

**DYNAMICS OF AGRICULTURAL VEGETAL PRODUCTION IN ILFOV COUNTY, ROMANIA. CASE STUDY FOR BUFTEA AREA**

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**Abstract:** *The paper analyzes the evolution of vegetable production in Ilfov county, with a case study for the Buftea area, in the period 2015-2021. For this purpose, the use of the land fund in Ilfov county and in the Buftea city area and the cultivated areas and the productions obtained in the main categories of cereals, oleaginous and proteinaceous plants are presented. In 2021, the largest areas in the county were cultivated with wheat - 23,398 ha, corn - 15,501 ha, sunflower - 11,454 ha and rapeseed - 10,524 ha. For the studied period, there were increases in the areas cultivated with wheat, corn, rapeseed, alfalfa and fodder peas, as well as in the production of wheat, corn, rapeseed, sunflower, peas and fodder beans. On the arable surface related to the city of Buftea, which represents 2.57% of the total of Ilfov county, insignificant amounts of wheat, corn, oats, rapeseed, sunflower and fodder peas were obtained. The statistical data available on the INS website and data provided by the Buftea City Hall were used.*

**Key words:** *Buftea area, cultivated area, Ilfov County, vegetal production*

### INTRODUCTION

The Bucharest-Ilfov development region is the most developed of the country's 8 regions, with GDP per capita above the European average and increasing compared to previous years. This fact is due to the good representation in the area of economic sectors and all branches of industry, which contribute 25% to Romania's economy [1].

The economic structure reflects the service function of the capital that the region has, and the most important sectors are: construction, transport, education, research and ICT [11].

At the same time, the location in the Romanian Plain allowed the cultivation of cereals, vegetables and flowers, being recognized at the zonal level a series of vegetable and flower "basins" that feed the capital [3].

In addition to the municipality of Bucharest, the Bucharest-Ilfov Development Region also includes 8 cities (Otopeni, Voluntari, Buftea, Chitila, Pantelimon, Bragadiru, Măgurele, Popești-Leordeni), 32 communes and 91 villages that belong to Ilfov County [4].

It can be said that Ilfov county surrounds the city of Bucharest and has an area of 1,583 km<sup>2</sup>, being considered the smallest county in Romania. It borders the counties of Prahova, Dâmbovița, Giurgiu, Călărași and Ialomița [12] and it has a relief that is completely plain [16].

Recently, Ilfov county has gone through a process of socio-economic development, due to demographic expansion and economic activities [14]. At the same time, the value of agricultural services registered the highest increase in this county, with 43.4% in 2020 compared to 2010 [15].

Located 20 km, in the northwest part of the city of Bucharest and on the border with Dâmbovița county, Buftea can be considered a satellite town of the capital. It was certified in 1752, and in 1968 it was declared a city, for which it holds the title of "oldest city" in Ilfov county. For a long time it was the only town in the former agricultural sector of Ilfov, which became Ilfov county in 1997 [7].

Buftea is composed of seven neighborhoods (Săbăreni-Gără, Oțetărie, Flămânzeni, Bucoveni, Atârnați, Studio and Centru) and the Buciumeni village. From a geographical point of view, it is located in the Vlăsia Plain and stretches along the banks of the Colentina River

and the lakes that it forms in this area. Another peculiarity of Buftea is that it is surrounded by clumps of forests, fragments of the former forests of Vlășia.

Buftea was and is known for its film studios and sets, which attracted productions from Romania and abroad. This industry has brought jobs and economic opportunities to the residents of the city and surrounding area.

The paper aims to identify whether agriculture is currently still of interest to entrepreneurs in the Buftea area, given that the other economic sectors are well developed.

### MATERIALS AND METHODS

To carry out this study, statistical data taken from the National Institute of Statistics [8] were used. To capture the trends in the evolution of agriculture in Ilfov County, a series of indicators were analyzed and a wide range of specialized materials were consulted. The main indicators analyzed in this study are: cultivated areas and productions obtained for wheat, corn, sunflower, rapeseed, oats, barley and sprind barley, soybeans, peas and fodder beans, alfalfa and clover. The use categories of the land fund in Ilfov county and in the Buftea city area are also presented.

The indicators of this study were analyzed for the period 2015-2021.

The data related to the arable surface of the city of Buftea were provided by the Buftea City Hall [13], being taken from the declarations reported annually by the producers.

### RESEARCH RESULTS

In Ilfov county agriculture has an important presence in the economy of the county, although, as it will be seen, it does not have an important share in the national economy.

The use of the land fund in Ilfov county and in the Buftea city area is presented in Table 1. It is noted that out of the total of 158,328 ha owned by Ilfov county, the lands in the Buftea area represent 3.46%.

