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DEVELOPMENT POTENTIAL OF THE FARMING SECTOR.
CASE STUDY: HUNEDOARA COUNTY

ABSTRACT

This paper aims to be an X-ray of agriculture in Hunedoara county, beginning with an analysis of agricultural holdings, land fund structure, structure of agricultural activities, population employed in agriculture, forestry and fisheries, and ending up with the value of agricultural output. The agricultural rural area of Hunedoara county is mostly covered by pastures and meadows, while forests and forest vegetation prevail in the non-agricultural area of the county. Cereal grains are mainly grown, maize and wheat being the main cereals. Sheep is the prevailing species in the livestock herds, being the only species in which an upward trend can be noticed. In the case of meat production, only pig meat showed an upward trend, while milk and egg productions remained constant throughout the investigated period. The population employed in agriculture decreased 2.6 times, while the value of agricultural output had the highest value in the year 2021 compared to the entire analysed period.

1. INTRODUCTION

The present paper intends to analyse the farming sector of Hunedoara county, aiming to identify the elements that favour and condition the development potential of this sector of the economy. The analysis covered the period 2014–2021 and the trends manifested at the level of the *Vest* region and nationwide were also captured.

Hunedoara county is one of the 41 counties of Romania, being a component part of the *Vest* region, together with the counties Timiş, Arad and Caraș-Severin. In terms of administrative structure, Hunedoara county has 7 municipalities (Deva – county seat municipality, Brad, Hunedoara, Lupeni, Orăștie, Petroșani and Vulcan), 7 towns (Aninoasa, Călan, Geoagiu, Hațeg, Petrila, Simeria and Uricani) and 55 communes with 457 villages.

2. STATE OF KNOWLEDGE

The European agricultural model is in a process of adaptation and capitalization of changes and transformations that occurred in the Community space and economy, contributing, in the first place, to the support of sustainable rural development policies and thus to the increase of the living standard of rural people.

The Romanian agriculture was subjected, first of all, to an extensive process of transition and then of adaptation to the Common Agricultural Policy requirements.

The studies from the post-communist period focused on the problems that agriculture was facing, starting from the "reconstitution of land ownership right that was an extremely slow process" (Otiman, P.I., 2002), to the privatization of agriculture that made "Romania's land structure be almost identical to that before the great agrarian reform of 1921" (Otiman, P.I. *et al.*, 2011, Otiman, P.I., 2012).

The studies from the pre- and post-accession period analysed the position of agriculture in our country's economy (Otiman, P.I., 2002, Stanef, R.M., 2010) and "an approach to it as a strategic priority was required" (Zahiu *et al.*, 2010).

In experts' opinion, "agriculture is a complex issue, given its opening and interaction with the other sectors of the economy" (Glogoveţan, O.E., 2010), which needs a fast adjustment of its structures under the influence of the Common Agricultural Policy" (Luca, L, Cionga, C., Giurca, D., (2012).

Romania is implementing CAP post 2023 through the National Strategic Plan (NSP) by measures to develop "a resilient, sustainable and competitive sector" in order to support "the socio-economic development of rural areas" (NSP, 2023).

3. MATERIAL AND METHOD

In the present study, an analysis of agriculture in Hunedoara county was carried out, by comparison with the regional and national level, for a period of eight years. The analysis was based on a set of information provided by the online database of the National Institute of Statistics.

