes sound decisions	3	4.1
	Cooperative determines prices	2	2.7
	Sense of unity/solidarity	2	2.7
	Processing own products	1	1.4
	Being informed about incentives	1	1.4
	No opinion	4	5.5

Reasons for dissatisfaction with cooperative membership	Late announcement of product prices and delays in payments	22	27.2
	Does not meet expectations (low prices, high interest rates, high input costs)	20	24.7
	Rights are not adequately protected / insufficient attention to problems	17	21.0
	Quotas imposed on product procurement	11	13.6
	Low product prices / inability to obtain fair value	6	7.4
	Cooperative is no longer functioning effectively	2	2.4
	No opinion	3	3.7

4. MAIN PROBLEMS ENCOUNTERED IN OLIVE PRODUCTION

The sustainability and competitiveness of olive production in Türkiye are increasingly challenged by the problems faced by producers. The field study conducted with producers in Balıkesir, Bursa, and Çanakkale reveals that these problems are not limited solely to economic dimensions; rather, they extend across a wide range of areas, including marketing, technical knowledge, organization, and agricultural policies.

This assessment, based on the producers' own statements, highlights the key bottlenecks within the sector and their impact on producer welfare. In the study conducted by Başaran (2011), producers were asked to identify the most important problems in olive cultivation, and these issues were ranked according to their priority (Table 4.1).

Table 4.1. Problems encountered by olive producers

Problem	Balıkesir and Çanakkale (%)	Bursa (%)	Total (%)
High input costs	20.8	36.3	27.5
Lack of marketing and promotion	12.1	24.8	17.6
Insufficient government support	10.7	12.4	11.5
Low olive oil prices	15.4	–	8.8
Lack of producer awareness	10.7	–	6.1
Problems related to maintenance practices	8.1	2.6	5.7
Inability to generate sufficient income	2.7	8.9	5.3
Problems related to cooperatives	5.4	5.3	5.3
Absence of a specific olive policy	5.4	–	3.0
Issues related to control and inspections	4.0	–	2.3
Insufficient irrigation facilities	1.3	3.5	2.3
Problems related to olive saplings	–	1.8	0.8
Other problems	2.7	0.9	1.9
No opinion	0.7	3.5	1.9

– High Input Costs and Financial Constraints

According to the research findings, one of the most significant problems faced by olive producers is the high cost of inputs. A total of 27.5% of producers identified this issue as the most fundamental problem in olive cultivation (Table 4.1). When examined at the provincial level, this rate becomes even more striking; in particular, in Bursa—where table olive production is intensive and harvesting is carried out manually, leading to higher labor costs—the proportion rises to 36.3%. The continuous increase in the prices of key inputs such as fertilizers, pesticides, fuel, and especially labor during the harvest period significantly narrows producers' profit margins. This situation also adversely affects their capacity to carry out essential cultural practices for the subsequent production season, such as pruning, fertilization, and plant protection. Financial constraints are directly linked to high input costs. Producers face difficulties in accessing the financial resources required at the beginning of the production season to cover these costs. When combined with the perception that government support is insufficient, this situation places considerable economic pressure on producers. Indeed, 11.5% of producers identified "insufficient

support" as one of the major problems (Table 4.1). Furthermore, 86.4% of producers stated that they do not consider the provided support to be adequate (Table 3.4). Producers particularly emphasized the need for direct support in reducing input costs (38.6%) and increasing premium payments (23.7%) (Table 4.2).

Table 4.2. Adequacy of support measures / Types of support needed

Variable	Category	Frequency (n)	Percentage (%)
Adequacy of support provided to producers	Yes, sufficient	5	1.9
	No, not sufficient	228	86.4
	Partially sufficient	31	11.7
Types of support needed	Support for input costs (pesticides, fuel, machinery/equipment)	88	38.6
	Increase in premium payments	54	23.7
	Direct support for olives	26	11.4
	Increase in support amounts and reduction of application/administrative costs	16	7.0
	Provision of pest control (e.g., aerial spraying)	8	3.5
	Low-interest credit support	5	2.2
	Training activities (on cultivation practices)	5	2.2
	Support in line with EU standards	5	2.2
	Government assistance in market access	1	0.4
	No opinion	20	8.8

– Marketing Problems and Organizational Deficiencies

Following input costs, the second major problem area that challenges producers is marketing and the associated price uncertainty. A total of 17.6% of producers identified the lack of marketing and promotion as a significant issue, while 8.8% considered low olive oil prices to be a major problem (Table 4.1). Small-scale and fragmented producers lack sufficient bargaining power in marketing their products. In most cases, they are compelled to sell their products either to local traders or to cooperatives. Within this process, price uncertainty—often coupled with low price levels—emerges as one of the most frequently expressed concerns. Producers commonly report that they are dependent on traders, face difficulties in finding reliable buyers, and are unable to obtain the true value of their products.

