ANALYSIS OF ROMANIAN AGRICULTURE DEVELOPMENT AFTER ACCESSION TO THE EU

Mateoc-Sîrb Nicoleta*, **#1, Otiman Păun Ion *, Adrian Băneș Adrian *, Sălășan Cosmin *,**, Feher Andrea *,**, Raicov Miroslav *

- *Romanian Academy, Timisoara Branch, CCDRDR, Mihai Viteazu Boulevard, no. 24, Ro-300223
- ** Banat's University of Agricultural Sciences and Veterinary Medicine"King Michael I of Romania" from Timisoara, Faculty of Management and Rural Tourism, no.119, Calea Aradului St., Ro-300645Timisoara, Romania, e-mail: nicoletamateocsirb@usab-tm.ro

Abstract. Within Romania's economy, agriculture is one of the branches of major importance that can contribute to the relaunch of the country's economic growth (UAAs in 2016 were 12,502,000 ha, 6% lower than in 2010) since the role of agriculture cannot substitute any other economic activity, as the demand for food is essential and is permanent for human existence, on the one hand, and, on the other hand, agriculture provides the necessary gross material for relaunching many other industries (agri-foods, textiles, chemicals, pharmaceuticals, cosmetics, craftsmanship, etc.) and for export. In this paper, the authors analyse the evolution of agriculture in Romania after joining the E.U. The contribution of agriculture to economic development can be determined by an analysis of the multiple functions it fulfils, as well as by its contribution to equilibrium and social stability and not only, in the light of the share of this branch in the formation of results indicators such as gross domestic product and value added.

Key words: agriculture, Romania, support, funding, accession

INTRODUCTION

Four major system changes, in the last century, appreciated as four fractures of Romanian agrarian structures – the great agrarian reform in 1921, the agrarian reform in 1945, the collectivization of agriculture during the period 1949-1962 and the effects of the Law of the Land Fund (and of its related laws) in 1991 – made impossible the design and the application of a long-term Romanian agricultural project, like the majority of Western European countries. Major successive system changes have generated instability and, more seriously, the absence of continuity and sustainability of the national agricultural system.

The consequences of agricultural policies (reforms, restructuring, adjustments) applied contradictorily, free of continuity after 1989, generated fluid, highly bipolarized, unstructured, non-performing, non-competitive,

¹ # Corresponding author: Mateoc-Sîrb Nicoleta e-mail: nicoletamateocsirb@usab-tm.ro

non-concurrently small households (comprising more than 95% of the number of holdings and over 5,000,0000 ha of land); the transition from large agricultural units (IAS, CAP), characteristic of Oriental socialism from the communist period, to **large corporate agricultural holdings** (associations, societies), most currently in the phase of primary capitalism of land-ownership type, where about 12,000 large and very large holdings cumulate an eligible European agricultural area of about 5,000,000 ha (over 50% of the arable land of the best quality), as well as a small share of medium-sized farms, characteristic of Western European agriculture, which hold only about 10% of the country's arable land.

The privatization process in Romania began in 1990, proving to be a much more complex and difficult process than originally thought. Romanian agriculture has evolved during the period after 1990 under the influence of the phenomena generated by the transition to the market economy, on the background of acute lack of financial and material resources as well as of an unfavourable international situation. Law 18 from 1991 of the Land Fund divided agricultural areas into small plots and led to their dispersal, plus the depreciation of the material basis, investment stagnation, asset destruction as well as errors in the management of state-owned assets and supporting the making-up process of a private agriculture, which has led to a sharp decline in the profitability of agricultural holdings.

At national level, agriculture has been a basic branch in the structure of the economy, with a strong share in the formation of the Gross Domestic Product (GDP) (Figure 1).