The methodology used included two types of instruments: data collection and quantitative analysis. Thus, data were processed, analysed and interpreted and formed the set of information necessary to carry out the present diagnostic analysis of the current situation of agriculture in a territorial profile, starting with Hunedoara county, as compared to the Vest Region and Romania.
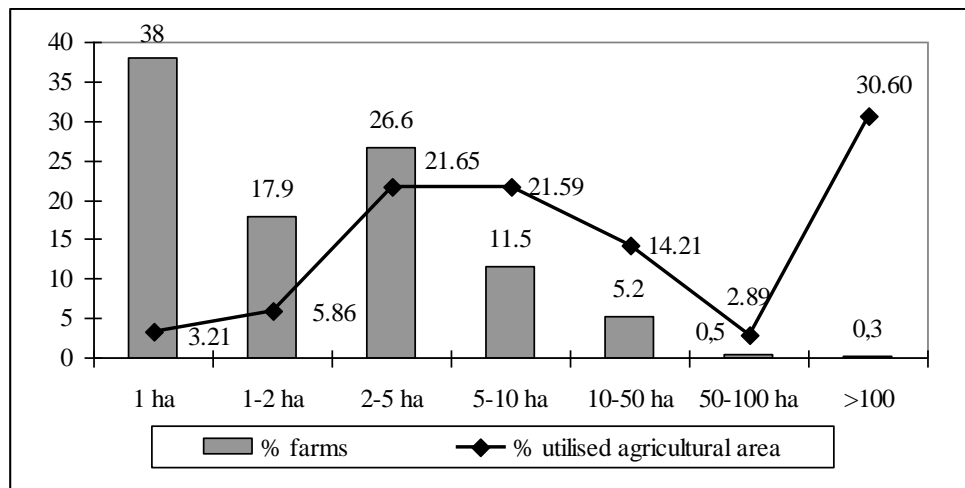
4. RESULTS AND DISCUSSIONS

In the year 2020[1], there were 2887 thousand agricultural holdings in Romania, which used 12.8 million hectares, with an average utilised agricultural area/holding of

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[1] NIS (2022), General Agricultural Census 2020.

4.42 ha. Over 10 years, since the previous General Agricultural Census, the number of agricultural holdings decreased by 972 thousand, i.e. by 25.2%, and the utilised agricultural area decreased by 543 thousand ha, by 4.1% respectively.

In the year 2020, there were 203 thousand agricultural holdings in the *Vest* region, with a utilised agricultural area/holding of 7.47 ha. In Hunedoara county, there were 50.7 thousand agricultural holdings, with a total utilised agricultural area of 224.6 thousand ha and an average area of 4.43 ha utilised agricultural area/holding, higher than that at national level, yet lower than in the other component counties of the *Vest* Region (Timiş 10.45 ha, Arad 8.16 ha and Caraş-Severin 6.37 ha).

The agricultural holdings with areas under 1 ha accounted for 38% of the total number of holdings, and those with areas of 50–100 ha and over 100 ha accounted for 0.8% of total. Thus, more than one third of agricultural holdings in Hunedoara county were not eligible to receive subsidies, as subsidies depend on the holding size (the physical size must be at least 1 ha, and the parcel area must be at least 0.3 ha for arable areas and natural meadows).

Source: Author's processing of NIS data, General Agricultural Census, 2020

Figure 1. Share of the number of agricultural holdings and
share of utilised agricultural area in Hunedoara county

In the year 2021, the land fund structure in Hunedoara county consisted of 40% agricultural land and 60% non-agricultural land. Due to the relief units, dominated by hills and mountain areas, the structure of agricultural land consisted mainly of pastures (42.1%), followed by hayfields (29.4%) and arable land (28.1%). The structure of non-agricultural land was dominated by land under forests and other forest vegetation (86%), of which less than half were privately owned.

Hunedoara county had more than 30% of the area of regional forestland and 4.8% of national forestland. Thus, in terms of area under forests and forest vegetation, Hunedoara county ranked third, next to Suceava and Caraş-Severin counties.

