

CURRENT CONDITIONS IN TOBACCO PRODUCTION IN MACEDONIA - SUSTAINABILITY ANALYSIS, DEVELOPMENT POSSIBILITIES AND FUTURE PERSPECTIVES

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Abstract

The Republic of North Macedonia, both regionally and globally, is known for producing high-quality aromatic Oriental tobacco. It is a country where quality types of Oriental tobacco are traditionally cultivated, alongside well-known regions in Turkey, such as Izmir and the Aegean region, where there are ecological conditions for producing high-quality Oriental tobacco. As a small continental country in the Balkans, Macedonia represents a "golden triangle" in the process of Oriental tobacco production and a long-term relatively stable traditional producer compared to surrounding countries that also produce this type of tobacco.

Driven by the demands of the global market, scientific and technological advancements worldwide, and the available natural, production, and human potentials, it can be stated that today, and even more so in the future, there will be a significant need to elevate the quality of tobacco production to a much higher level, considering the demands of buyers and the need for efficient and effective production.

Looking ahead, tobacco production, with certain oscillations, has a stable trend in movements, with gentle upward trends in global production, which our country must also follow and adapt to. The future of tobacco production will largely depend on good agricultural and export policies, as well as good state subsidy policies, all aimed at encouraging and directing the young, capable population towards tobacco production, where they will see not only an opportunity for existence but also space for development, expansion and certainly profit.

Keywords: sustainability, quality, subsidies, continuity, development

Introduction

The production of oriental tobacco has real developmental potential over the long term, considering global demand for the inclusion of oriental varieties in tobacco blends for the production of high-quality cigarettes, as well as for other broader needs of this type of tobacco at the global level. In Macedonia, tobacco production provides conditions for improving social and economic status for a large portion of the population, engaging almost all family members, and fostering work habits (within the framework of avoiding child labor abuse) among young people, thereby deterring them from bad habits and vices. Overall, it improves financial gains for our country.

Following the experiences of the Republic of Bulgaria after joining the European Union, as a country with a similar tobacco economy, there would likely be a decline in tobacco production, perhaps up to 10,000 tons annually.

Currently, there is no suitable legal alternative agricultural culture that would yield similar income as tobacco under our conditions, neither domestically nor globally, although the EU is actively involved in such projects. Farmers would be the most affected, as foreign tobacco companies present with investments in our country would seek other countries with more favorable economic conditions, indirectly causing higher unemployment and lower living standards.

Threats always exist, such as various occurrences in the external market, competition from neighboring countries that produce oriental types of tobacco (Turkey, Greece, and Bulgaria), as

well as from some distant eastern countries. The proliferation of new tobacco products that are not heavily dependent on traditional tobacco production, such as electronic cigarettes and similar products, also poses a real threat. This means that North Macedonia should not anticipate measures to reduce tobacco production because, due to the sensitivity of the socio-economic aspect, this issue should be left for resolution in the future period, after North Macedonia's potential accession to the EU, when tobacco production plans will be harmonized with the Union's rules.

On the other hand, while the World Health Organization urges countries to reduce tobacco production, it is also advocating for regulations that would make the production of tobacco products almost impossible. Such regulations would affect Macedonia from several aspects: destruction of tobacco production leaving many people without income, destruction of an important industrial sector employing a significant workforce, as well as negative impacts on budget revenues.

Therefore, although the importance of the Framework Convention on Tobacco Control and the commitments of the World Health Organization are indisputable, before implementing their provisions into domestic regulations, a serious analysis of the socio-economic implications on society should always be conducted. Global tobacco policy and the global strategic development of the tobacco industry in Europe are in constant correlation, so our country, as an applicant for membership in the European Union and simultaneously a participant in the global tobacco market, needs to apply the guidelines and principles within the framework of European integration in the development of agriculture.