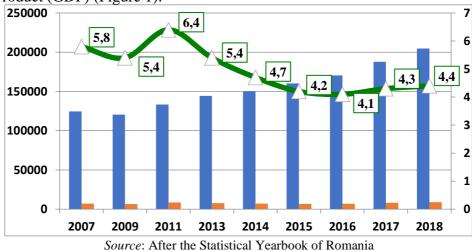


Figure 1. Share of agriculture and forestry in GDP (Total GDP,Agriculture and forestry in GDP, % of GDP)

Although the contribution of agriculture to GDP formation has fallen long enough during the analysed period, it continues to have a high share (4.4% in 2018) compared to developed E.U. member countries, where agricultural contribution to the GDP formation does not exceed 2%.

In developed countries, agriculture has a decreasing share of the gross added value (GAV), which is justified by the development of other sectors of activity such as services, trade, constructions, finances, banking, insurance, whose share of the GAV is increasing.

In Romania, the contribution of agriculture to total GAV in 2018 was 4.8%, while the E.U. average was 1.7%. The large share of Romanian agriculture compared to the other E.U. member states in the GAV formation at the economy level is explained by the far too slow process of increasing the share of services and trade in total gross added value

As regards investments in Romania's agriculture during the analysed period, they accounted for an average of 5.38% of the total investments. Under these circumstances, one cannot speak of investment for development but, largely, only of capital allocations to replace fixed assets.

The evolution of the share of the two sectors of agriculture highlights a low share of animal hudbandry production that does not exceed the share of 37% throughout the analysed period (only 27.68% in 2018, and agricultural services, 1.42%), according to the data in the Figure 2.

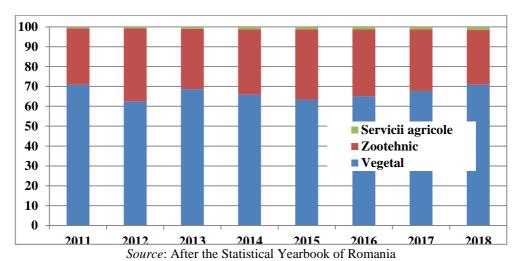


Figure 2. Evolution of the share of sectors in agriculture (Agricultural services Animal husbandry, Cropping)

The current situation of Romanian agriculture is characterized by multiple economic and social issues: the existence of numerous small non-viable farms and the excessive parcelling of land on the one hand and, on the other hand, the emergence of large and very large farms of corporate type, currently in the phase of primary capitalism of land-ownership type. Thus, in 2016, 12,310 farms of over 100 ha, i.e., **0.36% of the total Romanian farms**

(3,422,030), share 47.78% of Romanian UAAs (12,502,000 ha), i.e., 5,973,450 ha of agricultural land, and 2,480,770 farms with below 2 ha, i.e., 72.49% of the total farms, use 12.32% of the total UAAs, i.e., 1,539,790 ha of agricultural land.

Regarding the number of farmers by areas, data from APIA confirms that, in 2016, there was a concentration of farms up to 50 ha. Thus, 91.3% of holdings up to 50 ha, i.e., 823.119 holdings use an area of about 3,700,000 ha, i.e., 40.28% of UAAs, and 2,427 holdings above 500 ha (0.27% of the total) exploit 2,850,000 ha of UAAs, i.e., 31.07%.

Farms above 1,000 ha (0.1% of total farms), i.e., 868 farms, benefit from direct payments for an area of 1,750,000 ha, with the mention that the average size of these farms is 2,027 ha.

MATERIAL AND METHOD

In carrying out this analysis, we started from the premise that, in the economy of each country, irrespective of its development, agriculture, through the natural and human resources available, by its contribution to the creation of gross domestic product, and also by participation in domestic and foreign trade in agri-food products, obviously holds an important position. Agriculture is the economic branch that must ensure the food security of any people. The information analysed was collected through documentary study of specialized literature in the field of the topic addressed and investigated. The research methodology included the statistical analysis of primary data using the Microsoft Excel quantitative analysis program (tables, charts).

One of the methods used to prepare the raw analysis material was the documentation of the official databases provided by the National Institute of Statistics (INS - Tempo Online), data collections published by EUROSTAT, as well as various publications or complementary information taken from the Internet.

