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DIVERSIFICATION OF BUSINESS ACTIVITIES IN RURAL AREAS**L. ZABURANNA¹**¹ National University of Life and Environmental Sciences of Ukraine**Keywords:**

sustainable development, rural areas, diversification, rural economy, organic farming, rural tourism, cluster analysis.

ABSTRACT

The article deals with the importance of sustainable development on rural areas. The main criterion for sustainable development of the agricultural sector is improvement of the quality of life of farmers, rural population, and the nation that would base on preservation of life supporting systems. It was identified that agricultural production and agricultural employment are able not only to provide the appropriate level of income as a basis for quality living conditions of farmers, therefore, there exists an objective need for diversification of the rural economy. Identified several promising fields for diversification of business activities in rural areas that would ensure sustainable development of the agrarian sector, namely the development of organic farming and rural tourism.

Introduction. In the history of Ukrainian society, Ukrainian village always played a crucial role, because historically Ukrainians had sedentary lifestyle which involved tillage and farming. Yearly several dozen of villages disappear from the map of Ukraine and rural population is decreasing rapidly. Ukrainian village is generally characterized by the phenomenon of “aging nation” because young rural dwellers often leave their homes in search of better life in the cities. Overall, according to the State Statistics Committee, Ukraine lost 475 villages during the years of its independence and only 71 villages were founded (State Statistics Service of Ukraine, 2014). The reasons for disappearance of villages and decreasing number of rural population are demographic crisis, urbanization and ageing nation. Prospective villagers move to the cities because of the hopelessness of the rural hinterland: the lack of work and collapsed social infrastructure (non-functioning hospitals, schools, cultural institutions) do not allow to create proper living conditions for young people. For this reason, the principles of environmental and sustainable development are quintessential. The foundation for the establishment of the basic principles of sustainable development of the agricultural sphere should be appropriate infrastructure for land use based on innovations [1]. A significant criterion for sustainable development of the agricultural field should also be improvement of the quality of life of farmers, rural population, and the nation based on the preservation of life supporting systems.

This criterion can be interpreted as a criterion for protection of life support, security of an individual as a biosocial being and natural means for agricultural labor, such as land and water used in agricultural production of services of ecosystems and nature in general.

Summarizing the characteristics of the socio-economic condition of villages and the processes typical for agriculture and rural areas in general, it is possible to conclude that there are not only necessary conditions for diversification of rural economy, but also sound reasons for that, among which is low level of employment and financial well-being of rural dwellers.

Latest research and publications analysis. The importance of sustainable development on rural areas and different aspects of diversification of rural economy was investigated by A. Balmann [7], V. Bill [8], O. Bulavka [6], M. Burian, L. Dixey [15], A. Gannon [11], L. Hamzaoui [13, 14], O. Hohulia [3], J. Holland [15], M. Kropyvko [6], K. Larsen [19], M. Malik [6], V. Pulim [4], V. Valentinov [19], L. Zaburanna [2; 3; 20], M. Zahaf [13; 14]. However, despite the presence of substantial research insufficiently substantiated strategic importance and conditions of diversification of rural economy based on the experience of countries - members of the European Union.

The research objective is to determine promising fields for diversification of business activities in rural areas that would ensure sustainable development of the agrarian sphere and competitiveness of Ukrainian agrarian sector.

Key research findings. Agricultural production and agricultural employment only are not able to provide the appropriate level of income as a basis for quality living conditions of farmers, therefore, there exists an objective need for diversification of rural economy through a new strategic direction – diversification of activities, which does not require significant investment (in particular from the state), but guarantees positive results for both the private sector of the economy and for the society, represented by the state. Basing on thorough research of scientific papers on diversification process, we identified some differences in the definitions of “diversification”. In our view, *diversification* is an innovative strategy aimed at mitigating business risks and increasing revenue by expanding business activities of an entity through reallocating existing resources to other areas that are significantly different from the previous ones.

Diversification of activities through innovative fields refers to small forms of agricultural production as well. They can help expand the scope of employment in rural areas [10; 16; 17; 18].

According to researchers M.J. Malik and V.A. Pulim, de-agrarization of rural economy (decrease of the share of agricultural production) is a significant step to effective rural development; it serves as a prerequisite for formation of private initiative and entrepreneurship in rural areas (M. Malik and V. Pulim, [4]).

A classic example of this can be agricultural tourism, which uses human, material, and land resources of farms or private households, as well as produced goods for providing accommodation, board and other forms of services to tourists. It is not necessary for farms to provide the entire range of these services; they can specialize in one or several ones.