Regarding the quantities of Macedonian oriental tobacco types in relation to the total production of oriental tobacco types worldwide, we can observe that our role in this domain is very small, but our priority should be quality. We must not allow any compromises in quality or the typological and varietal purity of our tobacco types, as the tobacco production area in Macedonia is characterized by enviable quality and global renown. Therefore, efforts are needed to strengthen production and economic policies through the implementation of a development strategy, including price policy as a necessary stimulation in tobacco production. In this context, we should maintain the primacy as a traditional producer of oriental tobacco, with a very stable production compared to the surrounding countries, producers of oriental tobacco types (Bulgaria, Turkey, and Greece). Macedonia possesses outstanding opportunities for the production of high-quality small-leaved, aromatic types of oriental tobacco, which is an industrial culture with a high degree of globalization and there is no alternative for it.

Material and Methods

The scientific and analytical approach in the preparation of this study necessitated the use of reliable statistical data from relevant sources such as the World Bank, State Statistical Office of the Republic of North Macedonia, Ministry of Agriculture, Forestry and Water Economy of the Republic of North Macedonia, data from the Eurostat database, Food and Agriculture Organization of the United Nations (FAO), data from the World Health Organization, as well as our own analyses and empirical research using methods such as surveys, contingency coefficient, Chi-square test, mathematical-statistical and comparative methods, as well as tabular and graphical presentation of the obtained results.

Brief overview of the origins and significance of tobacco in the past

Many examples, theories, facts, objects, tools and products indicate that tobacco has been a part of life not only in these regions but also much more broadly. Tobacco arrived in Macedonia during the presence of the Ottoman Empire and has since deeply ingrained itself in the lives of

Macedonians. Globally, tobacco was discovered by Columbus, but its attention was mostly focused on gold, while he was still not aware of the financial gains from the other “yellow gold”. In Europe, the first cigarette was lit in 1506 when unfortunate Fragonard wanted to demonstrate to the citizens of Seville what Indians looked like while smoking tobacco. While he smoked, the Inquisition arrested him and tortured him to confess that he had made a pact with the devil, resulting in a seven-year prison sentence. After he was released from prison, he was surprised to see that everyone was smoking in the streets, while tobacco was called the Spanish madness.

The value of tobacco is further confirmed by yet another argument: in the homeland of tobacco in the United States, in the states of Virginia and Maryland, tobacco was used as a means of payment for two centuries. The first law in free America was the Tobacco Law, not the Constitution; the first standard was the tobacco standard, not the gold standard, making tobacco a highly important and valued culture, associated with luxury, prestige, and power. The first scientific book about tobacco is "Tabacologia" by Johannes Neander from 1626 when tobacco was still seen as a medicinal herb and almost all diseases were treated with tobacco. If tobacco was a symbol of peace among the Native Americans, throughout the centuries, tobacco has been a means of existence for us.

In Macedonia, tobacco arrived later than in the rest of the world, in 1873, and became the center of spiritual life. Not so much as a culture that contributes per unit of area, because tobacco is considered a labor-intensive culture, but because the cultivation of tobacco still brought significant financial contributions and paid off. Even the local, folkloric architecture was defined according to the need for curing tobacco leaves. Macedonian chardak was suitable for natural tobacco storing and curing. Somewhere in the second half of the 19th century, a tobacco producer named Mamut Alija Xholia brought the local variety Djumaj Bele to Prilep. This variety was later named Prilep type and was very similar to the physiological and morphological properties of Djumaj Bele. Mamut, for several consecutive years, selected the lower stalks with a greater number of leaves from this local variety, thus managing to create the new original variety, which nevertheless differed from the original in its morphological and technological properties. Over the years, this variety continued to be cultivated in the Prilep production area.

