

TOBACCO PRODUCTION IN THE REGION OF PELAGONIA -REPUBLIC OF MACEDONIA

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ABSTRACT

Analysis of tobacco production (yields and planted area) in the region of Pelagonia will be made in this paper. Pelagonia is traditional and largest producer of high-quality tobacco in the Republic of Macedonia. It is especially known for the production of oriental tobacco, which is the most interesting for the foreign market. In recent years, the production of oriental tobacco in R. Macedonia ranged from 23.200 t in 2009 to 30.273 t in 2010, or in average 27.040 t.

In the period of investigation (2009-2013), the share of the Pelagonia region in the average tobacco production of R. Macedonia was 12.762 tons. The highest production was recorded in the municipalities of Dolneni (4034,2 tons) and Prilep (3124,0 tons).

The average yield in Pelagonia region ranged from 1122,4 kg/ha in 2009 to 1297,4 kg/ha in 2013. The highest yield was achieved in municipalities Krusevo-1346,6 kg/ha, Dolneni-1341,6 and Mogila-1317,4 kg/ha and in the other municipalities the yields were relatively lower.

The average area under tobacco in the same period amounted to 9946,8 ha, the major part of which belonged to the municipalities of Dolneni (3006,2 ha) and Prilep (2472,8 ha). In other municipalities the average area under tobacco was smaller and ranged about 1000 hectares.

Keywords: tobacco, regions, production, area, yield

ПРОИЗВОДСТВО НА ТУТУН ВО РЕГИОНОТ НА ПЕЛАГОНИЈА - РЕПУБЛИКА МАКЕДОНИЈА

Во овој труд ќе извршime анализа на производството- приносот и површините засадени со тутун во Пелагонискиот регион, кој претставува традиционален и најголем производител на ориенталски тутуни во Р. Македонија.

Пелагонија е најголемиот регион за производство на тутун со високи квалитативни вредности, особено типот прилеп кој е доста интересен за странскиот пазар.

Во последниве години просечното производство на ориенталски тутуни во Р. Македонија се движи од 23.200 тони во 2009 до 30.273 тони во 2010 година, или во просек 27.040 тони.

Во просечното производство на тутун во Р. Македонија во периодот 2009-2013 година, Пелагонискиот регион учествува со 12.762 тони. Најголемо производство е остварено во општините Долнени (4.034,2 тони) и Прилеп (3.124 тони).

Просечниот принос на тутун во Пелагонискиот регион се движи од 1122,4 кг/ха во 2009 до 1297,4 kg/ha во 2013 година. Најголем просечен принос е постигнат во општините Крушево- 1346,6 kg/ha, Долнени- 1341,6 kg/ha и Могила-1317,4 kg/ha, а останатите општини имаат релативно понизок принос.

Просечната површина под тутун во овој регион во периодот 2009- 2013 година изнесува 9.946,8 хектари. Најголема површина под тутун има Општина Долнени- 3.006,2 хектари, понеа следи Општина Прилеп со

2.472,8 хектари а во останатите општини површините под тутун се помали и се движат околу 1000 хектари.

Клучни зборови: регион, површина, производство, принос, тутун

INTRODUCTION

Tobacco production has an important place in the agro-industrial complex of the Republic of Macedonia. According to our statistical nomenclature of territorial units, tobacco production in the country is present in 8 regions and 56 municipalities.

The largest region in the country is Pelagonia, in the southern part of the Republic Macedonia, covering the Pelagonia Valley and the basin of the Prespa Lake.

The region consists of the following municipalities: Dolneni, Prilep, Krusevo, Mogila, Krivogastani, Bitola, DemirHisar, Nobatsi and Resen. It is characterized by

favorable soil and climate conditions for producing high quality oriental tobacco which is highly valued on the world market. We shall especially emphasize the production of the type Prilep, which averages about 11.681,4 tons and represents almost half of the total production in the country.

The aim of investigation was to make analysis on production, yield and planted areas in Pelagonia tobacco producing region. Results of the investigation will present the actual situation regarding the production, human and natural resources characteristic for this region.

