

## RESEARCH OF EVOLUTION OF AREAS WITH MAIZE CULTURES IN ROMANIA DURING 2014-2018

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### **Abstract**

*Maize has a production capacity of about 50% higher than other cereals, but also a wide spread area, because it is little influenced by climate change. Moreover, maize has a high resistance to drought, heavy rains, but also to diseases and pests, and the agrotechnical and harvesting works can be fully mechanized.*

*Genetic progress has allowed to increase the density constantly in the maize crop, the new hybrids emerging having a lower sensitivity to the stress caused by the competition observed at high density, this directly influencing the increase of the production potential.*

**Key words:** (maximum 6): cultivated area, maize, production.

### **INTRODUCTION**

Maize is a valuable plant both from the point of view of productivity and from the point of view of its economic importance, having multiple uses in human nutrition, animal husbandry and industry.

This plant occupies the third place, as importance, among the plants grown on Earth. This position is acquired through a series of particularities: it has a high production capacity, it has a great ecological elasticity, which allows it a wide spreading area, it is a good precursor plant for most crops, it supports monoculture, it can be grown 100% mechanized, the harvesting is done without shaking, makes good use of fertilizers and water.

In Romania, maize began to be grown late, around 1700, replacing the old proso millet farms. The reasons why this plant was interesting were high productivity, it could be cultivated in less favorable areas, and more than all in one place, it was not of interest to the Ottoman Empire, it was not used as a tribute.

### **MATERIAL AND METHOD**

This study analyzes the evolution of maize surfaces and the yield of production during the years 2014-2018. In our country, maize is the second

crop as important as wheat. Of the 23.8 million acres of Romania area is concerned, the agricultural area used in agricultural holdings is about 13.3 million acres (55.9%), of which about 8.3 million acres are arable land. By use, the arable land occupies about 62.5% of the agricultural area.

## RESULTS AND DISCUSSION

The areas cultivated with whole grain cereals for the period 2014-2018 are found in table 1.

*Table 1*

Area cultivated with whole grain cereals for the period 2014-2018

2014	2015	2016	2017	2018
5443k acres	5319k acres	5487k acres	5107k acres	5174k acres

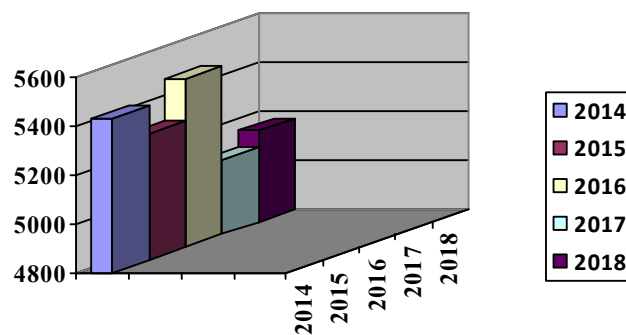


Fig. 1. Graph of the areas cultivated with whole grain cereals over the years 2014-2018

The largest area cultivated with whole grain cereals was harvested in 2016 with an area of 5487k acres, 7.4% more than in 2017, 6% more than in 2018, 0.8% and 3.1% respectively for 2014 and 2015.

From this area cultivated with whole grain cereals the second crop after wheat is represented by maize.

Table 2

Surface cultivated with whole grain corn 2014-2018				
2014	2015	2016	2017	2018
2512k acres	2605k acres	2581k acres	2402k acres	2371k acres

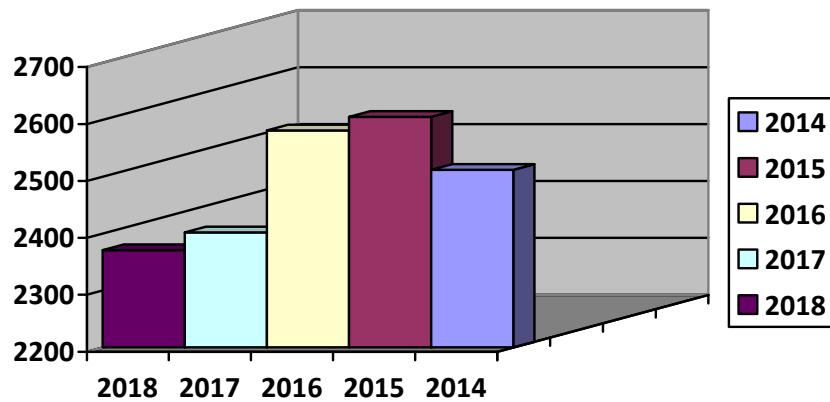


Fig. 2. Graph of maize cultivated areas over the years 2014-2018

The largest area cultivated with maize was harvested in 2015 with 2605k acres, 3.7% more than in 2014. In 2016, 2017, 2018 a decrease of maize area was observed compared to 2015 with 0.9%, 8.4% and 9.8% respectively.