Current conditions and directions for tobacco production in Macedonia

At the beginning of each tobacco purchase season, the primary question is the purchase price that tobacco companies should pay to tobacco producers, especially now, in a situation of inflation, high production costs, and expensive labor. From 2010 to 2022, production has stabilized at 22,000 to 23,000 tons annually, indicating continuity in tobacco production, unlike neighboring countries where a decrease is observed. We should utilize this as a country to protect the production of oriental tobacco because on the global market, we have quite competitive, recognizable, and renowned varieties whose tobacco raw material is highly valued. After the Izmir type, the Prilep type ranks second globally in terms of placement as a tobacco type, confirming that Macedonian oriental tobacco is in demand on the global market, especially when global production stagnates, mostly in oriental types, which are the most produced here. In recent years, there has been a stagnation in the production of raw tobacco in the world at around six million tons, across all types. The largest share in global production is held by the "Virginia" and "Burley" types, as well as oriental tobaccos, which have seen the greatest decline from 300 000 tons to 120 000 tons globally. For now, Macedonian production is not jeopardized because for several years, we have had some standard production, with the exception of the last harvest in 2023, as reported by ISET (information system for tobacco records) at the Ministry of Agriculture, Forestry and Water Economy of the Republic of North Macedonia.

Record of the total purchase of raw tobacco in leaf from the 2023 harvest

CLASS	TOBACCO TYPES				Total quantity for class in kg.	Ponder price for class MKD/kg.
	YAKA-quantity in kg.	Price MKD/kg.	PRILEP-quantity in kg.	Price MKD/kg.		
I-I	132,554.65	326.49	14,275,910.12	347.43	14,408,464.77	347.24
I-II	0.00	0.00	2,838.03	262.05	2,838.03	262.05
I-III	0.00	0.00	830.85	197.29	830.85	197.29
Total aromatic tobacco in kg.	132,554.65		14,279,579.00		14,412,133.65	
ADDITIONAL TOBACCO						
II-I	0.00	0.00	29.46	110.00	29.46	110.00
Total additional tobacco in kg.	0.00		29.46	110.00	29.46	
Moldy tobacco in kg.	0.00	0.00	48.00	14.00	48.00	14.00
Total moldy tobacco in kg.	0.00		48.00	14.00	48.00	
	132,554.65		14,279,656.46		14,412,211.11	
Total in kg.	14,412,211.11					
Total value of purchased tobacco	5,004,074,179.45					
Average purchase price MKD/kg.	347.21					

Source: Ministry of Agriculture, Forestry and Water Economy of the Republic of North Macedonia (ISET)

However, it should be emphasized here that this situation does not currently pose a threat because there is a greater decrease in other countries such as Bulgaria, Greece, and Turkey, which means there is still room for our tobacco in the global market. In this context, two key problems need to be highlighted for the profitability of Macedonian tobacco production: the purchase price, which must follow the expensive production costs, inflation, and the change in demographic structure due to emigration. In other words - to pay and to have someone to produce. This could lead to stagnation in production in Macedonia. In addition to the previously stated, Table 1 follows, with data on the production of oriental tobacco types in the Balkan countries for the past decade.

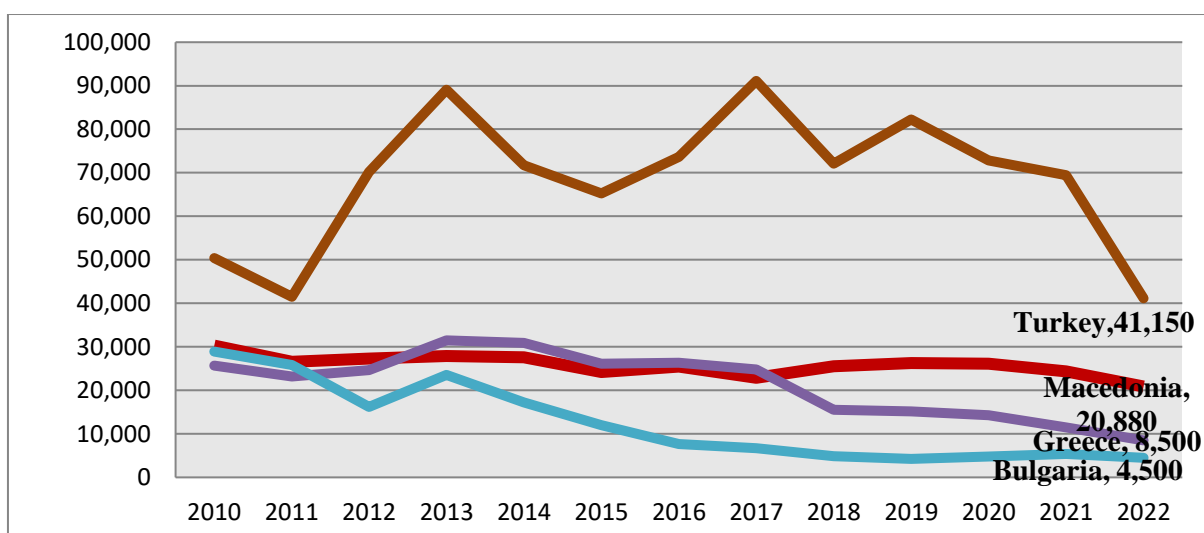
Table 1. Production of oriental tobacco types in the Balkan countries (2010-2022)