Western part of Ukraine is at the forefront of the rural tourism development. The most popular is the Carpathian zone: Ivano-Frankivsk region, Zakarpattia region, Lviv region and Chernivtsi region. Main attractions include skiing and the opportunity to celebrate New Year and Christmas holidays in winter and beautiful landscapes, fresh air, and mountain rivers in summer.

The hypothesis of our study is that there are three types of rural tourism enterprises according to their income structure (sources of funds), including:

1. Enterprises with mixed structure of income for which tourism revenues were less important or even unimportant.
2. Enterprises with mixed structure of income for which tourism has become an important source of income.
3. Active, sustainable and dynamic rural agricultural tourism enterprises that raise revenues primarily from tourism.

Quantitative variables that describe the examined companies by their size, number of permanent members and employees, sources of income, amount of agricultural production and services provided in the field of tourism were used for creating typological classification based on clustering using k-averages.

There is no classification of small and medium-sized enterprises of rural tourism according to their sources of income (share of income from agricultural and tourist activities). As a result of the study, we defined 17 key indicators (variables) for the classification of SMEs of rural tourism according to their sources of income and, therefore, divided them into three groups (Table 1):

- indicators that determine the level of income from both agricultural and tourist activities (ICP, ILP, RT, SIT);
- indicators that determine the level of income only from tourism (CL, CB, AL, NT, DTS, SI);
- other indicators that influence the level of income from both tourist and agricultural activities (TA, SAL, AAO, PA, PT, TLC, ET).

Table 1

Description of variables used for typological classification of enterprises of rural agricultural tourism

No.	Code of the indicator	Name of the indicator	Characteristics of the indicator
1	TA	Total area	Hectares
2	SAL	Share of agricultural land in the total area	Percentage of the total area, %
3	AAO	Average age of company owners	Years
4	PA	Number of people engaged in agriculture (agricultural production)	Number of individuals
5	PT	Number of people engaged in tourism	Number of individuals
6	TLC	Total labor costs of the enterprise	Including labor costs both in agriculture and tourism for all employees, hours
7	SI	Sources of income	Total amount, units
8	AB	Amount of beds	Total number of beds at the enterprise, units
9	NT	Number of tourists	Total number of tourists per year, individuals
10	DTS	Duration of the average tourist season	Number of days with tourists per year
11	ET	Experience in the field of rural agricultural tourism	Number of years
12	CL	Cost of living	Average price of accommodation for 1 person per day, UAH
13	CB	Cost of board *	Average price of board for 1 person per day, UAH
14	IT	Income from tourist activities	Total income from tourism, UAH
15	ICP	Income from crop production	Total income, UAH
16	ILP	Income from livestock production	Total income, UAH
17	SIT	Share of income from tourism in the total income	Percentage in the total income, %

* The examined enterprises usually offered breakfast and dinner.

Author's development

One of the most suitable methods of study of empirical data is the algorithm of fuzzy *K-averages*. It is important to analyze not only the absolute values of economic parameters of rural tourism enterprises, but also relative ones, such as the coefficients of economic efficiency of use of resource potential of the investigated business field.

According to the research methodology, the above mentioned parameters were identified as of January 01, 2015 for 87 rural tourism enterprises in Western Ukraine, the level of diversification of sources of income of which has substantial differences.

The results of the cluster analysis performed with the help of Statistics 8.0 package can be represented in the graphical form (Fig. 1), which reflects average values of the formed cluster groups. The diagram in Figure 1 shows typical profiles of rural tourism enterprises, and, thus, makes it possible to identify major differences in mechanisms of obtaining economic benefits from the resources available.