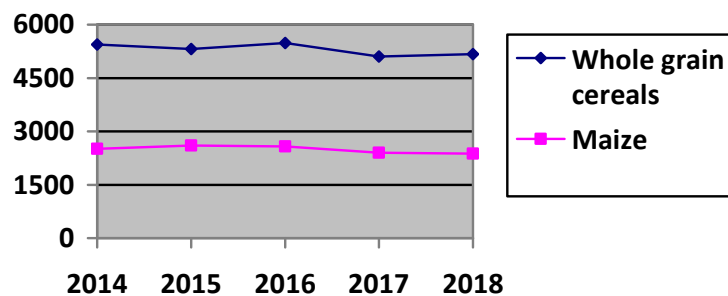


Fig. 3. Evolution graph of the areas cultivated with maize in relation to the areas cultivated with whole grain cereals.

In 2014 and 2018, the area cultivated with maize represented 46% of the total area cultivated with wholegrain cereals and in 2016 and 2017 the area cultivated with maize represented 47% of the total area.

The highest share of the area cultivated with maize in relation to the area cultivated with wholegrain cereals was recorded in 2015, as of 49%.

Table 3

Maize crops 2014-2018					
Average	2014	2015	2016	2017	2018
Average production kg/acres	4770kg	3462kg	4159kg	5959kg	7740kg
Average production k tones	11988	9021	10746	14326	18353

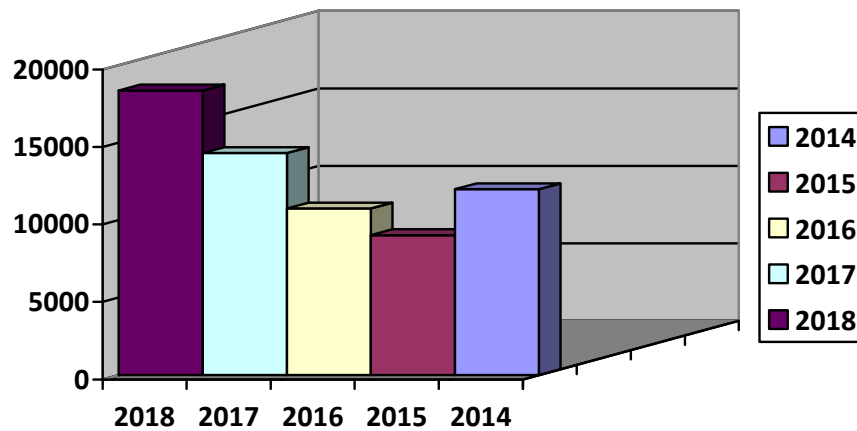


Fig. 4. Graph of total production recorded over the years 2014-2018

The highest maize production was harvested in 2018, 18353k tons, and the lowest production was harvested in 2015, 9021k tons, as well as the highest average production per acre was recorded in 2018, 7740 kg/acre and the lowest average production per acre was harvested in 2015, 3462 kg/acre.

#### CONCLUSIONS

The research of the evolution of the areas cultivated with maize during the period 2014-2018 was carried out on the basis of the data recorded at the Ministry of Agriculture and Development and of the data recorded in the Statistical Yearbook of Romania.

The largest area cultivated with wholegrain cereals was achieved in 2016, 5487k acres, with 0.8% and 3.1% higher than in 2014 and 2015, respectively, and for 2017 and 2018 the area cultivated compared to 2015 decreased by 7.4% and 6%, respectively.

The areas cultivated with maize between 2014-2018 are between 45% -50% of the total area cultivated with wholegrain cereals.

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The smallest maize production, both average 3462 kg/acre and average production 9021k tons was recorded in 2015 when the area cultivated with maize was the largest of the four years studied, namely 2605k acres.

The largest maize production, both average 7740 kg/acre and the total 18353k tons, was harvested in 2018 when the area cultivated with maize was the lowest cultivated area of the four observed years 2371k acres.

In 2018, Romania harvested the largest maize production in the European Union, France being on the second place and at the same time the largest maize crops in history.

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