Year	Turkey	Macedonia	Greece	Bulgaria
2010	50.400	30.280	25.676	28.906
2011	41.498	26.537	23.211	25.846
2012	70.150	27.333	24660	16.212
2013	89.109	27.859	31.486	23.562
2014	71.729	27.578	30.881	17.207

2015	65.230	24.237	26.103	11.982
2016	73.659	25.443	26.352	7.663
2017	91.107	22.885	24.830	6.690
2018	72.114	25.547	15.550	4.862
2019	82.212	26.234	15.185	4.246
2020	72.850	26.112	14.290	4.824
2021	69.430	24.329	11.500	5.400
2022	41.150	20.880	8.500	4.500
Total	890.638	335.254	278.224	161.900
Average for the period 2010/22	68.511	25.789	21.402	12.454

Source: Philip Morris International Database (<https://www.pmi.com/tobacco-economics/tobacco-database>)

For a better overview, data on the production of oriental tobacco in the mentioned countries are shown in Graph 1. which follows:



Graph 1. Production of oriental tobacco types in the Balkan countries (2010-2022)

The data presented in the preceding table and graph show that the production of oriental tobacco fluctuates with year-on-year decreases, and the main reason for the decline in tobacco production is the discontinuation of direct subsidies in Greece and the transition to olive cultivation as a less labor-intensive crop. In Turkey, the decline is attributed to the development of tourism, especially in the Aegean region, which is the largest tobacco-producing area by volume. Meanwhile, in Bulgaria, the decrease is due to the allocation of production quotas following its accession to the European Union, the alignment of the Common Agricultural Policy with Union regulations, where there are no direct subsidy payments to tobacco producers but payments per area, as well as the fact that a large part of Bulgaria's population, especially the younger population, migrates to Western European countries after joining the European Union. To maintain production in the Republic of North Macedonia, it is necessary to continue the policy of subsidizing and stimulating this production by the state. Supported by government subsidy policies, Macedonia should increase the production of oriental tobacco because production in Greece, Bulgaria, and Turkey will continue to decline, and the trend in the production of this type of tobacco in Balkan countries shows a further linear decline. Albania and Serbia have very small and almost insignificant quantities of oriental tobacco. The production of tobacco in Macedonia over the past ten years, as well as the cultivated areas, the number of concluded contracts, and the yield per hectare, are presented in the following table:

Table 2. Number of concluded contracts, the area planted with tobacco, production in tons, yield obtained kg/ha (2010-2022)

Year	Number of concluded contracts	Area planted with tobacco	Production in tons (t)	Yield (kg/ha)
2010	40.743	20.300	30.280	1.492
2011	33.234	19.693	26.537	1.348
2012	29.090	19.656	27.333	1.391
2013	42.367	19.178	27.859	1.453
2014	34.445	17.758	27.578	1.553
2015	28.454	16.128	24.237	1.503
2016	27.380	16.379	25.443	1.553
2017	29.132	15.961	22.885	1.434
2018	34.104	16.582	25.547	1.541
2019	24.854	16.719	26.234	1.569
2020	29.531	16.592	26.112	1.574
2021	27.712	15.457	24.329	1.574
2022	29.653	13.237	20.880	1.577