RESULTS AND DISCUSSION

Romanian rural economy is predominantly agrarian because, in Romania, agricultural economy itself (mainly primary) shares 60.5% of its structure, compared to only 14.1% in the E.U. The profoundly distorted structure of the Romanian rural economy also determines a similar structure of the rural population occupied by sectors of activity (64.2% primary sector, of which 56.6% in agriculture, 18.5% in the secondary sector, 17.3% in the tertiary sector). Investments in the rural food and non-agricultural economies, in addition to ensuring the increase in gross added value by processing agricultural and non-agricultural commodities from local resources, have a great advantage, both in times of crisis and recession and in economic growth, in the sense of creating

new jobs (for the use and stabilization of local labour), revitalizing rural localities, particularly those in disadvantaged and peripheral areas.

Both rural economy as a whole and agri-food economy as an important element of the rural economy present different structures in Romania compared to the European Union. Thus, if the Romanian rural economy is predominantly agricultural (about two-thirds, 60.5%) or agri-food (more than three-fourths, 78.1%), in the European Union rural economy is dominated by the economy of services (with a share of 42.2%, 2% more than the agri-food economy). Great differences are also in terms of agri-food economy. While turning agricultural raw materials in food (gross value-added carriers) has a share of more than half of the value of the agri-food economy in the European Union, in our country the production of agricultural raw materials (agricultural economy) has a much higher share of the total amount of final agri-food production (over 75%).

Given the precarious rural structure of Romania today, we believe that it is necessary to create an environment for stimulating investments in rural areas for the extension of primary agricultural products processing SMEs in the non-agricultural rural economy must become a permanent concern of the local authorities through the achievement, in the process of economic decentralization and decision-making, in rural localities (or rural areas) with a labour force surplus, of village industrial macrozones, with county or regional financial support, equipped with the utilities required by industrial activities (electricity, heat, gas, water, sewage, access and interior roads, telecommunications, etc.), according to the model of those created long time ago in the rural areas of E.U. countries.

In conclusion, in addition to the low agricultural production per agricultural worker, the structures of the rural and agri-food economy are still far from what we can call **a competitive rural economy in Romania**.

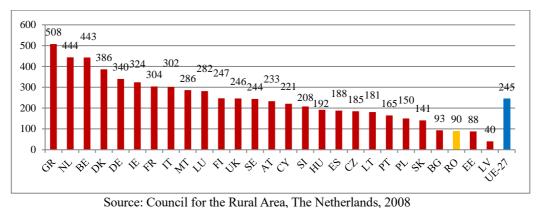
The poorly developed rural economy has immediate and permanent consequences, visible and negative effects on the Romanian village: sharp demographic aging, youth leaving rural localities through urban exodus or external migration, phenomena that accentuate the social desertification of the Romanian village.

If Romania's agriculture is characterized by a high degree of fragmentation of agricultural areas, low investments, poorly qualified people, aged labour force and a precarious material situation that makes people live at the limit of subsistence, we believe that **the relaunch of agriculture**, with its two sectors – plant and animal – so important for our country's economy can only be achieved by attracting European funds and massive investment in this branch.

In the financial period 2007-2013, the main form of support for agricultural producers was represented by direct payments. Table 2 presents the budget allocated to support these payments to E.U. member states.

Expenditure in the CAP budget for direct payments funding amounted to € 286,000,000,000 for the period 2007-2013. It can be seen that there are large differences between E.U. countries in terms of community support for direct payments and rural development. In the E.U.-15 countries, 83% of the allocated amounts are for direct payments, whereas this value is only 52% in NSM-12. As a result, the second pillar – rural development – Is treated as more important in the new member states than in the old member states. This difference revealed that the new member states were in a transition period, gradual implementation of direct payments (25% in the first year after accession, 30% in the second year, 35% in the third year, 40% in the fourth year, following an annual growth of 10%, reaching 100% in the 10th year after accession. The highest shares of their financial packs for direct payments were France, Belgium, The Netherlands, the United Kingdom and Denmark, with an allocation between 90-94% of the funds for this purpose, reserving only 6-10% for rural development. Countries like Portugal, Austria, Finland, Luxembourg, Sweden and Italy have directed between 50-75% of total funds, and for rural development, 25-50%. In NSM-12, the sharing between the two support directions was less pronounced; as a whole, the new member states have allocated half of the funds for direct payments and half payments for rural development, except for Malta, with 79% of the total funds for the pillar two of the CAP.