Crop farming is a developed branch of agriculture in *Vest* Region and Hunedoara county, and grains represent the main category of crops grown. In Hunedoara county, the cultivated areas differed from one year to another, a similar trend being noticed both at regional and national level.
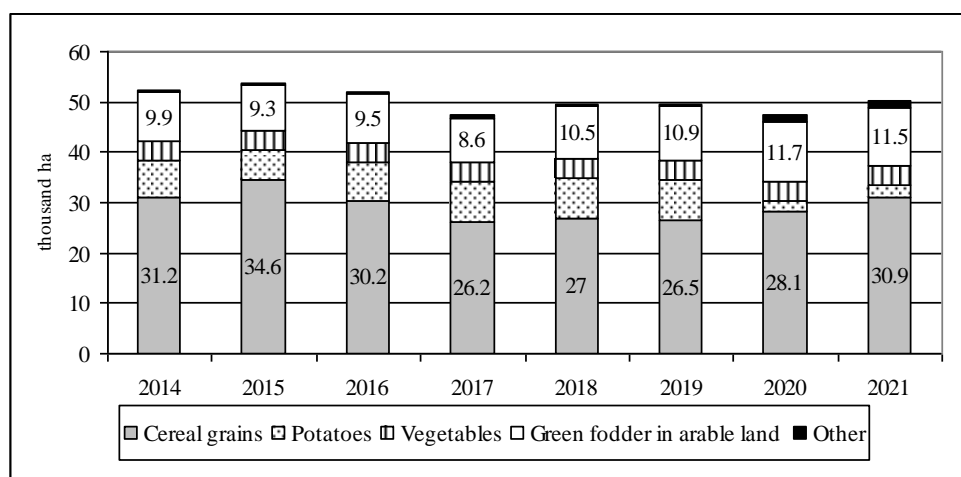
Table 1

Areas cultivated with the main crops

						– thousand ha –
	2014	2016	2018	2020	2021	2021–2014 difference
Romania	8234.4	8409.2	8466.7	8263.6	8263.8	29.40
Vest Region	907.9	934.0	979.0	844.4	769.5	-138.9
Hunedoara	52.5	52.1	49.8	47.4	50.1	-2.4

Source: NIS, tempo-online database, AGR108A

In the structure of areas destined to crop production, the most important areas were cultivated with cereal grains, maize and wheat being the main crops.
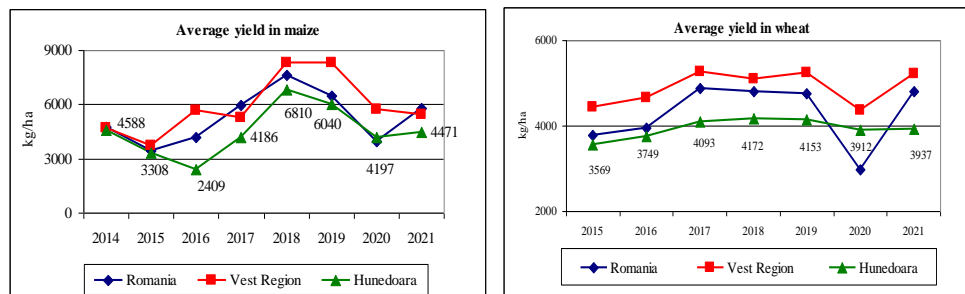

Source: NIS, tempo-online database, AGR108A

Figure 2. Areas under main crops in Hunedoara county

On the second place, green fodder covered the largest areas, accounting for 20% of the cultivated area in the year 2014 and 23% in the year 2021.

In Hunedoara county, the average wheat and maize yields were lower than those obtained in the region and nationwide. It is worth noting that in the *Vest* Region, the average yields in the two crops were higher than those obtained at national level, throughout the investigated period.

Figure 3. Average yields in maize and wheat at national and
regional level and in Hunedoara

Livestock farming has an important share in Romania' agricultural sector, being one of the basic activities in the countryside, which is also a characteristic of the farming sector in Hunedoara county.