Source: State Statistical Office of the Republic of North Macedonia (<https://www.stat.gov.mk/>)

Data from the table clearly indicate that the number of individual tobacco producers (contracted agreements), as well as the cultivated areas, have been decreasing over the years. However, the quantities produced remain relatively stable as a result of the use of healthy seed material, modern mechanization, proper managerial approach in organization and realization of the production process, and the application of Good Agricultural Practices (GAP). This contributes to achieving a constantly increasing yield per hectare, which certainly represents a special incentive for tobacco producers. In fact, with the right policy of subsidization and stimulation, as well as maintaining relatively acceptable purchase prices, tobacco production will continue to be maintained at a stable level, with good prospects for growth in the future. This is particularly important because previous analyses have shown that there is no alternative crop that would absorb as much labor force and have such economic impact as tobacco, both from the perspective of tobacco producers and from the perspective of the state as a whole.

In North Macedonia, it is undisputed that the state supports tobacco producers with subsidies per kilogram of tobacco, as well as other measures for purchasing machinery and modernizing production, but this assistance should not be decisive. The most important thing is that the purchasing companies increase the price and the production is profitable. However, what is concerning in North Macedonia is the demographic structure of the population, as there has been significant emigration in recent years. Measures should be taken to retain especially young people and to continue the continuity of tobacco production, primarily through appropriate measures for profitability, such as increased subsidies, consolidation of cultivated areas, greater use of mechanization, and of course, quality tobacco raw material. The choice of variety, introduction and maintenance of varieties, as well as preservation of the variety structure in primary production, have the greatest impact on the entire tobacco economy.

Table 1. Participation of direct payments for tobacco in total direct payments for agriculture(2015-2021)

Year	Total funds for financial support in agriculture in MKD	Total funds for produced and sold unprocessed tobacco from 2015-2021 harvests in MKD	Participation of tobacco support in total agricultural support in %
2021	3.723.103.000	1.276.178.716	34,3
2020	6.668.000.000	1.724.500.000	25,9
2019	6.138.767.000	1.699.679.706	27,7
2018	6.210.500.000	1.696.688.814	27,3
2017	6.117.857.000	1.505.429.595	24,6
2016	6.320.000.000	1.130.548.658	17,9
2015	6.260.000.000	1.489.031.604	23,8

Source: Ministry of Agriculture, Forestry and Water Economy of the Republic of North Macedonia

The trend of increasing subsidies continues in the coming years as well. In 2023, through the program for financial support in agriculture, over 4 billion denars were paid out, of which around 1.5 billion denars were paid to tobacco producers, with the subsidy reaching a value of 100 denars per kilogram. In the context of the above, it should be emphasized that one of the main opportunities that must be intensively worked on, especially in the upcoming period, is the utilization of uncultivated agricultural land owned by the state. Another opportunity that needs attention is reducing the fragmentation among existing tobacco production entities to improve their efficiency and effectiveness. Educating tobacco producers to encourage tobacco production and elevate it to a family business level is a third opportunity to be considered, especially through seminars, training sessions, debates, and increased involvement of the expert community in addressing on-the-ground issues. The introduction of production quotas for tobacco in the European Union member states, as well as the reduction in production in these countries due to disinterest among producers in engaging in this type of business, means creating new opportunities for Macedonia to expand its production, especially at a time when there is stagnation in the production of oriental tobacco types, not only in our neighborhood but also globally.

As an opportunity for current and future tobacco producers, the development of ideas and plans for additional production should be pursued to achieve better utilization of production factors. To improve and increase tobacco production, it is necessary to provide cheap credit lines to facilitate easy access to fresh capital, which will be used for both modernizing outdated equipment and expanding production capacities, including cultivating larger areas.

