
ANALYSIS OF VEGETABLE PRODUCTION IN THE MAIN CROPS IN 2023

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Abstract

Plant production is important from two points of view. Firstly, because it ensures the population's food needs and secondly because, in the case of an excellent one, it could be an export trap. In this article, the authors proposed to analyze how agriculture evolved in general, but the vegetable part in particular, in the year 2023. It should be stated that the year 2023 was a year with a better climate than the previous year, a context in which and the productions obtained, as well as the total quantities realized on the cultivated areas, were clearly superior to the previous year. From this point of view, agriculture, which was somewhat supported by the PNRR program, also benefited from additional funds, both internally through allocations from the government and based on the economic recovery plan approved by the European Union. In the study of this activity, the fact that there were data communicated by the National Institute of Statistics regarding the subject under debate prevailed, and consequently a solution could be found to use other statistical methods in the study of the indicators characterizing vegetation production. In general terms, plant production was better and, in the context, where there would have been additional irrigation and fertilization possibilities, of course the Romanian field would have been able to offer significantly higher productions and quantities. In the study carried out by the authors, a series of tables and statistical graphs were used that highlight with greater ease the possibility of understanding the data that was recorded, they being also compared with data from the previous year or years. This article is only a preamble to a possible extended study on the situation regarding Romanian agriculture.

Key words: *plant production, crops, agriculture, European funds, developments.*

JEL classification: *C10, Q10*

Introduction

Plant production for the main crops evolved in 2023, in a context in which the cultivated area and plant agricultural production increased compared to the previous year for grains for grains, legumes for grains, oilseeds, vegetables and decreased for potatoes.

Compared to the European Union, Romania ranked first in the area cultivated with sunflowers and grain corn, and in second and third place respectively in terms of production.

In this article I presented and referred primarily to the cultivated area and the production of the main crops in the year 2023, which I compared with the year 2022.

Next, I made an analysis of the way in which the surface increases were recorded and especially of the yields in the main crops, resulting in a series of data that I specified for each crop category and I also specified the increases that were in 2023, compared to the previous year.

Next, in a synthetic table, I presented the data on the area of vineyards and fruit tree plantations per fruit, grape production and fruit production. And here we find that production has increased in fruit vineyards by a fairly good percentage of 9.7%, in other organized crops such as plantations with fruit trees or other such areas, some increases have been found, if not decisive, at least encouraging for the next period.

In this article we also dealt with the situation of the evolution of Romanian agriculture compared to some member states of the European Union in the year 2023. Briefly summarizing, we can state that in terms of grain corn, Romania ranked first in cultivated area and third in production after France and Poland. In sunflower, Romania was once again in first place, in surface area and second after France in terms of production. Wheat production was achieved by Romania in a positive process, but the surface is much smaller than in France, Germany or Poland. In terms of potatoes, Romania ranked sixth in cultivated area and ninth in terms of production.

In the study we highlighted which countries have acquired and which had a clearly superior evolution to Romania. From the study we carried out, it is very clear that through the statistical methods and procedures used, we were able to highlight much more clearly the way in which the vegetable productions of the main crops evolved in the year 2023, this constituting an impetus and so that the allocations of to the state budget, as well as those from the European Union to be better used.

Literature review

Angelsen (2010) presented a number of elements that are taken into account in what agricultural production means, and Anghel, Anghelache and Panait (2017) analyzed the results obtained in agriculture in the European Union, both as a whole and for each state member. Anghelache, Samson and Stoica (2020) analyzed the main elements of the European Union's strategy regarding the agricultural sector. Anghelache and Dumitrescu (2015) analyzed production indices in agriculture. Bezemer and Headey (2008) addressed issues regarding the measures that can be implemented for agricultural development. Fleurbaey (2009) tried to identify some social welfare measures. Islam (2011) referred to the forms of foreign support for agriculture. Lowder, Bertini and Croppenstedt, A. (2017) presented data on poverty, social protection and agriculture. Quamrul and Michalopoulos (2015) researched the implications of climate fluctuations on agriculture. Swintona, Lupi, Robertson, Hamilton (2007) analyzed the role of agricultural ecosystems for diverse benefits.

Methodology

From a methodological point of view, the source of the data is the statistical research Plant production of the main crops (PVPC), carried out in accordance with the Regulation of the European Parliament and of the Council no. 543/ 2009 regarding plant production, with subsequent amendments and additions. This research was carried out on the basis of a representative sample at the national level, macro-regions, development regions and counties. The volume of the sample was made up of 50649 agricultural holdings, which used agricultural areas, consisting of 25514 agricultural holdings without legal personality and all agricultural holdings with legal personality (25135).

