

## REGIONALIZATION OF TOBACCO PRODUCTION IN THE REPUBLIC OF MACEDONIA

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### ABSTRACT

The paper presents data on tobacco planted areas, average production and yields in various regions of R. Macedonia in the period 2007 – 2011. The analysis revealed that the biggest areas planted with tobacco are found in the southwest region of R. Macedonia (4604 hectares in average) and the smallest in the northeast and west regions. The highest average production was achieved also in the southwest region – 5426 tons, and the lowest in northeast region – 103 tons. The highest average yield per unit area was achieved in the central region (9505 kg/ha) and the lowest in the northeast region (2585 kg/ha). According to the obtained results, adequate and in-time regionalization is one of the most important conditions for improvement of tobacco production in R. Macedonia.

**Keywords:** regions, areas, production, yield, tobacco

## РЕГИОНАЛИЗАЦИЈА НА ТУТУНОПРОИЗВОДСТВОТО ВО РЕПУБЛИКА МАКЕДОНИЈА

Во содржината на трудот презентирани се податоци за просечите површините засадени со тутун во регионите (реоните) на Р. Македонија, оствареното просечно производство и приносот по единица површина, за периодот 2007-2011 година. Од извршената анализа доаѓаме до сознание дека во југозападниот произведен регион на Р. Македонија засадени се најголеми површини со тутун кој во просек изнесуваат 4604 хектари, а најмали површини забележани се во североисточниот и западниот регион. Исто така и по однос на оствареното производството предност има југозападниот произведен регион, со остварено просечно производство од 5426 тони, а најмало просечно производство забележано е во североисточниот регион (103 тони). Просечниот принос по единица површина во регионите (реоните) на Р. Македонија за периодот 2007-2011 година најголем е во централноисточниот произведен регион 9505 кг/ха и најмал во североисточниот произведен регион (2585 кг/ха). Неоспорен е фактот дека во Р. Македонија потребно е да се изврши правилна и навремена регионализација (реонизација) на производството на тутун бидејќи тоа е еден од условите за негово подобрување и унапредување.

**Клучни зборови:** региони, реони, површина, производство, принос, тутун.

## INTRODUCTION

Republic of Macedonia has favorable environmental conditions for production of high-quality oriental, semi-oriental and (from recently) Basma tobacco varieties. The complex of natural conditions (climate: soil: relief) is, however, very limited, i.e. in some regions the conditions for growing certain tobacco types are optimal and in others they are very poor. Care must be taken to choose those tobacco types that will be the most suitable for given soil type and climate conditions of the region in order to obtain highly valued raw product. Some of the regions offer favorable conditions for combined production of various types and subtypes, which will enable diversification of tobacco production.

It is undisputable that proper distribution of tobacco types and varieties by regions is essential for rational use of available areas suitable for tobacco production, which is one of the conditions for its development and improvement.

According to the decision of the Ministry of Agriculture, Forestry and Water Management of the Republic of Macedonia, the following five tobacco producing regions have been differentiated: northeast, west, southwest, central east and southeast.

The starting point in defining the aim of our investigation was the data analysis on area planted with tobacco and average yields in certain regions of R. Macedonia for the period 2007-2011.

## MATERIAL AND METHODS

Basic material for realization of the research were the data published in the Statistical yearbook of R. Macedonia and Statistical Review on crop farming, fruit growing and viticulture, 2007 -2011.

Methods used in data processing and conclusion making were typical for this type of investigation, but the most usual one was the comparative-analytical method.

## RESULTS AND DISCUSSION

This paper presents data on the average area planted with tobacco, realized average production and average yield in the regions of R. Macedonia for the period 2007-2011.

Analysis of the above data shows that the average area planted with tobacco in all five regions amounted 1817 hectares. The largest average area of 4604 hectares was recorded in the southwest region, and

it was followed by the southeast region with 3300 hectares and centraleast region with 1053. The smallest area planted with tobacco was recorded in the northeast and west producing regions, with only 85 i.e 43 hectares, respectively. According to this, the largest average area under tobacco for the period2007-2011 was planted in the years 2010 (2008 ha) and 2011 (1923 ha) .