Empirical research

The goal of this research is to gather information about the real developmental opportunities and directions of tobacco production in the Republic of North Macedonia, with a hypothetical framework based on the assertion that a portion of the population will continue tobacco production in line with global trends and movements. The main hypothesis of the research states: **Developmental opportunities of tobacco production in Macedonia, through following the guidelines of the European Union and global trends, depend on the determination of a part of the population to engage in tobacco production, in accordance with their statements about carrying out that activity.** Auxiliary hypotheses are as follows:

- 1. Tradition i.e. knowledge of the work (activity), enables its execution in the long term.**

2. **Tobacco production as an activity will develop if it enables tobacco producers to achieve expected income and appropriate profit.**
3. **For the successful development of tobacco production, it is necessary to modernize it with the application of modern mechanization and the availability of labor.**

For the empirical research, combined qualitative and quantitative methodological procedures and methods were used, such as surveys, analysis, statistical processing, and calculations of the obtained data.

The survey was conducted on three groups of respondents: active tobacco producers (100 respondents), occasional tobacco producers (100 respondents), and non-tobacco producers (50 respondents), in the broader areas of the municipalities: Prilep, Krivogashtani and Dolneni. The obtained responses to the posed questions were statistically processed sequentially, tabulated, and graphically presented, and the Chi-square test (χ^2 -test), or Pearson coefficient, was calculated, as well as the coefficient of contingency (C), to ascertain the hypothesis for the realization or non-realization of the same. The survey questionnaire comprised fourteen questions, but in this exposition, only the most characteristic four questions will be elaborated to obtain an answer to the question of whether tobacco production in Macedonia is profitable and sustainable and in which direction we should move in the future.

On the first question, which asked: Do you consider that you have enough labor and machinery for tobacco production?, 58% of the surveyed active tobacco producers answered affirmatively (yes), 31% negatively (no), and 11% did not respond at all. On the other hand, 53% of the occasional tobacco producers answered affirmatively (yes), 44% negatively (no) and only 3% did not respond at all. In the surveyed group of non-tobacco producers, 42% answered affirmatively (yes), 46% negatively (no) and 12% did not respond at all.

The analysis of the given responses expressed in percentages indicates the fact that the statements are quite realistic, i.e., both the consistent tobacco producers and occasional tobacco producers, as well as non-tobacco producers, with a satisfactorily high percentage (58%, 53%, and 42%), answered affirmatively (yes). This suggests the conclusion that all three groups of respondents confirm that their families have a tradition in tobacco production, use appropriate machinery through various measures and programs of the Ministry of Agriculture, Forestry and Water Economy of the Republic of North Macedonia, and so far, thanks to experience and guidance in the activity, they meet the need for labor, as older individuals are also involved in the production process.

The obtained and processed responses are presented in the following table:

Table 1. Presentation of responses from surveyed groups to the first question

1. Do you believe that you have sufficient labor and machinery for tobacco production?	Active tobacco producers	%	Occasional tobacco producers	%	Non-tobacco producers	%
a) Yes	58	58 %	53	53 %	21	42 %
b) No	31	31 %	44	44 %	23	46 %
c) No response	11	11 %	3	3 %	6	12 %
Total	100	100 %	100	100 %	50	100 %
The calculated X^2-test result is: 11,5						C = 0,192

From the tabular presentation of the three groups of respondents: tobacco producers, occasional tobacco producers and non-tobacco producers, similarity in the three provided responses is observed: **yes, no and no response.**

The analysis of the given responses expressed in percentages indicates that the statements are quite realistic, i.e., both consistent and occasional tobacco producers, as well as non-tobacco

producers, with a satisfactorily high percentage (58%, 53% and 42%) answered affirmatively (yes). This suggests the conclusion that their families have a tradition in tobacco production, have sufficient labor and use appropriate machinery during the work process.

The aim of the question was to determine whether the individual groups of respondents, in their families, have sufficient labor and appropriate machinery for tobacco production, which opens up room for the assumption of future engagement in tobacco production, particularly among younger generations.

From the statements of the three groups of respondents, it is observed that a relatively high percentage of them answered affirmatively (yes). This means that the three groups of respondents realistically have a good basis for further tobacco production since tobacco production has a multi-year tradition in their families. They have experience that is undoubtedly passed on to future generations, not to mention that they have created favorable conditions for this type of production through the machinery they use and the consistency of the workforce involved in the production process.