The sheep species prevailed in the structure of livestock herds, with an upward trend both at county, regional and national level. Thus, in the year 2021, in Hunedoara county, sheep number was up by 33,181 compared to their number in the year 2014. While the bovine and pig herds in Romania and in the Vest Region had a decreasing trend, in Hunedoara county the number of bovines continued to be relatively constant, while the number of pigs increased starting with the year 2019.
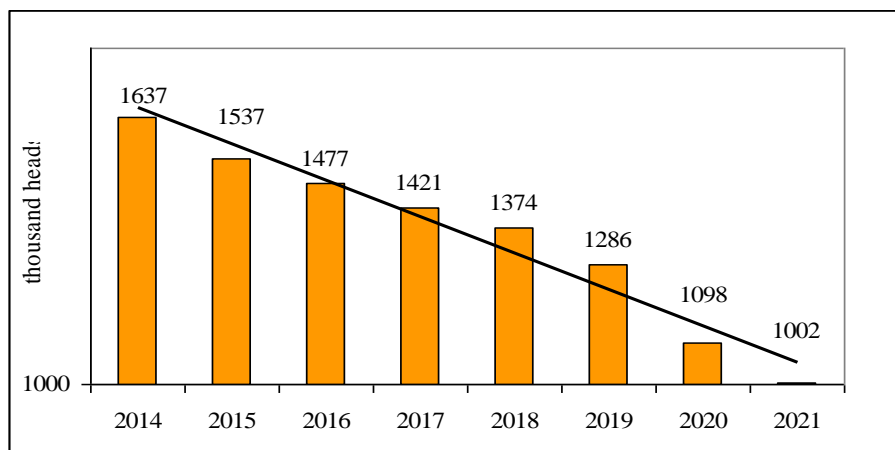
Table 2

Evolution of the main livestock herds

– number –

	2014	2016	2018	2020	2021	2021–2014 difference
Bovines	42382	43011	41332	42203	40892	-1490
Pigs	54241	51716	52868	63117	63628	9387
Sheep	181793	185694	194156	204305	214974	33181

The number of poultry heads dropped significantly in the investigated period, from 1637 thousand heads in the year 2014 to 1002 thousand heads in the year 2021. This downward trend in the number of poultry heads was noticed both at regional and national level.

Animal production is the second main branch of agricultural production, both in Hunedoara county and in the region. Meat production in the main animal species fluctuated, so that in the investigated period, there was a significant decline in the production of beef, sheep and goat meat and poultry meat in particular, while the production of pig meat increased, so that in the year 2020 it was by 2922 tonnes liveweight higher than that of 2014.

Figure 4. Evolution of poultry flocks

Table 3

Meat production

– tonnes liveweight –

Item	2014	2016	2018	2020	2020–2014 difference
Beef	4916	4087	3150	2811	-2105
Pig meat	8265	9732	11519	11187	2922
Sheep and goat meat	2011	1832	1817	1310	-701
Poultry meat	14708	4333	11796	9941	-4767

Milk and egg productions were maintained at a relatively constant level, while at regional and national level they continued to decrease.

Table 4

Milk and egg production

Item	UM	2014	2016	2018	2020	2021	2021–2014 difference
Milk production, total	thou.hl	1206	1161	1105	1161	1208	2
Egg production	mil. pieces	115	109	108	108	103	-12

Hunedoara county has good development prospects in livestock farming, primarily because there is a long-lasting tradition in raising animals in this area. The potential for increasing the number of livestock herds and animal production is given by the large areas under pastures and hayfields in Hunedoara county.

Agriculture and forestry have been traditional occupations in Hunedoara county, yet with a secondary role in the economic structure of the county. In the year 2014, the population employed in this sector accounted for 20.6% of the population employed in agriculture in the region and 1.7% of the population at national level. In the year 2021, these shares remained unchanged, even though in absolute figures, the population employed in this sector diminished both at national, regional level and in Hunedoara county.

The population employed in agriculture was down by 24.6 thousand in the year 2021 compared to 2014, following the national and regional trend.

Table 5

Population employed in agriculture, forestry and fisheries

– thousand persons –

	2014	2016	2018	2020	2021	2021–2014 difference
Romania	2304.1	1726.1	1759.5	1681.2	846.5	-1457.6
Vest Region	193.4	146.4	149.1	142.7	74.9	-118.5
Hunedoara	39.8	30.2	30.9	29.3	15.2	-24.6

Source: NIS, tempo-online database, FOM103D

It is worth noting that in the year 2021, the population employed in agriculture, forestry and fisheries was almost half of that of the previous year, both at national, regional and Hunedoara county level.