**Table 1. Areas planted with tobacco in the regions of R. Macedonia for the period 2007 - 2011**

In hectares

Regions	Years					Average
	2007	2008	2009	2010	2011	
Northeast	81	83	80	88	91	85
West	37	41	46	46	44	43
Southwest	4044	4242	4602	5140	4992	4604
Central-east	1096	1027	1024	1081	1039	1053
Southeast	3114	3067	3179	3692	3448	3300
<b>Average</b>	1674	1692	1786	2008	1923	1817

Data on the total tobacco production and realized yields in the regions of R. Macedonia are presented in Tables 2 and 3.

**Table2. Tobacco production in the regions of R. Macedonia for the period 2007-2011**

In tons

Regions	Years					Average
	2007	2008	2009	2010	2011	
Northeast	79	87	88	138	123	103
West	26	56	82	36	36	47
Southwest	4870	4106	5607	6650	5898	5426
Central-east	1595	1003	1636	2009	1588	1566
Southeast	3999	2870	4367	5729	5141	4421
<b>Average</b>	2114	1624	2356	2912	2557	2313

Data presented in Table 2 show that the average tobacco production in R. Macedonia for all five regions was 2313 tons. The highest production was recorded in the southwest (5426 t) and southeast region (4421t), in the central east region it was lower (1566 t), and the lowest values were recorded in the northeast (103 t) and west region (47 t). The highest average production was recorded in the years 2010 and 2011, amounting 2912 and 2557 tons, respectively.

The average yield achieved in all five regions was 5612 kg/ha. The highest average yield was recorded in the central east region-9505kg/ha, followed by the south east region with 5629kg/ha and the west region with 5238kg/ha. The lowest yield (2585 kg/ha) was obtained in the north east region. The highest average yields for the period 2007-2011 were achieved in 2009, 2010 and 2011 (6258, 5963, 5936 kg/ha) (Table 3).

**Table 3. Tobacco yields obtained in the regions of R. Macedonia, 2007-2011 crop**

Regions	Years					Average
	2007	2008	2009	2010	2011	
Northeast	1944	2105	2151	3972	2755	2585
West	2780	6160	7700	2850	6700	5238
Southwest	5157	4279	5396	5583	5103	5104
Central-east	8983	7803	10610	10587	9541	9505
Southeast	6151	4154	5434	6823	5582	5629
<b>Average</b>	5003	4900	6258	5963	5936	5612

## CONCLUSIONS

Based on the data presented in the paper, the following conclusions can be drawn that are of major interest to the tobacco industry of R. Macedonia:

1. Tobacco producing regions in R. Macedonia could hardly be shifted to other agricultural crops or economic activities, although tobacco industry is subjected to many fluctuations in the production and market and imposes huge risks to the farmers, due to which the regions remain under developed.
2. The Republic of Macedonia has exceptionally favorable agro-ecological conditions for production of the highest quality oriental aromatic types of tobacco, and some of the regions with their specific conditions enable a successful growing of semi-oriental and Basma tobacco varieties.
3. Tobacco production should be adequately developed in the regions of R. Macedonia in order to rationally exploit the available area for tobacco growing.
4. The need for regionalization is undisputable, because it is one of the conditions for improvement and development of tobacco production.
5. The average area planted with tobacco in all five regions in R. Macedonia was 1817 hectares. The largest area under tobacco was recorded in the southwest, and the smallest in the southeast and west region.
6. The average production of tobacco in all five regions in R. Macedonia was 2313 ton. The highest production was achieved in the southwest region, and the smallest in the northeast and the west.
7. The average yield per hectare achieved in all five regions was 5612 kg/ha. The highest average yield (kg/ha) was recorded in the central east region, and the lowest in the northeast region.
8. Tobacco industry of the Republic of Macedonia and its further development should be directed toward grouping of oriental tobaccos at one level and, to a lesser extent, introducing of semi-oriental and Basma types of tobacco.
9. Measures which should be taken in realization of tobacco production will result in obtaining a better and cheaper product. For this purpose it is necessary to make a detailed analysis of conditions in the tobacco producing regions, i.e. to predict which tobacco type would be the most appropriate for given region.

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