

VARIETY STRUCTURE AS AN ESSENTIAL FACTOR FOR SUSTAINABLE DEVELOPMENT OF THE PRODUCTION OF ORIENTAL TOBACCO IN REPUBLIC OF MACEDONIA AND MARKETING OF TOBACCO PRODUCTION COMPETITIVE IN FOREIGN MARKETS

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ABSTRACT

In the last 10 years in Macedonia are produced only oriental types of tobacco which achieved an average annual production of unprocessed raw tobacco amounting to around 25,000 tonnes, with the exception of two vintages (2008 and 2015). This production is competitive and compatible with the real needs of the market. Accordingly, in this ten year period total production by year shows that the Republic of Macedonia has continued sustainable development of tobacco production and the variety structure is extremely heterogeneous, especially in type prilep and there are no direct payments (subsidies).

Thus, based on a whole set of research. The analysis of the parameters it was found that the introduction of subsidies by the government € 1 per kg of tobacco from 2009 to date and improving the variety structure as a major factor in the introduction of the variety Prilep 66- 9/7 in the primary tobacco production in this period is decisive for the increase in production and achieving sustainable development in the last 10 years. The variety Prilep 66-9 / 7 in the last two years has represented an average of 88% in total production and over 97% in the production of the type prilep. This variety is not only achieve sustainable development of tobacco production, significantly increased the competitiveness of tobacco production in the market and realize a much higher export price for 1kg processed tobacco in the previous year period.

Keywords: tobacco, varieties, prilep, jaka,basma, production

INTRODUCTION

Tobacco has conquered the world not only for the pleasure it gives during smoking but also for the high revenues it brings to the countries in which it is grown. Tobacco was introduced in Macedonia from Turkey in 1638 and ever since it has been highly valued for its economic and social importance. According to Turkish statistical data, total tobacco production in R. Macedonia before the Balkan wars was 4-5 million kg. The production of this crop start in creasing after the Second World War, to reach 36.221 tons in 1982.

Tobacco production takes a very important place in the economy of Macedonia due both for economic and social reasons. Tobacco cultivars grown in R. Macedonia are of oriental origin, mainly of the types Prilep, Jaka and Basma. With a share of 3%, R. Macedonia is positioned among the eight major tobacco producing countries in the world. Of the total arable land in the country tobacco occupies 3,4% in the area under energy crops around 81.1 % of the total area. The average tobacco planted area in Macedonia in the period 2008-2016 was 16025 ha. With an average yield of 1.437 kg/ha, the total production for the same period was 23 068 tons of oriental tobacco, but it is presumed that it can achieve up to 35.000 tons. Tobacco share in the total exports of R. Macedonia was 3.7% (Statistics Annual of RM for 2011). At first sight that seems to be an insignificant segment in the foreign trade relations of the country, but its real value can be figured out when we take into consideration that the total exports in 2015 was 24 893 tons of oriental tobacco. The importance of tobacco for Macedonian economy is even more obvious when compared to the total exports of agricultural products in 2015 , in which it participated with over 22% . All activities and processes related to production of this crop are regulated by law (The Tobacco and Tobacco Products Act). According to the provisions of this Act, tobacco producers are allowed to use only certified seed material and the only authorized institution for production of such material is Scientific Tobacco Institute from Prilep.

The aim of our investigation is to study importance of the tobacco production in Macedonia for economic and social reasons.

Presently, tobacco production in the country is managed by nine purchasing companies with foreign capital (Socotab, Alliance One, Strumica Tabak, etc.) and one domestic company – Tututnski Kombinat -Prilep. Oriental tobacco is grown in several areas: Pelagonia (which covers 46.8% of the area under tobacco in R. Macedonia), Strumica, Radovisandromemino regions. 7-10 years ago, a conglomerate of varieties could be observed in these regions, but now, due to the selection work of the experts from Tobacco Institute –Prilep, the varietal structure is far more homogenous and a share of almost 80% of the total oriental tobacco production in the country accounts for the variety Prilep P66-9/7.

Pelagonia is the largest tobacco growing region, especially the Prilep area which accounts for 25% of the oriental tobacco production. The most dominant variety in this region is of the type Prilep, while in the other regions Yaka and Basma tobaccos can also be observed.