MATERIALS AND METHOD

Data from the State Statistical Office of the Republic of Macedonia for the period 2009-2013 were used as material for this paper, along with the following publications Statistical Review: Field crops, orchards and vineyards in 2009-2013; Regional Yearbook: The regions in the Republic of Macedonia; scientific papers published in the journal Tutun/ Tobacco and other scientific and technical

references. Secondary internal and external data sources were used in realization of this investigation.

The following methods were applied in the investigation: analytical, comparative, inductive, deductive, method of index and other mathematical-statistical methods common to agricultural research.

RESULTS AND DISCUSSION

The finest oriental, semi-oriental and tobaccos intended for export are traditionally produced in the area of the Republic of Macedonia.

In each region of the country, there are specific differences in the relief, climate, altitude and soil conditions that favor the production of certain tobacco type.

The region of Pelagonia is the largest region in R. Macedonia and it is most suitable for

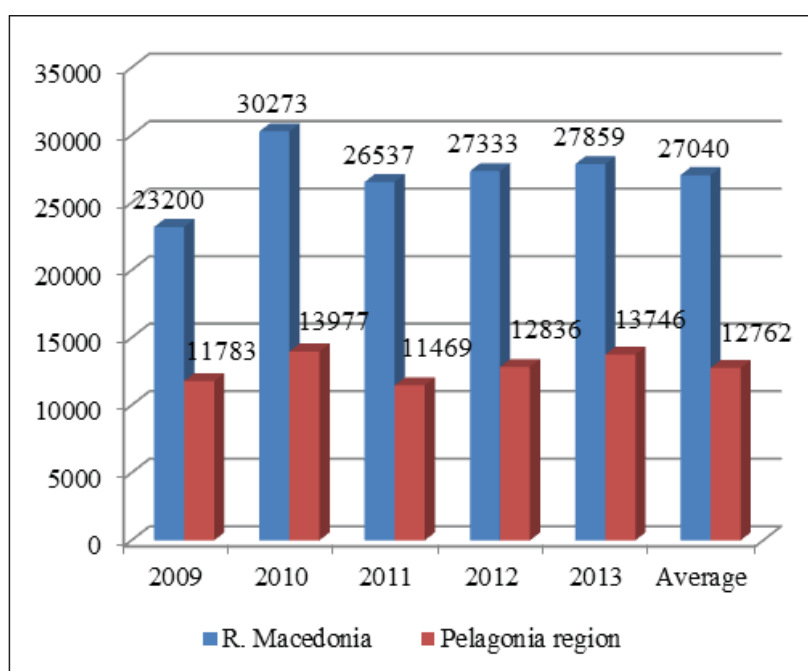
production of oriental tobacco type Prilep.

The share of Pelagonia region in the total tobacco production of the country in the last five years ranged from 43.22% in 2011 to 50.79% in 2009, which makes an average of 47,29%. Approximate share was observed in 2012 and 2010 -46.96% and 46.17%, respectively (Table 1, Fig. 1).

Table 1. The share of Pelagonia region in the total tobacco production of R. Macedonia, in tons

Year	R. Macedonia	Pelagonia region	%
2009	23.200	11.783	50,79
2010	30.273	13.977	46,17
2011	26.537	11.469	43,22
2012	27.333	12.836	46,96
2013	27.859	13.746	49,34
Average	27.040	12.762	47,29

Source: State Statistical Office of the Republic of Macedonia. Regional Yearbook: the regions in R. Macedonia, 2014, Skopje

**Figure1. The share of Pelagonia region in the total tobacco production of R. Macedonia, in tons****Table 2. Area sunder tobacco in the region of Pelagonia, by municipalities (ha)**