In absolute value, the largest five beneficiaries of Community funds for payments were France (\in 58,000,000,000), Germany 40,000,000,000), Spain (€ 32,000,000,000), United Kingdom 28,000,000,000) and Italy (€ 27,000,000,000), and the largest five rural development fund users were Poland (€ 13,000,000,000), Italy, Germany and Romania (€ 8,000,000,000) and Spain (€ 7,000,000,000). Therefore, the old member countries are those that have absorbed most of the Community funds for agriculture and rural development, which is understandable to some extent, if we consider that these countries create 85% of the gross added value of the European Union agriculture. The budgetary financial support of farmers in the new member states is made to a much smaller extent, with repercussions on their ability to turn and develop into viable commercial farms. By calculating the level of direct payments relative to the eligible agricultural area and the agricultural area used, the comparison with other E.U. member states, highlights the large difference between the level of subsidization of Romania's agriculture and that of other states (Figure 3)



Source. Council for the Kurai Area, The Netherlands, 2006

Figure 3. Direct payments from the E.U. budget per ha of eligible area (€/ha eligible) EU-27

Direct payments per eligible hectare in Romania (annual average of 90 €/ha) account for only 67.2% of the average annual amount of E.U.-12 budget allocations, and 31.9% of the average annual level per eligible hectare of the states in the E.U.-15.

The large difference between the average annual level of payments to Romania and the average annual level of payments granted to the other member states has as a cause both the historical yield underlying the annual limits (the product between the historical yield, different from one state to another, and a fixed amount per t, equal for all member states) and the progressive percentages allocated annually calculated for each member state. From this point of view, we remind that the reference production or historical yield (average of the production in the main crops in 2000-2002), taken into account for Romania was 2.65 t/ha compared to 4.77 t/ha the reference production of E.U.-15 states, 4.0 t/ha the reference production of the 10 new member states (which joined the E.U. in 2004) or by 4.73 in Hungary, 4.2 in the case of Czech Republic, 4.06 in the case of Slovakia, 3.0 in the case of Poland.

The aforementioned gaps have increased more since, in the case of Romania, there is a very large agricultural area considered ineligible (a difference of 5,037,000 ha between the agricultural area used by 13,753,000 ha in 2007 and the agricultural area eligible of 8,716,000 ha), an unacceptable difference eligible due to the excessive crushing of the land (holding less than 1 ha or the fragmentation of a ha in more than 3 plots). Analysing the average of direct payments on a hectare of agricultural area used from the E.U. budget, throughout the 2007-2013 interval (Figure 4), we find that Romania with a payment of $57 \in \text{ha}$ ranked last in the E.U.-27 with only 11.2% of Greece level ($508 \in \text{ha}$), 12.8% of the Netherlands level ($444 \in \text{ha}$), 12.9% of Belgium level ($443 \in \text{ha}$), 18.7% of the France level ($304 \in \text{ha}$), 26% of Hungary level ($219 \in \text{ha}$), and 41% of Poland level ($139 \in \text{ha}$).

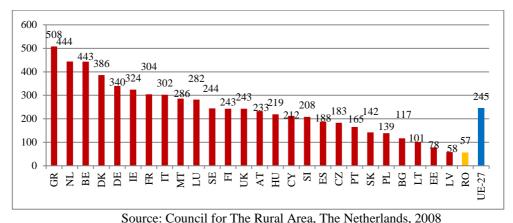


Figure 4. Direct payments from the E.U. budget per ha oof UAA (€/ha UAA) annual average 2007-2013 in E.U.-27 countries

In addition to direct payments granted through the single area payment scheme, Romanian farmers have also benefited from other support measures. Financial resources for agriculture, throughout the 2007-2013 financial period, can be grouped into three major categories after the source of support funding.