More than half of the producers who are members of cooperatives (52.6%) are not satisfied with their membership (Table 3.4). The main reasons for dissatisfaction include delays in the announcement of product prices, low price levels, the implementation of quotas in product procurement, and the general inadequacy in protecting producers' rights.

– Insufficiencies in Technical Knowledge, Training, and Modern Agricultural Practices

Another significant problem in the sector is the lack of technical knowledge among producers and their persistence in traditional agricultural practices that reduce productivity. While 6.1% of producers directly identify the lack of awareness among producers as a problem (Table 4.1), the consequences of this issue are evident in various stages such as harvesting, maintenance, and storage. The root cause of these problems lies in insufficient training. When asked whether they had received any training, 57.8% of producers reported that they had not received any form of education (Table 4.3).

Harvesting methods provide a clear example of this situation. The stick-beating harvesting method is still used by 26.1% of producers (Table 4.3). This method damages the shoots that are essential for the tree's productivity in the following year (Ilgar, 2016; Anonymous, 2021). Damage to annual shoots during harvest increases the severity of periodicity (Anonymous, 2016). The reasons why producers continue to prefer this method include economic and structural factors, such as the high cost of machinery (26.7%) and the large and tall structure of trees (25.5%) (Table 4.3).

Table 4.3. Training activities for producers and harvesting preferences

Variable	Category	Frequency (n)	Percentage (%)
Training activities for producers	Conducted	109	42.2
	Not conducted	149	57.8

Harvesting method	Hand harvesting	153	57.9
	Stick-beating harvesting	69	26.1
	Mechanical harvesting	42	16.0
Reasons for preferring hand harvesting	To avoid damaging olives and obtain higher quality products	71	48.0
	To avoid damaging the tree and ensure better yield in the following year	40	27.0
	To collect olives that cannot be harvested by machines or sticks	13	8.8
	Small land size and limited number of trees	11	7.4
	High cost of machinery	11	7.4
	Low product density	2	1.4
Reasons for preferring stick-beating harvesting	High cost of machinery	24	26.7
	Trees are large and tall	23	25.5
	Economical, causes less damage to the tree	14	15.6
	Traditional practice	14	15.6
	Small land size, to reduce labor costs	6	6.7
	Due to land structure	5	5.5
	For areas inaccessible to machinery	4	4.4

Another critical mistake that directly affects product quality occurs during post-harvest processes. Olives are delicate fruits that are highly sensitive to heat and light. It was found that 40.7% of producers store their table olives in "concrete tanks," despite the associated risks (Figure 4.1). The concern primarily stems from uncertainties regarding whether small-scale producers adequately comply with food safety requirements. In particular, proper storage requires that the inner surfaces of concrete tanks be coated with materials that do not harm human health or olive quality and do not chemically react with food. Additionally, instead of using pressure stones, locking systems should be applied, tanks must be kept clean, and the upper part of the tanks should be covered with plastic mesh to prevent pest intrusion (Şahin et al., 2010). The lack of clarity regarding the extent to which small producers adhere to these standards raises concerns about both food safety and product quality.