Municipality	Areas under tobacco					Average	%
	2009	2010	2011	2012	2013		
Dolneni	2772	3121	3036	3040	3062	3006,2	30,3
Prilep	2156	2518	2440	2545	2705	2472,8	24,9
Krusevo	954	1024	968	989	1173	1021,6	10,3
Mogila	884	877	844	842	849	859,2	8,6
Krivogastani	747	796	808	824	844	803,8	8,0
Bitola	712	781	811	845	861	802,0	8,1
D. Hisar	740	767	733	736	751	745,4	7,5
Novaci	225	236	224	227	239	230,2	2,3
Resen	0	0	8	8	12	5,6	0,1
Total	9190	10120	9872	10056	10496	9946.8	100

Source: Statistical reviews -Field crops, orchards and vineyards

In the context of our research, will first present data on the areas under tobacco

in Pelagonia region for the period 2009-2013 by municipalities (Table 2, Fig. 2).

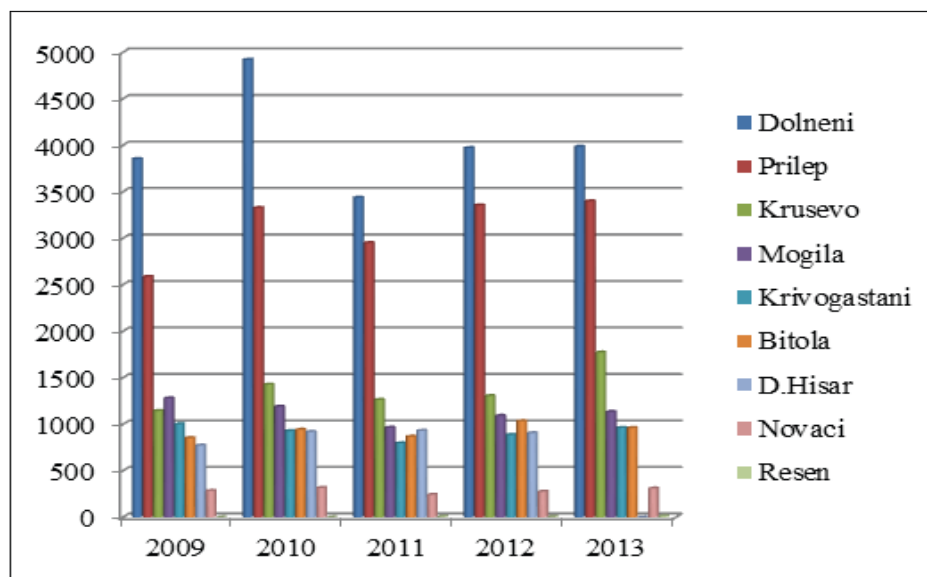


Figure 2. Area under tobacco in the region of Pelagonia(ha)

According to data presented in Table 2, the average area under tobacco in 2009-2013 was 9946.8 ha. The largest area was observed in municipalities Dolneni and Prilep (3006.2 and 2472.8 ha), which is around 55%, i.e. these two municipalities account for half of the area under tobacco. The area of all other municipalities is very small and ranges from only 0.1 to 10.3%.

Tobacco production of the Pelagonia region in 2009-2013 ranged from 11.469 tons in 2011 to 13.977 tons in 2010, i.e. an average

of 12.521,4 tons. The largest production was observed in municipalities Dolneni-4034.2 tons, or 32.2% and Prilep- 3124.0 tons or 24.9%, which means that these two municipalities account for about 57%. In other municipalities, average production ranges from 6.0t in Resen to 1383.2 t in Krusevo. Higher production was also noted in the municipality Mogila(1133.2 tons), while the production in the other municipalities investigated was relatively low (Table 3, Fig. 3).