Payments from the European Agricultural Guarantee Fund (EAGF): Direct SAPS payments; Specific aid scheme granted according to art. 68 of the Reg. CE no. 73/2009; Separate payment scheme; Payment scheme for energy crops; Transitional tomato payment scheme for processing, 100% assured funding from the EAGF; Market measures with funding from the EAGF and the national budget; Programs for the promotion of agricultural products on domestic markets and third countries and export refunds.

Payments representing financial support from the national budget (BN): Complementary national payments in the plant and animal sector; State aid in agriculture for payment of insurance premiums; Life annuity; State aid for Diesel used in agriculture.

Payments from the European Agriculture and Rural Development Fund (EAFRD) for Axis II measures in the National Rural Development Program 2007-2013: Measure 211 "Payments for the disadvantaged mountain area"; Measure 212 "Payments for disadvantaged areas - other than mountain"; Measure 214 "Payments for agri-environment"; Measure 215 "Payments for animal welfare". These forms of support were managed by the Agency for Payments and Intervention for Agriculture (APIA), the body operating under the Ministry of Agriculture and Rural Development under Law 1/2004 with subsequent amendments and completions, being the institution responsible for the implementation of the Common Agricultural Policy in Romania. Table 1 presents the funds

Table 1.

Funds managed by APIA in 2007-2014 (millions of €)

Financing source	Limited amount 2007-2014	Payments made 2007-2014	Absorption level (%)	
FEGA	7,794	7,660	98.33	
FEADR and BN, for the measures in Axis II	3,160	3,040	96.14	
TOTAL	10,954	10,700	97.70	

Note: FEGA = European Agricultural Guarantee Fund; EAFRD = European Agricultural

Fund for Rural Development; BN = National Budget

Source: MADR, 2015

APIA's Annual Activity Report for 2015 shows that the total value of allocations and payments made throughout the 2007-2014 interval, by types of resources, according to data in Table 5 and Figure 5. We mention that in the selected range (2007-2014), payments made in the last year (2014) also include part of the previous year's allocations in view of maintaining for 2014 the payment schemes of the period 2007-2013. For 2014, the level of payments per areas was granted according to the same criteria as during the period 2007-2013.

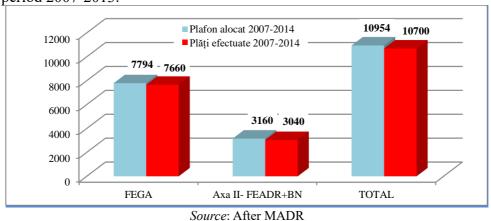


Figure 5. Allocations and payments made by APIA in 2007-2014 (millions of €)

In conclusion, it can be appreciated that the implementation of the European agricultural financing mechanism during this period was with syncopes, both in terms of the creation of the application structures (the Agency for Payments and Intervention for Agriculture), and in terms of payments proper to holdings upon prioritizing their destination.

The graphical representation of the direct payments reported to UAA for each member state in 2019 (Figure 6) is relevant for assessments of these differences.

With all the changes, there are still significant differences in the support per ha for each member state, further differences that generate major imbalances, unfair or discriminatory competition, with obvious negative effects, hard to bear by the poor states of the European Union such as Romania.