Among the main causes of the decline in the share of population employed in agriculture, we can list the following: exit of elderly people from agriculture, low incomes obtained in this economic sector, which are not attractive for young people, still low rural investments to absorb young labour force.

In Hunedoara county, the agricultural output value in current prices, in the year 2021, had the highest value recorded throughout the investigated period.
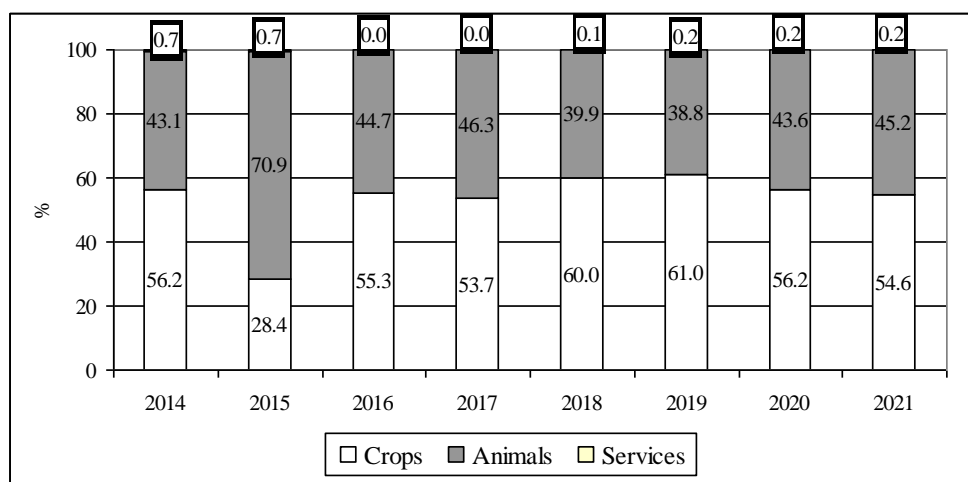
Table 6

Agricultural output value

– thousand RON –

	2014	2016	2018	2020	2021	2021–2014 difference
RO	74524454	69348614	86349291	81400417	103878603	29354149
Vest Reg.	8010946	7617252	9762169	9373030	9876274	1865328
HD	1183022	1014616	1203226	1237341	1280340	97318

Source: NIS, tempo-online database, AGR206A

It can be noticed that the agricultural output value had a fluctuating evolution, both at county and regional and national level, but in the year 2021 it was higher at all the three levels than that recorded in the year 2014.

In the investigated period, except for the year 2015, crop production in Hunedoara county had the highest share in the structure of the agricultural output value, followed by animal production and then by the sector of agricultural services.

Source: author's processing of NIS, tempo-online database, AGR206A

Figure 5. Structure of agricultural output value by sectors in total agricultural output value

5. CONCLUSIONS

The latest official data show that in Hunedora county, 38% of the total number of holdings have an area under 1 ha and use 3.2% of the county's agricultural area; 0.8% of the total number of holdings have an area of 50–100 ha and over and use 30.6% of the county's agricultural area.

Pastures and hayfields cover the most part of the county's agricultural area. In the non-agricultural area of the county, the areas under forests and forest vegetation prevail, which rank the county on the 3rd place in the top of Romania's counties.

In Hunedoara county cereal grains are grown, the main crops being maize and wheat. Changes in the areas cultivated with these crops, together with climatic factors, led to fluctuating average yields per hectare.

In livestock herds, an increasing trend can be noticed only in the number of sheep. The large areas under pastures and hayfields in the county represent a real potential for livestock farming, both for the increase of livestock herds and for the increase of animal production.

The population employed in agriculture, forestry and fisheries had a decreasing trend at national, regional and county level in the investigated period; it

is worth noting that in the year 2021, the population employed in agriculture was almost half of that in the previous year.

The agricultural output value fluctuated in the investigated period, but in the year 2021 it was clearly higher than that recorded in the year 2014, at national, regional and Hunedoara county level. The crop production sector prevailed in the structure of agricultural output value, except for the year 2015, when the livestock production sector accounted for more than 70%.

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