Table 3. Tobacco production in Pelagonia region, by municipalities (in tons)

Municipality	Tobacco production (t)					Average	%
	2009	2010	2011	2012	2013		
Dolneni	3854	4921	3438	3972	3986	4034,2	32,2
Prilep	2587	3328	2951	3355	3399	3124,0	24,9
Krusevo	1145	1428	1264	1305	1774	1383,2	11,0
Mogila	1282	1191	966	1092	1135	1133,2	9,0
Krivogastani	1003	928	797	887	963	915,6	7,3
Bitola	854	943	869	1035	961	932,4	7,4
D.Hisar	772	920	932	906	0	706,0	5,6
Novaci	286	318	243	276	311	286,8	2,3
Resen	0	0	9	7	14	6,0	0,3
Total	11.783	13.977	11.469	12.835	12.543	12.521,4	100

Source: Statistical reviews -Field crops, orchards and vineyards

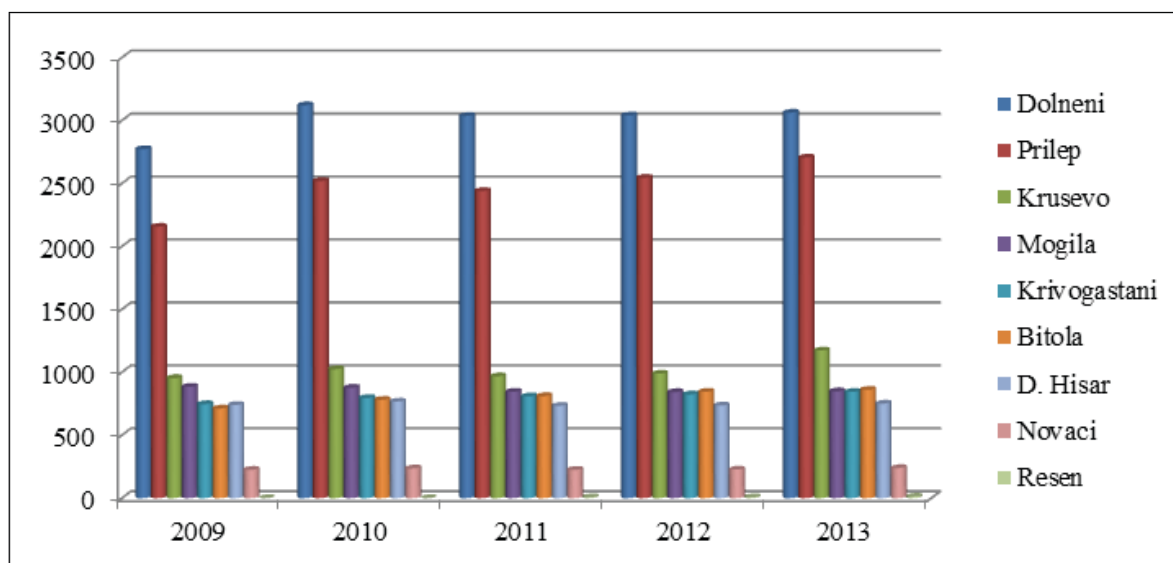


Figure 3. Tobacco production in Pelagonia region, by municipalities (in tons)

The average yield per unit area in the same period ranged from 1122.4kg/ha in 2009 to 1297.4 kg/ha in 2013, or 1189.9 kg/ha in average. The highest average yield was achieved in municipalities Krusevo(1346.6 kg/ha),Dolneni(1341.6 kg/ha) and

Mogila(1317.4 kg/ha), while municipalities Prilep,Novaci and DemirHisar achieved almost equal average yield 1261.2, 1245.0 and 1227.8 kg/ha, respectively. Municipality of Resen has the lowest average yield of 632.6kg/ha (Tabela4, Fig. 4).

Table 4. Average tobacco yield in Pelagonia region, by municipalities (kg/ha)

Municipality	Yield (kg/ha)					Average	Rank
	2009	2010	2011	2012	2013		
Krusevo	1200	1394	1306	1320	1513	1346,6	1
Dolneni	1390	1577	1132	1307	1302	1341,6	2
Mogila	1450	1358	1145	1297	1337	1317,4	3
Prilep	1200	1322	1209	1318	1257	1261,2	4
Novaci	1272	1349	1084	1217	1303	1245,0	5
D. Hisar	1356	1209	1087	1205	1282	1227,8	6
K r i v o - gastani	1034	1155	1154	1100	1425	1173,6	7
Bitola	1200	1208	1071	1225	1116	1164,0	8
Resen	0	0	1100	921	1142	632,6	9
Average	1122,4	1174,6	1143,1	1212,2	1297,4	1189,9	