Regarding the cultivated area, this represents the area sown, planted, in own field, in the reference agricultural year (October 1 - September 30) with a main crop (which occupies the land for the longest period of time) or in previous agricultural years for biennial, triennial or perennial crops.

Also, the vegetable agricultural production represents the physical production obtained in the reference period (the year in which the harvest is done), less the losses during the harvest, expressed in physical units depending on the nature of the products and product groups and includes: the production of crops in the field own, the production of intercrops, the production of successive crops and the production obtained in family gardens (for vegetables, potatoes and grapes).

The average production or yield represents the number of products for each crop obtained per unit of surface area cultivated in one's own field.

Data, Results and Discussion

Cultivated area and vegetable agricultural production increased in the year 2023 compared to the previous year in cereals for grains, legumes for grains, oilseeds, vegetables, but instead decreased in potatoes. At the level of the European Union, Romania ranked first in the area cultivated with sunflowers and grain corn, and in second and third place respectively in terms of production. Table number 1 shows the data on the cultivated area and the production of the main crops in 2023, compared to 2022.

Cultivated area and production of the main crops

Table 1

	Cultivated area - thousand ha-		Total production -thousand tons-		Differences (±) year 2023 ²⁾ compared to the year 2022	
	2022	2023 ²⁾	2022	2023 ²⁾	-mii ha-	-mii tone-
Cereals for grains	5184	5238	18861	20571	+54	+1710
from which:						
-wheat	2169	2208	8684	9635	+39	+951
-barley and millet	426	501	1707	2001	+75	+294
-oat	78	76	172	155	-2	-17
- corn kernels	2431	2373	8037	8522	-58	+485
Legumes for grains	76	102	119	164	+26	+45
Oil plants	1701	1859	3584	4122	+158	+538
from which:						
-Sunflower	1093	1089	2107	2028	-4	-79
-soy beans	136	141	244	300	+5	+56
-rape	469	625	1230	1787	+156	+557
Potatoes	81	77	1346	1085	-4	-261
Vegetables ¹⁾	178	179	2426	2466	+1	+40

¹⁾ It includes the cultivated area and the production of vegetables grown in fields, greenhouses and solariums and in family gardens

²⁾ Provisional data

Source: *INS press release*

Analyzing the data presented, we note that in 2023 there was an increase in the areas and yields (average production per hectare) of the main crops. Thus, the area cultivated with grains for grains increased by 1.0% and the production by 9.1%, mainly due to the increase in yields per hectare. At the same time, the area cultivated with grain corn in 2023 represents 45.3% of the area cultivated with grains for grains, and that cultivated with wheat 42.2%.

As for cereal production, it increased mainly due to the 11.0% increase in wheat production which has a share of 46.8% in cereal production. Also, production increased compared to the previous year by 37.8%, as a result of the increase in cultivated area and yield per hectare.

The production of oilseeds increased by 15.0% and the cultivated area by 9.3%. Production increases were recorded in canola (+45.3%), soybeans (+23.0%) and decreases in sunflowers (-3.7%).

The cultivated area of potatoes decreased by 4.9%, and the production by 19.4%, and the production of vegetables increased by 1.6%, as a result of the increase in yields per hectare, but also in cultivated areas.

Table number 2 presents the data on the area of vineyards and fruit tree plantations per fruit, grape production and fruit production.

Area of vineyards and fruit tree plantations per fruit, grape production and fruit production

Table 2

	Surface - thousand ha-		Total production -thousand tons-		Differences (±) year 2023 ²⁾ compared to the year 2022	
	2022	2023 ²⁾	2022	2023 ²⁾	-mii ha-	-mii tone-
You come to the fruit ¹⁾	161	164	808	886	+3	+78
Plantations of fruit trees per fruit (orchards per fruit)	138	139	789	794	+1	+5

¹⁾ It includes the cultivated area and the production of grapes from vineyards grown in fields and family gardens