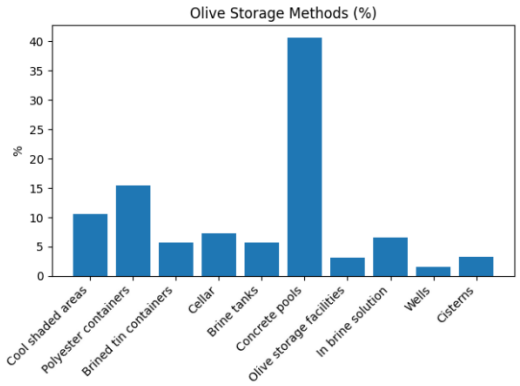

FİGURE 4.1.Olive Storage Methods

The recommendations of producers regarding the problems they encounter in olive cultivation are presented in Table 4.4. A total of 22.8% of producers suggested increasing support for inputs. This proportion is even higher in Bursa, where table olive production is intensive, reaching 27.6%. Furthermore, 16.4% of producers recommended the implementation of training, awareness-raising, and visual education activities related to olive cultivation. This recommendation was expressed at a higher rate (21.8%) by producers in Bursa. The suggestion of timely aerial spraying ranks as the third most important recommendation, with a rate of 11.4%. However, this proposal was not put forward by producers in Bursa.

In Balıkesir and Çanakkale, olive groves are generally located in areas where mechanical spraying is difficult and costly. Therefore, producers in these regions proposed timely aerial spraying (20.2%) as a solution to both prevent the spread of diseases and ensure timely application, as was practiced in the past. Other recommendations

mainly focus on marketing, increasing consumption, improving support mechanisms, and strengthening organizational structures.

Table 4.4. Producers' proposed solutions to sectoral problems

Proposed Solutions	Balıkesir and Çanakkale (%)	Bursa (%)	Total (%)
Increase support for inputs	19.1	27.6	22.8
Provide training, awareness, and visual education activities for producers	12.4	21.8	16.4
Government should implement timely aerial spraying as in the past	20.2	–	11.4
Promote domestic consumption and raise consumer awareness about olives and olive oil	10.1	2.9	7.0
TARİŞ should announce olive oil prices on time	10.1	–	5.7
Support cooperatives to improve production and reduce farmer vulnerability	9.0	–	5.1
Establish a clear government policy for olive cultivation	3.4	4.3	3.8
Improve irrigation facilities	2.2	5.8	3.8
Provide direct support specifically for olives	–	8.7	3.8
Develop a geographical mapping of olives and register local varieties	–	8.7	3.8
Ensure better management of cooperatives	–	7.2	3.2
Increase olive oil prices	4.5	–	2.5
Producers should maintain olive groves properly and activities should be monitored	4.5	–	2.5
Explore foreign market opportunities and develop new markets	–	4.3	1.9
Increase government support in years when cooperatives are insufficient in marketing	–	2.9	1.3
Other	4.5	5.8	5.0
Total	**100**	**100**	**100**

5. Conclusion and Recommendations

The multidimensional nature of the problems faced by olive producers necessitates that solution strategies be addressed through a similarly holistic approach. Based on the demands expressed by producers and the evaluations conducted in this study, strategies aimed at eliminating structural weaknesses in the sector and improving producer welfare can be grouped under four main headings: restructuring economic and financial support mechanisms; expanding education and technical knowledge; strengthening marketing and organizational models; and implementing structural and policy reforms.

The most urgent demand expressed by producers is the alleviation of their economic burden. The most effective strategy to address the problem of high input costs is the redesign of government support mechanisms. While 38.6% of producers expect direct support for input prices (such as pesticides, fuel, and fertilizers), 23.7% demand an increase in existing premium payments (Table 4.2). In this context, it is critically important that support mechanisms move beyond being solely output-based and instead take the form of "direct input support" aimed at reducing production costs. In addition to the amount of support, its timing and predictability are equally important. Producers should be able to plan their finances by knowing in advance what type of support they will receive at the beginning of the production season. Furthermore, the establishment of special credit and grant programs for the acquisition of harvesting machinery would help alleviate one of the largest cost components, particularly labor expenses.

Productivity and quality losses resulting from insufficient technical knowledge and the persistence of traditional practices can only be overcome through a comprehensive education and extension campaign. A total of 16.4% of producers emphasized training and awareness as a key solution (Table 4.4). Considering the generally low education level of producers, these training programs should be visual and practice-oriented rather than purely theoretical, in order to increase adoption rates. Periodic training programs organized through local television channels, websites, chambers of agriculture, and cooperatives should address topics such as modern pruning

techniques, soil analysis-based fertilization, appropriate harvesting timing and methods (particularly the disadvantages of stick-beating and its alternatives), and proper post-harvest handling and storage. In this process, assigning region-specific agricultural advisors and ensuring their direct interaction with producers would facilitate the rapid transfer of knowledge to the field.