The calculated value of the X^2 -test for the three groups of respondents, across the three questions, resulting in four (4) degrees of freedom and with a significance level of 0.05, is 11.53 (with a theoretical value of 9.488). The corresponding coefficient of contingency C is 0.192, which we will present comparatively with the theoretical value:

$$\mathbf{X^2\ 0.05\text{-test (calculated value) = 11.53 > X^2\ 0.05\text{-test (tabular value) = 9.488}} \\ \mathbf{C = 0.192}$$

This means that the value of the X^2 -test for this question, with four (4) degrees of freedom, is 11.53, which represents a slightly higher value (but not significantly) than the corresponding tabular-theoretical value of X^2 of 9.488 (at a significance level of $p = 0.05$). Thus, it can be concluded that the responses of the surveyed groups are consistent. The coefficient of contingency is 0.192, indicating that there is consistency in the statements across the respective groups.

The foregoing regarding the first question from the conducted survey indicates that for successful tobacco production, the primary factor is the labor force, but also modern machinery that would facilitate and enhance the work process. However, in today's conditions, to retain the workforce, especially young people, adequate stimulation is necessary, enabling them to see their future in this activity, either as their primary or secondary occupation, thus continuing the tradition of their families in the tobacco production sphere.

On the second question: *Are you satisfied with the amount of subsidies from the state for the produced tobacco?*, about 57% of the surveyed tobacco producers answered affirmatively (yes), 30% negatively (no) and only 13% did not respond at all. On the other hand, of the surveyed occasional tobacco producers, about 46% answered affirmatively (yes), 44% negatively (no) and only 10% did not respond. Conversely, non-tobacco producers responded differently, with 16% answering affirmatively (yes), 40% negatively (no) and the majority, 44%, did not respond to the question.

Considering the regions of research, it can be said that the statements are quite realistic, with a relatively high percentage (57% and 46%) of consistent tobacco producers and occasional tobacco producers responding affirmatively (yes). This suggests that they are satisfied with the assistance they receive in the form of subsidies, which serve as an incentive for maintaining and developing production, indicating that it should proportionally increase with the increase in production costs and living expenses.

The obtained responses are presented in tabular form below:

Table 2. Presentation of responses from surveyed groups to the second question

2. Are you satisfied with the amount of subsidies from the state for produced tobacco?	Active tobacco producers	%	Occasional tobacco producers	%	Non-tobacco producers	%
a) Yes	57	57 %	46	46 %	8	16 %
b) No	30	30 %	44	44 %	20	40 %
c) No response	13	13 %	10	10 %	22	44 %
Total	100	100 %	100	100 %	50	100 %
The calculated X²-test value is: 57.1 C = 0,400						

The calculated value of the X²-test for the three groups of respondents, across the three response options, resulting in four (4) degrees of freedom and with a significance level of 0.05, is 57.17 (compared to a theoretical value of 9.488). The corresponding coefficient of contingency C is 0.400. Below, we will display and compare them with the theoretical value.

$$\mathbf{X^2\ 0.05\text{-test}\ (calculated\ value)\ =\ 57.17\ >\ X^2\ 0.05\text{-test}\ (tabular\ value)\ =\ 9.488}$$

$$\mathbf{C\ =\ 0.400}$$

This means that the value of the X²-test for this question, with four (4) degrees of freedom, is 57.17, which is significantly higher than the corresponding tabular–theoretical value of X² of 9.488 (at a significance level of p = 0.05). Therefore, it can be concluded that the responses of the surveyed groups, to some extent, do not correspond. The coefficient of contingency is 0.400, indicating a low similarity in the responses across the specified groups.