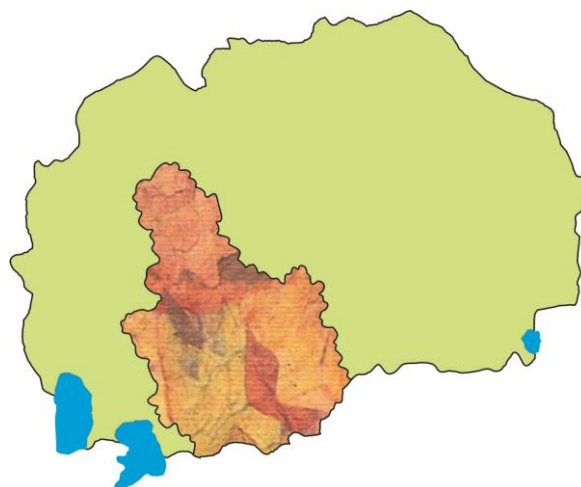


Foto.1 Region of Pelagonia

This is a newly created variety, recognized in 2004 and added to the list of registered varieties of domestic agricultural plants (Official Gazette of the Republic of Macedonia No.70/2004. Authors of this variety is Prof.dr. Dimitrieski M. and prof. dr.Miceska G.) Plants are ellipsoid-conic in shape, with height average of 65 - 75 cm, depending on conditions of growing and applied cultural practices. Average leaf number of leaves is 52 and they are uniformly distributed on the stem. Average size is in the limits of 18 - 22 cm for the largest leaf, 16-18 cm for the middle and 8 - 10 for the top leaves. Inflorescence is relatively small, moderately to tightly condensed, semi-oval in shape.

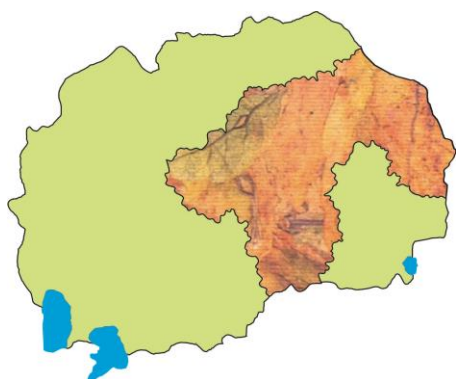


Foto 2.Eastern region

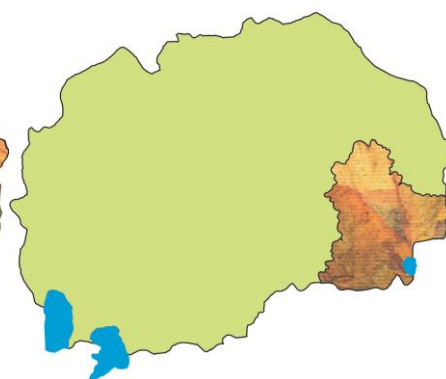


Foto 3.Strumica – Radovis region

Prilep 66-9/7(Miceska at all.2014)is suitable for growing at loose, light and drained soils, with poor supply of nutrient elements, showing especially good results under irrigation conditions. The variety also achieves good yields and quality in soils with medium supply of nutrients,

where no possibilities for irrigation exist, yielding small-leaf aromatic and substantial tobacco typical for the type Prilep. Length of the growing season from planting to the beginning of flowering is 70 - 75 days. The variety is resistant to blue mold and bassara disease, and tolerant to viruses. The Dry tobacco yield averages **2000 - 3600 kg/ha**, depending on conditions of growing and applied cultural practices.

Prilep 66-9/7 belongs to the group of small-leaf aromatic tobaccos with uniform raw typical for the type Prilep. It has fine, soft and substantial dry leaf tissue, with yellow-orange color of the middle leaves and orange to light red of the upper. It is distinguished by high percentage of high-graded tobacco. (Dimitieski M at all. 2014).

Chemical composition of this tobacco is variable and depends greatly on conditions of growing and applied agrotechnical measures. The average values of major chemical compounds range within the following limits: nicotine **1.0 % (irrigated) - 2.30 % (non-irrigated)**, proteins **5 % - 8%**, soluble sugars **18.50% - 29.00%** and Shmuk's quality index **2.5 - 5.0**.

During smoking, this tobacco is medium in strength, with full and sweetish taste and strongly expressed, intensive aroma.



Prilep 66-9/7 Seed plot of P 66-9/7

The average area under tobacco in R. Macedonia for the period 2008- 2016 was 16 052 ha. According to the oriental tobacco production in the country has increased from 16 280 tons purchased tobacco in 2008 to 30 997 tons in 2013 (Table 1). Of course, this is primarily due to the interest shown by the foreign companies for Macedonian oriental tobacco, characterized by good quality and yield, which is included in the American blend cigarettes by 7-10% and it is known that these cigarettes account for almost 70% of the world cigarette manufacture.

The number of contracts, the areas planted with tobacco in hectares and total subsidies are also presented in Table 1.

Table 1: Production of tobacco in R. Macedonia in the period 2008-2016

Year	Number of contracts	Areas under tobacco/ ha	Purchased tobacco/tons	Total subsidies €
2008	30 519	17 185	16 280	11 799 512,20
2009	38 710	16 212	23 196	22 655 291,29
2010	40.743	18 846	26 393	25 749 268,00
2011	33.234	15.677	21 024	20 511 219,00
2012	29.090	14.609	27.993	27 310 244,00
2013	42.367	19.806	30.997	30 240 976,00
2014	34 445	14 030	24 857	23 623 171,00
2015	28454	14 127	18 910	35 035 691,00
2016	27 380	13 978	25 167	24 554 097,00
2017	29 132	14 342	23559,122	

Source: Ministry of agriculture, forestry and water economy of R. Macedonia

The tobacco purchase in the last year 2016 of production recorded upward movement, with noticeable decrease of the average purchase price Table 2. In 2017 the purchase amount was 85,58% higher compared to 2014, while the average price was 1,90€/kg. The increase of production appeared as a result of the stimulative measures undertaken by the government of the Republic of Macedonia and the subsidies for tobacco of 1€ per kg (Table 1).