More than half of the 5,480 ha is non-agricultural land - 2,934 ha. Of these, 2,144 are "Forests and other lands with forest vegetation" and 505 ha - "Lands occupied with constructions and yards".

Also, it should be noted that of the total of 5,480 ha, approximately 74% represents extra-village territory [2].

**Table 1.**

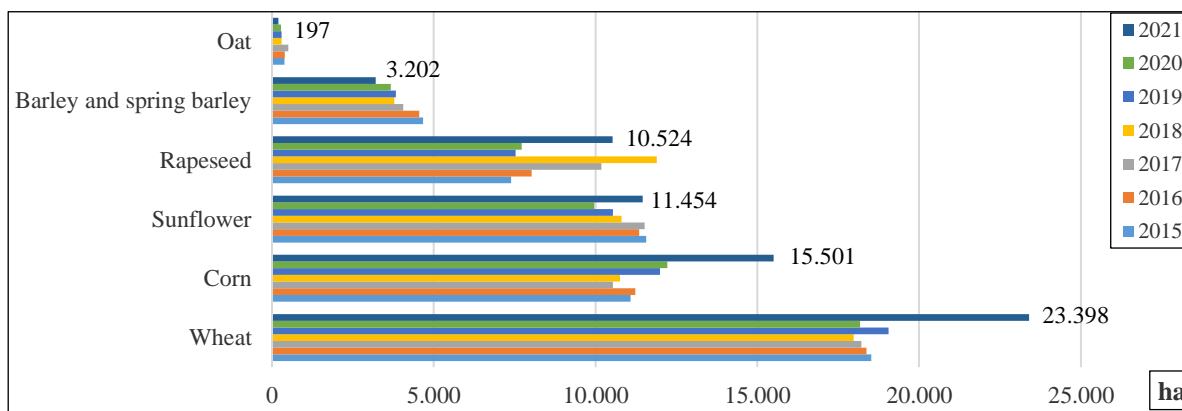
**How land is used in Ilfov county and in the Buftea city area (ha)**

Total Ilfov County 158,328 ➤ <i>Buftea area</i> 5,480	Ilfov County Agricultural lands 101,453 ➤ <i>Buftea area</i> 2,546	Arable lands	Total Ilfov	98,080
			<i>Buftea area</i>	2,528
		Pasture	Total Ilfov	1,875
			<i>Buftea area</i>	-
		Meadows	Total Ilfov	58
			<i>Buftea area</i>	-
	Ilfov County Non agricultural lands 56,875 ➤ <i>Buftea area</i> 2,934	Vineyards and wine nurseries	Total Ilfov	812
			<i>Buftea area</i>	18
		Fruit orchards and nurseries	Total Ilfov	628
			<i>Buftea area</i>	-
		Forests and other lands with forest vegetation	Total Ilfov	25,217
			<i>Buftea area</i>	2,144
		Lands with water	Total Ilfov	5,107
			<i>Buftea area</i>	132
Lands occupied with constructions and yards	Total Ilfov	20,898		
	<i>Buftea area</i>	505		
	Communication roads and railways	Total Ilfov	4,491	
		<i>Buftea area</i>	119	
Degraded and unproductive lands	Total Ilfov	1,162		
	<i>Buftea area</i>	34		

Source: [8, 13]

Although in Ilfov county the agricultural area has the largest share, in the Buftea area it occupies less than half of the total and consists of the arable area - 2,528 ha and 18 ha of "Vineyards and wine nurseries".

Figure 1 shows the areas cultivated with the main field crops. Wheat and corn occupied the largest areas, increasing in 2021, with 126.33% and 139.90%, respectively, compared to 2015. Another crop that expanded during the analyzed period was rapeseed – 142.45%.



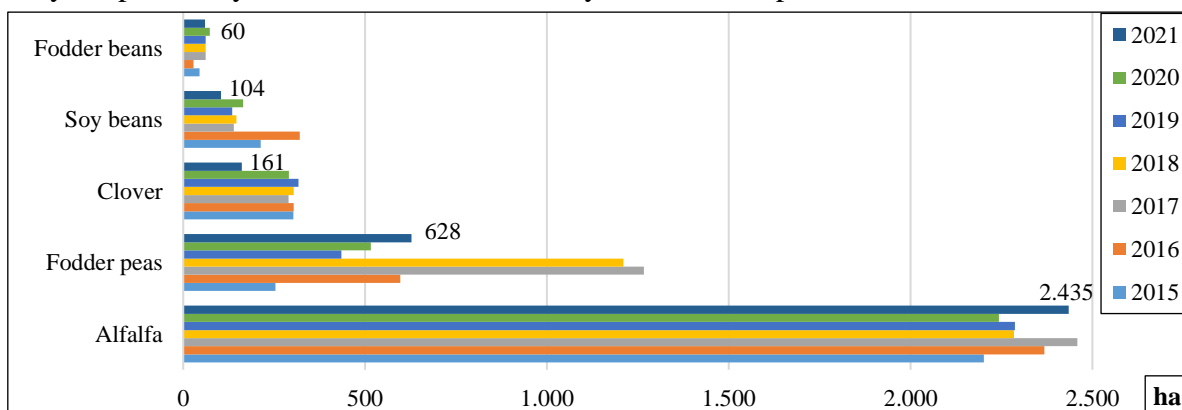
**Figure 1. Areas cultivated with the main field crops in Ilfov county (ha)**