Further analysis of the non-compliance with the hypotheses set forth in a certain percentage of respondents, particularly among the non-tobacco producers, suggests the need to identify factors that would influence the motivation of producers, considering that tobacco production could continue to represent their primary activity, generating significant income not only for their families sustenance but also as an opportunity for further investment and modernization of the production process. The similarity in responses among active and occasional tobacco producers, with certain deviations among non-producers of tobacco, confirms the fulfillment of the main hypothesis: The developmental prospects of tobacco production in Macedonia, by following the guidelines of the European Union and global world movements, depend on the determination of the population to engage in tobacco production, provided there is profitability achieved through appropriate purchase prices for tobacco and corresponding subsidization of purchased kilograms of tobacco.

The analysis conducted with comparative responses from the three groups of respondents, allows us to conclude that for successful tobacco production, with a tendency towards development and modernization, it is essential to engage and involve all family members. This includes both older individuals, who have experience in the work, and younger individuals, who have the willingness and desire for education and motivation for work. Therefore, the responses to this question confirm the fulfillment of both the main and auxiliary hypotheses of the research, which creates space for optimistic thinking that the full engagement of all family members in the tobacco production process enables its future, which will certainly be continued by the younger individuals who need to be adequately motivated and educated to increase tobacco production through better management and organization, as well as through the use of modern working methods.

Conclusion

Analysis of the sustainability of tobacco production in Macedonia and the future prospects for development lead to the following conclusions:

1. In perspective, tobacco production with certain fluctuations has shown a stable trend, with mild upward trends in global production, which our country must follow and adapt to. The future of tobacco production will largely depend on good agricultural and export policies, as well as on state subsidization policies aimed at encouraging and directing the young workforce towards tobacco production. They should see it not only as an opportunity for existence but also as a space for development, expansion, and, of course, profit realization. In this regard, motivation and leadership are crucial elements in a series of other related activities aimed at fostering entrepreneurial spirit among the youth, who are the future of our country. If all measures continuously offered by the European Commission for the protection and advancement of agriculture are utilized, including the IPARD funds, significant progress can be made in the developmental flow of tobacco production in our country.
2. Global tobacco companies treat Macedonia as a country with favorable soil, climatic, and economic conditions for the production of quality tobacco and tobacco products, giving it an economic advantage over neighboring countries. However, it is essential for our country to carefully follow the recommendations of the Framework Convention on Tobacco Control (FCTC) while simultaneously implementing measures to control tobacco advertising and smoking. The Republic of North Macedonia should not consider measures to reduce tobacco production because, due to the sensitivity of the socioeconomic aspect, this issue should be left for resolution in the future period, after the potential accession of Macedonia to the EU, when tobacco production plans are aligned with the rules of the European Union.
3. In Macedonia, the planted areas with tobacco are decreased over the years, but production and yield in kilogram per hectare have almost doubled as a result of using modern mechanization in the production process. Additionally, this increase is due to the greater education and knowledge enhancement of tobacco producers in this field, who are increasingly organizing into larger family businesses that generate greater profits, but also due to the support and subsidies they receive from the state. In this context, it can be said that tobacco production in Macedonia follows global trends (where there is also an increase in yield), gradually approaching the global average of 1.800 kg/ha.
4. What still represents a significant drawback of agricultural subsidies in our country is that a large portion of the subsidies are used as a social measure, although they should contribute to increasing competitiveness and creating large production entities that will then contribute to increasing exports. Particularly, attention should be paid to how subsidies can provoke lasting positive consequences rather than temporary effects. If significant expenditures in agriculture continue in the form of subsidies, it suggests the argument that increased subsidization, as a global trend of rising prices, leads to the release of funds for consumption rather than increasing consumption for infrastructure investments that would not trigger inflationary movements. If this is the case, the question of limiting their use or restructuring the subsidy plan also arises.
5. The long-term future of tobacco production can only be ensured through quality production policies, proper investment, employment incentives, motivation enhancement, capital increase, proper pricing policies, stimulating subsidy policies, education and advice from experts, and proper market policies. In this context, it is inevitable to emphasize that the traditional way of tobacco production, favorable

natural-climatic conditions, state interest, socio-economic aspect and export policy within global frameworks serve as a springboard for continuing the century-long tradition of tobacco production in our country.

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