²⁾ Provisional data

Source: INS press release

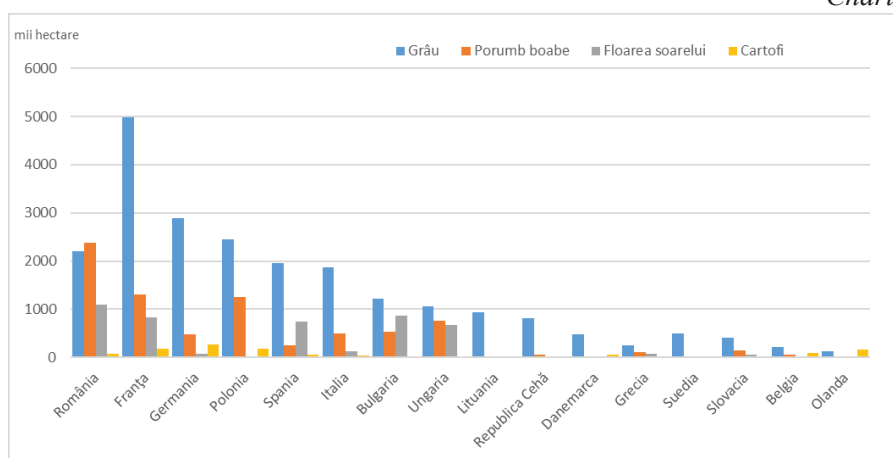
Analyzing the situation of vineyards per fruit, we find that in 2023, compared to the previous year, grape production increased by 9.7%, as a result of the increase in yield per hectare (+7.6%) but also the cultivated area by 1

.9%. At the same time, fruit production from orchards increased by 0.6%, due to the increase in cultivated areas.

Graph number 1 shows the situation of cultivated areas and the production of wheat, grain corn, sunflower and potatoes, in Romania and in some Member States of the European Union, in the year 2023, and graph number 2 shows the production in thousands of tons.

Cultivated area (thousands of hectares)

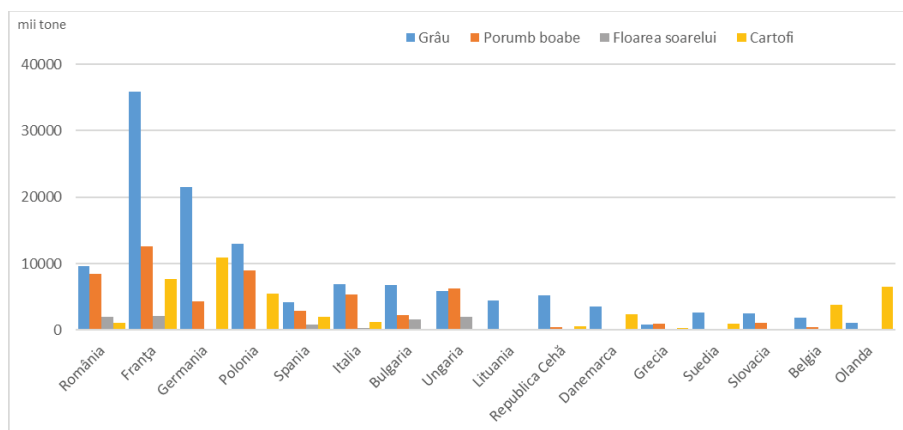
Chart 1



Source: Eurostat

Realized production (thousand tons)

Chart 2



Source: Eurostat

If we analyze the position of Romania compared to Member States of the European Union in the year 2023, we find that in terms of grain corn, Romania was in first place in cultivated area and in third place in terms of production, after France and Poland. Also, in sunflower, Romania ranked first in cultivated area and second in production, after France.

In terms of cultivated area and wheat production, Romania ranked fourth both in terms of cultivated area and production, after France, Germany and Poland, and for potatoes, Romania ranked sixth in terms of cultivated area after Germany, Poland, France, Holland, Belgium and ninth in production after Germany, France, Holland, Poland, Belgium, Denmark, Spain and Italy.

Conclusions

From the study of this article, a number of theoretical and pre-accurate conclusions emerge. First of all, agriculture remains an important branch of the national economy. Also, agriculture may be able to provide much higher yields and quantities, in the context in which the entire agricultural area would be cultivated, however, through subsidized allocations from the government and the European Union, a greater percentage of irrigation of fertile surfaces and especially for clearly superior agrotechnics.

Another conclusion is that it is important that the achievement and growth of the Gross Domestic Product primarily depends on agricultural production, to which this branch should have a significantly higher contribution. On the other hand, it would be necessary for this activity to be viewed with more interest by the Romanian authorities and to make sustained efforts at the European Union and in the sense of granting some compensation to Romania regarding the effect of the export of cereals, especially wheat from Ukraine to Romania or high countries. In this way, it would be possible to maintain a competitive price, which would encourage Romanian agricultural producers to realize the high quantities that they could use domestically.

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