Source: own representation after [8]

On the other hand, sunflower, oats, barley and spring barley registered decreases of 1% for the areas cultivated with sunflower, 48.56% - those with oats and 31.41% for those with barley and spring barley.

The arable surface of Ilfov county was also sown with other crops, from the range of oleaginous and proteinaceous plants, which can be found in Figure 2: soy, alfalfa, clover, beans, peas. Of this category, the largest areas were alfalfa - 2,435 ha in 2021 and peas - 628 ha in 2021.

We noted the increase in the areas of the 2 previously mentioned crops, during the analyzed period, by 110.58% for alfalfa and by 247.24% for peas.



**Figure 2. Areas cultivated with oleaginous and proteinaceous crops in Ilfov county (ha)**

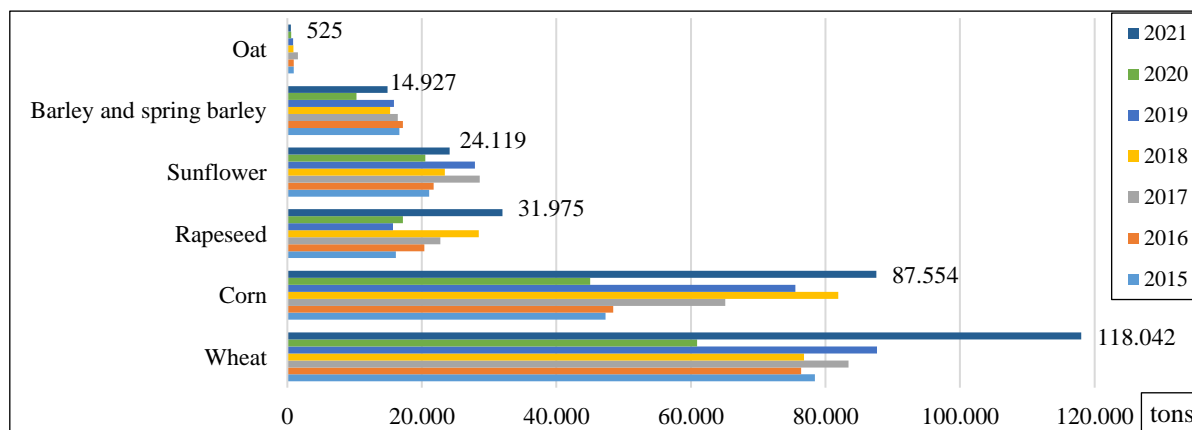
Source: own representation after [8]

Regarding the productions obtained from field crops found in Ilfov county and within the radius of the city of Buftea, they will be presented in the following.

Thus, Figure 3 shows the total production of cereals and oleaginous plants that were harvested in the period 2015-2021 in Ilfov county. Cereal crops ranked first, in 2021 obtaining 118,042 tons of wheat and 87,554 tons of corn. It is found that these crops

registered increases during the analyzed period by 150.54% for wheat and 185.01% for corn. Production increases were also noted in rapeseed (197.78%) and sunflower (114.35%).

On the other hand, oats, barley and spring barley showed decreases in production, by 45.99% and 10.38%, respectively. These crops were also on the last places among the analyzed crops, in terms of production.

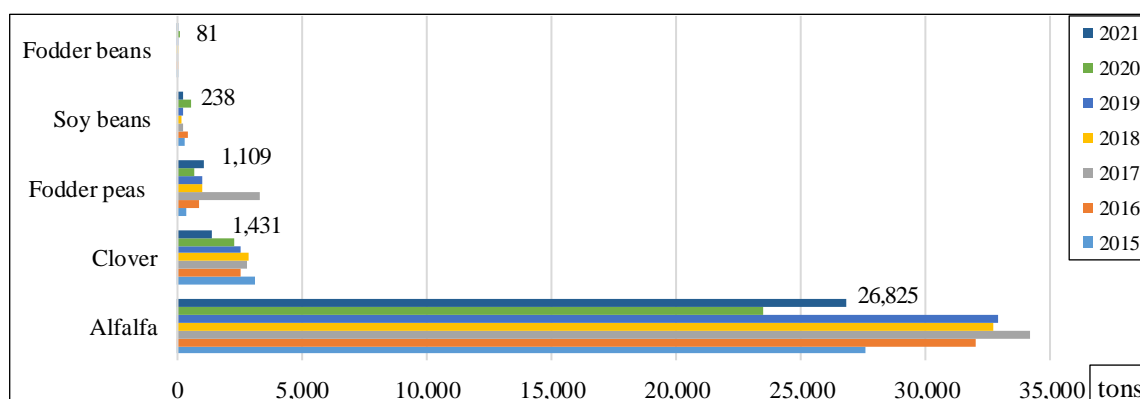


**Figure 3. The productions obtained from the main field crops in Ilfov county (tons)**

Source: own representation after [8]