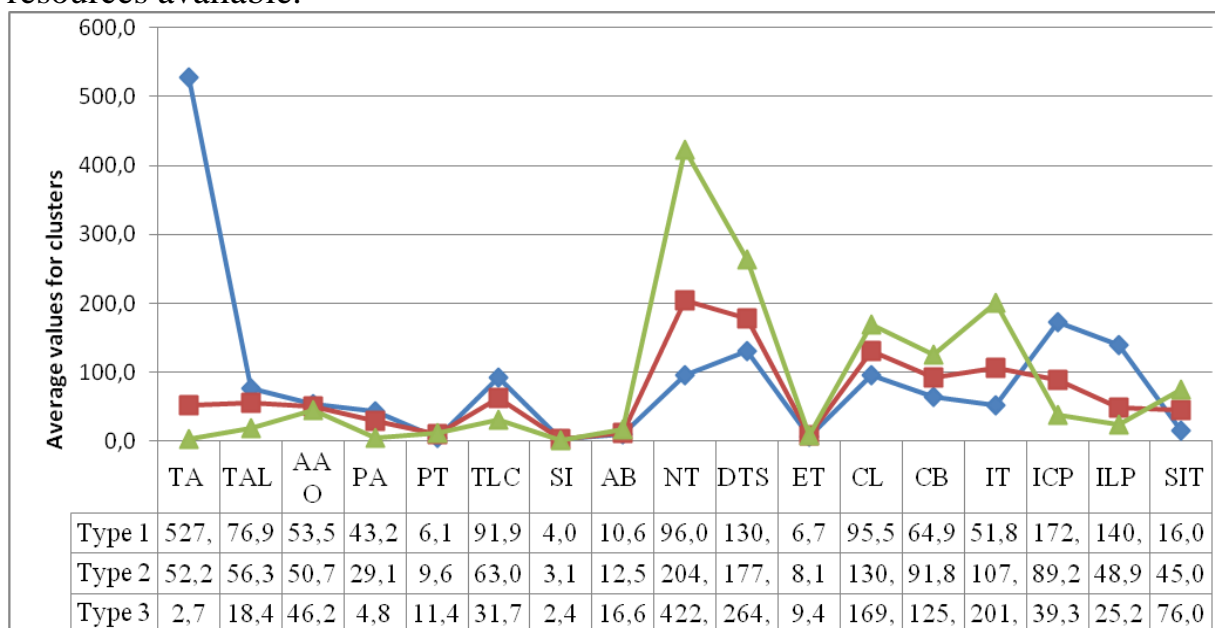


Figure 1. Diagram of average values of the clusters formed for the sample of enterprises of rural agricultural tourism

Calculated by the author.

To determine the contribution of a certain classification feature in the distribution of observations we will summarize the results of the analysis of variance generated in Statistical 8.0 (Table 1). It was established that for all of the suggested 17 indicators intragroup variance is lower than intergroup one, as the values in the last column of Table 3 are positive.

Table 2

Analysis of variance of cluster distribution of the enterprises of rural agricultural tourism

Variables (classification criteria)	Inter-group variance (Between – SS)	Number of degrees of freedom df	Intra-group variance (Within – SS)	Number of degrees of freedom df	Fisher criterion value (F)	Level of significance of F-criterion (signif. – p)	Excess of inter-group variance compared to intra-group one
Total area (TA)	2670249.0	2.0	1357686.0	84.0	82.6	0.0	1312563.0
Share of agricultural land in the total area (SAL)	44916,3	2.0	10939.9	84.0	172.4	0.0	33976.3
Average age of company owners (AAO)	672.4	2.0	402.8	84.0	70.1	0.0	269.5
Number of people engaged in agriculture (agricultural production) (PA)	19038.5	2.0	3314.5	84.0	241.2	0.0	15724.0
Number of people engaged in tourism (PT)	284.1	2.0	204.7	84.0	58.3	0.0	79.5
Total labor costs of the enterprise (TLC)	40617.05	2.0	4859.91	84.0	351.0	0.0	35757.14
Sources of income (SI)	28.0	2.0	19.7	84.0	59.8	0.0	8.3
Amount of beds (AB)	499.3	2.0	167.1	84.0	125.5	0.0	332.2
Number of tourists (NT)	1440186.0	2.0	206402.2	84.0	293.1	0.0	1233783.8
Duration of the average tourist season (DTS)	230785.0	2.0	104807.0	84.0	92.5	0.0	125978.0
Experience in the field of rural agricultural tourism (ET)	74.9	2.0	36.5	84.0	86.2	0.0	38.4
Cost of living (CL)	61065.6	2.0	21367.8	84.0	120.0	0.0	39697.9
Cost of board (CB)	43066.9	2.0	12272.0	84.0	147.4	0.0	30794.9
Income from tourist activities (IT)	286406.8	2.0	78276.4	84.0	153.7	0.0	208130.4
Income from crop production (ICP)	174163.5	2.0	68301.0	84.0	107.1	0.0	105862.5

Continuation of Table 2

Income from livestock production (ILP)	124197.7	2.0	75209.7	84.0	69.4	0.0	48988.0
Share of income from tourism in the total income (SIT)	4.0	2.0	0.8	84.0	221.1	0.0	3.2

Calculated by the author.