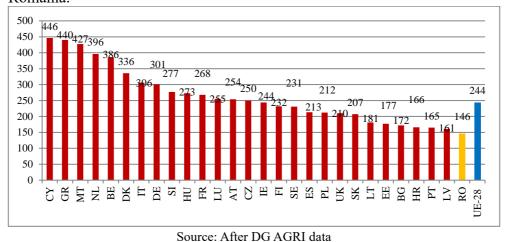


Figure 6. Support for direct payments reported to UAA from 2019 (€/ha)

It is noted that the amounts received by the farmers are influenced by the farm size class, the farmer's age and the application of certain agrienvironment conditions. The highest subsidy is for the farmers holding 5-30 ha, as this category of farmers benefits from a significant redistributive payment. Thus, a farmer holding 5-30 ha got, in 2015, a maximum of 229.04 €/ha, and in 2019 a maximum of 255.19 €/ha. The lowest subsidies per ha was for the farmers holding farms larger than 60 ha. In these farms, payments varied between a minimum of 138.85 €/ha in 2015, and a maximum of 158.04 €/ha, reaching a minimum of 161.92 €/ha in 2019, and a maximum of 175.24 €/ha (if the farmer also benefited from transient national aids).

Table 2. Value of payments per ha made to Romanian farmers in 2015-2019, (ϵ/ha)

Farm size	Payment schemes	2015		2016		2017		2018		2019	
1-5 ha	SAPS	Max	79.73	Max	96.88	Max	97.24	Max	102.56	Max	102.60
	Greening	182.97	59.12	199.84	57.37	199.73	57.17	206.33	58.23	211.48	59.32
	Redistributive		5.00		5.00		5.00		5.00		5.00
	Young farmer	Min	19.93	Min	22.87	Min	24.31	Min	25.84	Min	31.24
	ANT	143.85	19.19	159.25	17.72	159.41	16.01	165.79	14.70	166.92	13.32
5-30 ha	SAPS	Max	79.73	Max	96.88	Max	97.24	Max	102.56	Max	102.60
	Greening	229.04	59.12	243.34	57.37	243.05	57.17	251.69	58.23	255.19	59.32
	Redistributive	Min	51.07	Min	48.50	Min	48.32	Min	50.36	Min	48.71
	Young farmer	189.92	19.93	202.75	22.87	202.73	24.31	211.15	25.84	210.63	31.24
	ANT 1		19.19		17.72		16.01		14.70		13.32
30-60 ha	SAPS	Max	79.73	Max	96.88	Max	97.24	Max	102.56	Max	102.60

	Greening	177.97	59.12	194.84	57.37	194.73	57.17	201.33	58.23	206.48	59.32
	Redistributive	Min	0	Min	0	Min	0	Min	0	Min	0
	Young farmer	138.85	19.93	154.25	22.87	154.41	24.31	160.79	25.84	161.92	31.24
	ANT		19.19		17.72		16.01		14.70		13.32
	SAPS	Max	79.73	Max	96.88	Max	97.24	Max	102.56	Max	102.60
	Greening	158.04	59.12	171.97	57.37	170.42	57.17	175.49	58.23	175.24	59.32
>60 ha	Redistributive	Min	0	Min	0	Min	0	Min	0	Min	0
	Young farmer	138.85	0	154.25	0	154.41	0	160.79	0	161.92	0
	ANT		19.19		17.72		16.01		14.70		13.32

Note: SAPS = Payments under the unique surface payment scheme; Conversion = Payments under the scheme for agricultural practices for climate and environment; Redistributive = Payments under the redistributive payment scheme; Young Farmer = Payments in the Payment Scheme for Young Farmers; ANT = Payments under the Scheme on Transitional National Aid

Source: After MADR reports

CONCLUSIONS

In the field of agricultural policies and their implementing instruments, Romania has been constantly attempting to meet the short-term challenges of more or less electoral political objectives, conditionalities imposed from abroad by international financial bodies or by international organizations whose member Romania wishes to become. These challenges, on the short and medium term, have practically hold its strategies or, better, have been arguments to justify the absence of a political approach of a clear agricultural strategy in the long run.

In our opinion, the starting point of the agriculture development strategy should take into account a land policy, a fiscal policy in agriculture, a socio-professional policy defining the professional status of the farmer, a policy of developing infrastructure and basic services for agriculture, topics that need to be addressed mentioning that the solutions proposed to solve the problems in these areas also depend on how the production potential of the different agricultural sectors can be highlighted.