Source: Statistical reviews -Field crops, orchards and vineyards

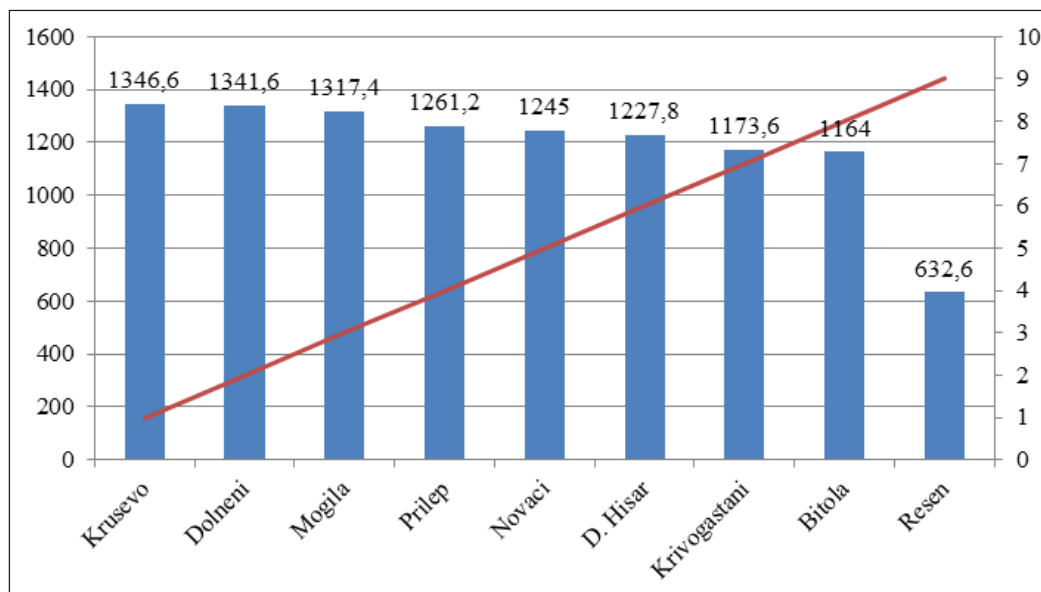


Figure 4. Average tobacco yield in Pelagonia region, by municipalities(kg/ha)

From the above data it can be seen that municipalities in the region of Pelagonia

have favorable conditions for production of good quality tobacco.

CONCLUSIONS

Based on the data presented for the production of tobacco in the region of Pelagonia (R. Macedonia), the following conclusions can be drawn:

1. According to the new statistical nomenclature of the Territorial units, tobacco production in the Republic of Macedonia is represented in 8 regions and 56 municipalities.
2. The largest region in the country is Pelagonia region, with the following municipalities: Dolneni, Prilep, Krusevo, Mogila, Krivogastani, Bitola, Demir Hisar, Novaci and Resen.
3. The share of Pelagonia region in the total production of the country in the period 2009-2013 ranges from 43.22% in 2011 to 50.79% in 2009, which is an average of 47.29%. Similar percentages were observed in 2012 and 2010 (46.96% and 46.17%).
4. The average areas planted with tobacco in

the Pelagonia region in the same period amounted to 9946.8 hectares. The biggest planted areas were observed in municipalities Dolneni and Prilep (3006,2, 2472,8 ha, i.e. 55%).

5. Tobacco production in Pelagonia region in the period 2009-2013 ranges from 11,469 tons in 2011 to 13,977 tons in 2010, or in average 12,521.4 tons. Municipalities Prilep and Dolneni reached the highest tobacco production with a share of 57%.
6. The yield per unit area during the investigation period ranged from 1122.4 kg/ha in 2009 to 1297.4 kg/ha in 2013, averaging 1189.9 kg/ha. The highest average yield was achieved in municipalities Krusevo, Dolneni and Mogila. Somewhat lower yields were obtained in municipalities Prilep, Demir Hisar and Novaci.

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