The results of the sample of rural tourism enterprises in accordance with the structure of their income are presented in Table 3. Almost the half of the surveyed enterprises provide only tourist services, but a big share of companies – 36.8% – has diversified revenue sources, combining agricultural production with tourist services. For a small number of surveyed enterprises agricultural production is of primary importance and tourist services are a secondary source of income.

Table 3

Results of typological classification of the enterprises of rural agricultural tourism in Western economic region*, 2014

No.	Type of an enterprise	General characteristics of the type of an enterprise	Number of enterprises, units	Share, %
1.	Type I	Enterprises with mixed structure of income for which tourism revenues were less important or even unimportant	12	13.8
2.	Type II	Enterprises with mixed structure of income for which tourism activity has become an important source of income	32	36.8
3.	Type III	Active, sustainable and dynamic rural agricultural tourism enterprises that raise revenues primarily from tourism	43	49.4
4.	Total:	X	87	100

* Zakarpattia region, Lviv region, Chernivtsi region and Ivano-Frankivsk region.

Calculated by the author.

The next step of the study based on typological classification of rural tourism enterprises is to analyze the most important factors influencing the efficient use of limited resources.

The foundation for the study of efficiency of rural tourism enterprises should consist of indicators that without any complications and conventions can be compared for entities different in size, structure, and location. These indicators include the share of agricultural land in the total area (SAL), the share of income from tourism in the total income (SIT), as well as:

- ✿ share of personnel involved in agricultural production in the total number of employees (SPA);
- ✿ labor productivity at the agricultural tourism enterprise that is defined as the total income of the company per employee (LP);
- ✿ labor productivity in agricultural production that is defined as the income from crop and livestock production per employee in agricultural production (LPA);
- ✿ land resources efficiency, which is determined by dividing total income by total area of the enterprise (LRE);
- ✿ turnover of beds, defined as the ratio between the number of tourists, who have visited the analyzed enterprise during the year, and the number of beds created (TB);
- ✿ average profitability of a bed per day – we believe that this indicator fully covers the level of fulfillment of tourism potential of an enterprise, the desired level of fulfillment of tourism potential, that is, PBD indicator.

The graph (Fig. 2) shows the average values of efficiency of rural tourism enterprises defined using typological classification of cluster groups.

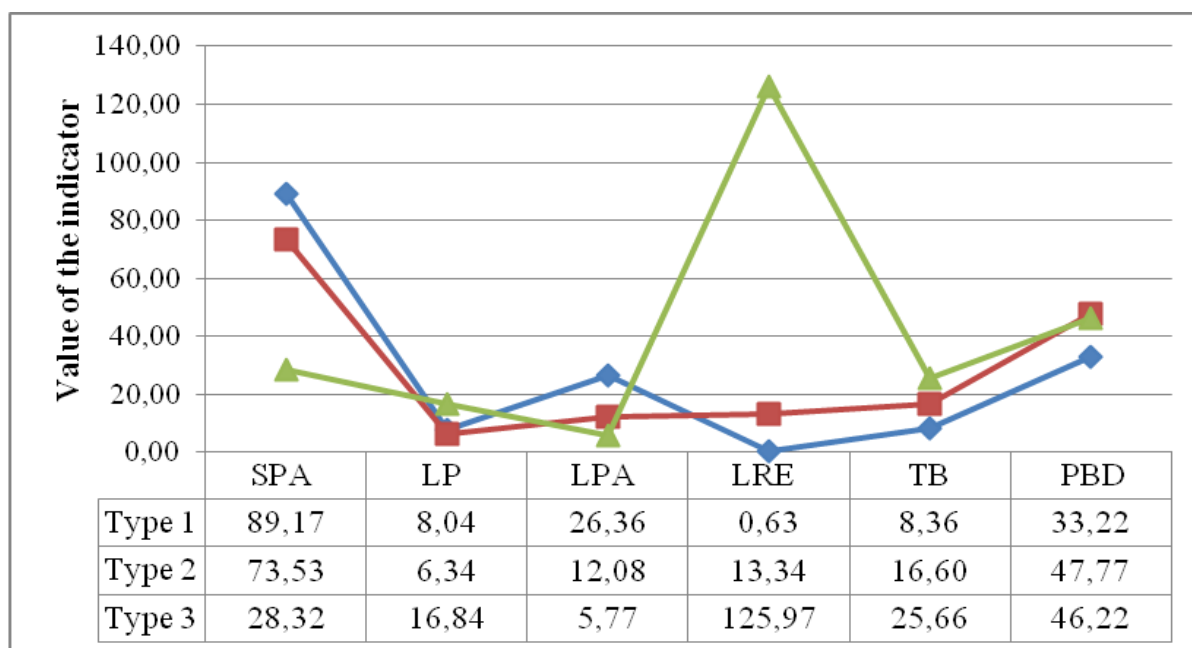


Figure 2. Performance profile formed in accordance with standard diversification strategies of rural tourism enterprises

Calculated by the author.