In a similar study, producers particularly emphasized the need for training on pruning, olive diseases and pests, and harvesting methods, and expressed that such training activities should be conducted regularly, announced in advance, and focused on practical applications (Adıgüzel and Kızılaslan, 2019).

Bottlenecks in marketing channels and the weak bargaining power of producers represent structural problems that can be addressed through the strengthening of cooperatives. Existing cooperatives need to be restructured in a way that rebuilds trust by ensuring fair pricing, timely payments, and transparent management—core expectations of producers. Cooperatives should evolve beyond being mere procurement centers and become professional entities that provide a wide range of services, including input supply, marketing, branding, and training. Moreover, branding and promotional activities for regional olive varieties such as Gemlik, Ayvalık, and Edremit olives should be carried out under the leadership of these cooperatives and producer organizations. Notably, 7% of producers suggested increasing domestic consumption (Table 4.4), further highlighting the importance of branding and promotion.

The fragmented structure of landholdings is a long-term issue that can be addressed through land consolidation projects, supported by appropriate legal incentives. In order to overcome the lack of reliable data and planning—one of the sector's major deficiencies—a "national olive inventory" should be urgently established, including information on the number, age, variety, and location of olive trees in Türkiye. Such an inventory would enable more accurate decision-making in areas ranging from yield estimation to support policies. In addition, platforms that bring together all sector stakeholders, such as the National Olive and Olive Oil Council, should be restructured to become more responsive and solution-oriented toward producers' problems, thereby strengthening sectoral dialogue and cooperation.

The findings of the study indicate that olive producers can be characterized as having an average age of 53, predominantly possessing primary and secondary education, operating on small and fragmented lands (with an average of 58 decares of olive groves), unable to rely solely on olive cultivation for their livelihood (64.8% have additional income sources), and largely dissatisfied with their income (49.6% report no satisfaction). The underlying causes of this profile include high input costs, insufficient marketing channels and price uncertainty, and deficiencies in technical knowledge and modern agricultural practices.

These challenges constitute the primary barriers to realizing Türkiye's full potential in olive production. The inability of producers to obtain adequate returns for their labor prevents them from carrying out essential cultural practices, thereby creating a vicious cycle of low productivity, reduced quality, and declining income. These structural weaknesses not only threaten producer welfare but also weaken the competitiveness of a strategic product such as olives in both national and international markets. Therefore, addressing these issues through a comprehensive approach and implementing the following policy recommendations is of critical importance:

- **Restructuring Input Support Mechanisms:** The current premium-based system is insufficient in alleviating producers' cost burdens. The Ministry of Agriculture and Forestry should develop "direct cost-reducing" support models, particularly for key inputs such as fuel, fertilizers, and pesticides. These supports should also encourage sustainable practices such as soil analysis-based fertilization and environmentally friendly farming methods.
- **National Education and Extension Campaign:** Considering the educational level and traditional practices of producers, applied training programs should be implemented through collaboration between the Ministry of Agriculture and Forestry, chambers of agriculture, and universities. Visual and practical training on harvesting techniques, pruning, pest and disease management, and post-harvest handling will directly contribute to improvements in productivity and quality.
- **Strengthening and Monitoring Cooperatives:** One of the major issues faced by producers—marketing problems—can be addressed through effective and transparent cooperatives. The Ministry of Trade and the Ministry of Agriculture and Forestry should oversee agricultural sales cooperatives and other agricultural organizations both financially and administratively, and support reforms aimed at professionalization. Strong cooperatives that guarantee fair prices and timely payments, while also engaging in branding and marketing, can act as the driving force of the sector.

- **National Branding and Promotion Strategy:** To increase domestic consumption and ensure that olives achieve their deserved value in international markets, the budget of the National Olive and Olive Oil Council should be increased, and comprehensive promotional and marketing activities should be implemented. The protection and promotion of geographically indicated products should form the core of this strategy.

Note: This study constitutes a part of the doctoral dissertation titled "Problems of Small and Medium-Scale Enterprises Producing Olives and Olive Oil and Alternative Solutions to These Problems," prepared at the Department of Agricultural Economics, Graduate School of Natural and Applied Sciences, Tekirdağ Namık Kemal University.

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