Romania needs a multi-functional, competitive agriculture, complementary to the agriculture of the other European Union countries, as well as major decisions in support of different (competitive and complementary) systems of agriculture.

REFERENCES

- 1. Alexandri Cecilia, 2017, Agricultura și spațiul rural evaluări la 10 ani de la aderare, Ed. Academiei Române, București;
- 2. Brînzan O., Drăgoi M., Bociort D., Țigan E., Mateoc-Sîrb N., Lungu M., 2020, A market-based economic instrument to better use water in agriculture, Sustainability, Volume 12, Issue 4, pp.1473;
- 3. Bădescu I., 2019, Satul românesc sub amenințările veacului în Satul românesc, Ed.

- Academiei Române;
- 4. Goșa, V., Feher, Andrea, Raicov, M., Otiman, P.I., 2019, Convergența agriculturii românești și a Uniunii Europene evoluții și evaluări prospective, Revista de Economie agrară și dezvoltare rurală;
- 5. Hera, C., 2019, Satul românesc 100 de ani de evoluție rurală, Ed. Academiei Române;
- 6. Hera, C., Otiman, P.I. 2016, Securitate și siguranță alimentară. Vol. Strategia de dezvoltare a României. Vol. III, Ed. Academiei Române;
- 7. Kligman, G., Verdery, Katherine, 2015, Țăranii sub asediu, Ed. Polirom;
- 8. Mateoc-Sîrb N., Otiman P. I., Mateoc T., Manescu C., 2018, Evolution of romanian village since the great union of 1918, Transylvanian Review•Vol. Xxvii, Supplement No. 2;
- Mateoc-Sîrb, N., Toth, A., Mateoc, T., Mănescu, C., Dumitrescu, 2016, Aspects regarding rural space development and life quality improvement in Romania, SGEM, Conference proceedings, Ecology, Economics, Education and legislation, Environmental economics, Education and accreditation in geosciences, Book 5 Vol. III:
- 10. Otiman, P. I. et.al., 2020, Cercetări de dezvoltare rurală în România-Sinteze-1990-2005-2020, Ed..Artpress, Timișoara, Ed. Academiei Române, București;
- 11. Otiman, P. I. et.al., 2011, Alternativele economiei rurale a României: dezvoltarea agriculturii sau insecuritate alimentară și deșertificare rurală severă, Ed. Academiei Române, București;
- 12. Otiman, P. I., 2019, Viața rurală românească pe lungul drum între Flămânzi și Uniunea Europeană sau Drama satului, pământului și a țăranului român într-un secol de iluzii, dezamăgiri și speranțe, Ed. Academiei Române, București;
- 13. Otiman, P.I., și colab, 2006, Dezvoltarea rurală durabilă în România, Ed. Academiei Române, București;
- 14. Toth, A., Mateoc-Sîrb, N., David, S., Mateoc, T., Mănescu, C., Venig, A., Sârb, Gh, 2016, Organic agriculture: An opportunity for sustainable development of Romanian villages, Journal of Biotechnology, Volume: 231, S109, S83;
- 15. Zamfir, C., Mihalache, F., 2019, Starea actuală și perspective (demografia)în Satul românesc, Ed. Academiei Române;
- 16. *** Analiza SWOT Planul Național Strategic (2021-2027).
- 17. ***Economia agroalimentară și dezvoltarea rurală din perspectiva integrării europene, Ed. Academiei Române, 2018, p.610;
- 18. *** Cadrul Național Strategic Rural (2014-2020-2030), 2013, Editura Academiei Române;
- *** Politica Agricolă Comună. Prezent şi viitor. Prezentarea Cadrului General al Planului Național Strategic, 2019, Ministerul Agriculturii şi Dezvoltării Rulare, Versiunea II, iunie 2019;
- 20. *** Ministerul Agriculturii și Dezvoltării Rurale www.madr.ro