Table 2. Quantity of purchased tobacco

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Quantity (tons)	23 196	26 158	21 024	27 993	30 997	24 857	18 910	25 167	23557,12
Average price €/kg	3.12	2,22	2,68	2,93	2,48	1,90	3,00	3,20	3,53

Source: Ministry of agriculture, forestry and water economy of R. Macedonia

If we analyze the prevalence of the purchased tobacco by types of tobacco (Table 3), it can be concluded that the type Prilep participates with an average of 78.56% (2010-2016 in the total purchase of tobacco.) Its participation is above all the level of uniformity and quality of tobacco raw material, as well as the varietal structure of the type Prilep represented in the tobacco production in the Republic of Macedonia, which completely coincides with the results given in Table 4, for the representation of the high classes of purchased tobacco in accordance with the Rulebook on Tobacco purchased in the Republic of Macedonia.

Table 3 .Purchase of leaf tobacco by types

Types/ in tones	Year							
	2010/2011	%	2011/2012	%	2012/2013	%	2014/2015	%
Prilep,	18 364	70,00	14 838	73,00	20 320	72,77	16 684	88,22
Yaka	6 704	25,56	5 327	26,41	6 913	24,75	2 150	11,36
Basma k	1161	4,43	0.730	0,04	690	2,47	77	0,41
Total	26 229	100,00	20 165	100,00	27 923	100,00	18 911	100,00

Source: Ministry of agriculture, forestry and water economy of R. Macedonia

Table 4.Purchased amount of row tobacco in tons and share of Purchased classes in %

Class	2014		2015		2016	
	Tobacco	Tobacco %	Tobacco tons	Tobacco %	Tobacco tons	Tobacco %
I	245	1,06	2 264	11,98	4 020	16,00
II	3987	17,39	11 711	61,98	17 366	69,00
III	12 102	52,80	4 579	24,23	3 610	14,30
IV	6584	28,73	337	1,78	162	0,6
V					618	0,002
Total	22 918	100,00	18 892	100,00	25 160	100,00

Source: Ministry of agriculture, forestry and water economy of R. Macedonia

According to the State Statistical Office, tobacco exports from the Republic of Macedonia in 2010 was 16 546 tons, which is over 69% of the total tobacco production. The share of tobacco in the total exports from the country was 3.7%(Statistical Yearbook of the Republic of Macedonia, 2011). At first sight, it might seem that tobacco takes insignificant part in international economic relations of the Republic of Macedonia. In terms of agri-exports, however, exported tobacco in 2013amounted to 25444 tons, which is a share of over 22% from the total exports from R. Macedonia Table 5.

Table 5. Amount of exportet and imported of fermented tobacco in the period 2010- 2015 (tons)

Year	fermented tobacco	Tobacco export	Tobacco import
2010	26 229	16 546	2 911
2011	20 165	21 495	3 625
2012	27 923	22 462	4 986
2013	30 997	25 440	3 197
2014	24 857	22 588	3 463
2015	18 910	24 893	3 616

CONCLUSIONS

In general, the presented data for the investigation period(2006-2013) reveal an upward trend in production of oriental tobacco in R. Macedonia. Tobacco is strategic crop and I believe that all questions and disputes regarding the ban on its future production in these areas have no basis, taking in to account the Global strategy on tobaccos well as the assumptions of FAO experts on the increase of its production by almost 25%. The real question for us is how to find a place in that framework and to make the best use of the comparative advantages of this area for stable production of oriental tobacco. If we want to resolve that problem, several important factors should be taken into account:

- specification of tobacco growing areas, to stop the production of varieties in regions where the inappropriate climate, pedological and other factors significantly affect the quality of tobacco.
- taking proper measures to stabilize the varietal purity by: consistentup holding of the Lawon Tobacco;
- use only of certified seed, supplied from authorized breeder;
- constant work on creation of new varieties which will retain typical traits of the type;
- use of varieties with low environmental variability, i.e. higher biological plasticity;
- timely contract-signing and information on purchase prices of leaf tobacco;
- financial support for scientific-research activities;
- Further subsidization of purchased tobacco per kg and for modernization of agricultural mechanization;
- investments in micro-accumulations;
- consolidation of agricultural properties;
- introducing modern technologies in the process of production.

Only with a well-coordinated cooperation among the Ministry of Agriculture, Forestry and Water Economy, Tobacco Institute, buyers, tobacco associations, manufacturers and farmers there is a real opportunity to resolve the problems.

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