Climatic risks are high in Romania, compared to the EU average, and crops are affected by a large number of extreme weather phenomena, which cause severe production losses. Among the most affected areas is the Bucharest-Ilfov Region, where the main extreme meteorological phenomenon is drought [6, 10].

Another oleaginous crop, soybeans, recorded a decrease of approximately 20% in production in 2021 (Figure 4). Among the protein plants, peas and fodder beans, although they occupied small areas, recorded higher productions than in 2015, with 303.84% - fodder peas and 103.85% fodder beans.



**Figure 4. Productions obtained from oleaginous and proteinaceous crops in Ilfov county (tons)**

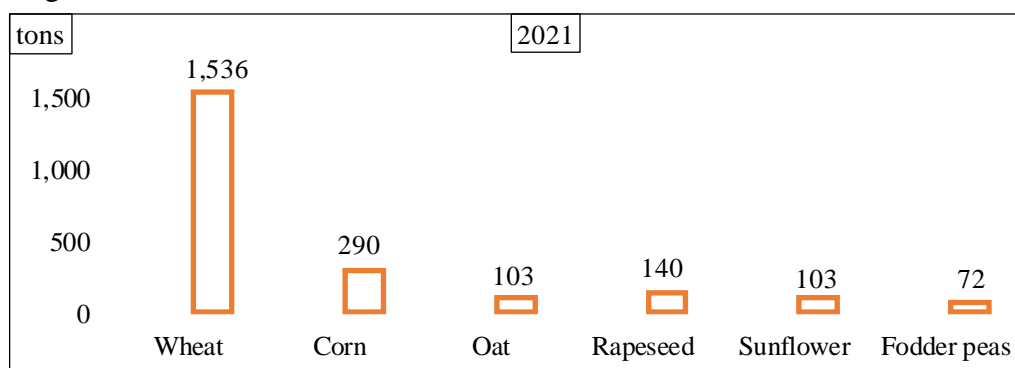
Source: own representation after [8]

As can be seen from Figure 4, the highest production was achieved in alfalfa, 26,825 tons in 2021, followed by clover, 1,431 tons (both being crops with several harvests per year), and the lowest – fodder beans, 81 tones.

According to the Ilfov county Development Strategy - Horizon 2030, "Agriculture" is one of the sections of the Ilfov county economy that are not competitive at the national level [5].

This aspect is directly related to people who have an occupation in the "Agriculture, Forestry and Fisheries" sector. Their number decreased by 56.49% in 2021 compared to 2015. It should be noted that agricultural employees in Ilfov county represented 1.46% of the total number of employees in the sector mentioned above in 2021 [9].

From the data provided by the City Hall of Buftea [13], we concluded that in 2021, in the area related to this city, wheat, corn, oats, rapeseed, sunflower and fodder peas were cultivated. Regarding cultivated areas, we have no data, but the productions obtained can be found in Figure 5.



**Figure 5. Productions obtained from the main agricultural crops in Buftea area (tons) – 2021**

*Source: own representation after [13]*

Also in this area, the highest production was obtained from wheat - 1,536 tons, from corn - 290 tons and rapeseed - 140 tons.

It is necessary to specify that the productions presented in Figure 5 are those obtained by private producers and specified in the annual declarations submitted by them to the City Hall of Buftea [13].

### CONCLUSIONS

Agriculture is not a competitive field for Ilfov county, and the number of employees in this sector was decreasing during the analyzed period.

The most cultivated field crops in Ilfov county were wheat and corn, whose occupied areas increased starting from 2015.

Regarding the productions obtained in the vegetable sector, wheat and corn also ranked first, and the harvests obtained increased in 2021 compared to 2015.

In the Buftea area agricultural lands represent approximately half of the total area available, and the arable lands have the largest share of them, 2,528 ha. But this area does not have a large share in the agricultural production of Ilfov county.

Here too, cereals were mainly cultivated, wheat being the crop with the highest production achieved in 2021, of 1,536 tons.

Although the agricultural sector does not play an important role in the economy of Buftea, the area has a significant development potential, attracting investors and developers interested in its location close to Bucharest and the existing infrastructure. The diversification of economic sectors is an advantage for the city in terms of its development.

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