According to Figure 2, enterprises whose income is dominated by revenues from agriculture, have the lowest efficiency both in terms of productivity of land resources – only 630 UAH per 1 hectare of total area – and fulfillment of tourism potential: a potential bed eventually brings income of 33.22 UAH per day. They also have low labor productivity level, especially when compared to the enterprises that receive most of the income from tourist services: 8.040 UAH per person per year compared to 1.684 UAH per person per year. Latest enterprises are leaders in workforce productivity and efficiency of land resources – almost 126.000 UAH per hectare of the total area. Although labor productivity of workers engaged in agricultural production is the lowest at these enterprises: only 5.770 UAH per person per year. In addition, companies specializing exclusively in tourism do not reach maximum fulfillment of their tourist potential, because every potential bed allows obtaining an average income of 46.22 UAH per day. Turnover of beds at the enterprises of the third type is the highest, as they have almost 26 guests per bed per year. Enterprises of the second type occupy medium position by all performance indicators except two. They show the lowest labor productivity of only 6,340 UAH per person per year and the highest level of fulfillment of tourism potential – every potential bed in 2014 brought an average income of 47.77 UAH per day. Efficiency indicators, averaged within each type of diversified enterprises (see Fig. 2) are recommended to be viewed as “control” numbers. This means that management of enterprises should lead to exceeding of at least average values; in this case, it can be recognized as satisfactory. Taking all indicators into consideration, we can state that the cluster of rural tourism enterprises with mixed income structure for which tourism activity has become an important source of income is more cost effective compared to others, which proves our hypothesis about economic justification of diversification in agriculture on innovative basis, especially in the regions with difficult conditions for agricultural production.

An important area of diversification of rural economy on innovative basis aimed at achievement of its sustainable development is the use of organic farming that can adapt agricultural production to climate change and positively influence the socio-economic development of rural areas. Due to the fact that organic farming uses only organic materials (fertilizers, pesticides, etc.), the amount of organic matter in the soil increases. As a result, soil contains much more moisture than when using traditional farming systems.

Thus, the use of organic farming systems may to some extent neutralize the effect of environmental factors, most importantly in terms of global climate change. One more positive aspect of the system of organic farming is that the prices for certified products are almost twice as high as those for conventional agricultural products. This, in turn, allows farmers to receive higher income and cover the cost of production even at low yields.

Priority of the development of organic production is declared in the State target program of the development of Ukrainian village until 2015, which substantiates the necessity of “reproduction of soil fertility and environmental conservation, rural development, improvement of agricultural production, providing consumer market with healthy quality products, strengthening export potential of the state, ensuring food security and improving the welfare of citizens” (State Target Program development of Ukrainian village until 2015, 2007). The trend of market growth is presented in all countries. And it should also be mentioned that the demand far exceeds the supply even at high prices (Table 4). Analysis of the development trends of the market of organic products in European countries indicates significant positive results. The largest share of the market belongs to Germany, the UK and Italy. The data also show the growth of organic agriculture market in Ukraine, but in comparison to other European countries it is only at the beginning of its development and, therefore, small business entities in rural areas may play an essential role in the development of this area of innovative agriculture.

Table 4

Development of the market of organic products in European countries. *Source: Organic-World.net*

Countries	Market volume, million euros					
	2006	2010	2011	2012	2013	Change between 2013 and 2006, %
Germany	4600	6050	6590	7040	7550	164.13
Sweden	605	860	885	905	1018	168.26
Estonia	3.2	12.1	18.7	20	22	687.50
Czech Republic	28.7	59	66,2	70	71.3	248.43
Latvia	1.1	3.6	4	4.7	5,3	481.82
Italy	970	1580	1720	1885	2020	208.25
UK	1240	1680	1882	1950	2065	166.53
Poland	58	111	120	127	138	237.93
Ukraine	0.5	2.5	5.1	9.3	12.0	2400.00
Russian Federation	56	109	115	120	123	219.64

Leaders in organic food consumption per capita are Germany and Sweden, where the average resident buys these products in the amount of 93 and 106 Euros per year respectively. In Ukraine, the figure is only 3 cents per capita per year (Fig. 3).

Despite the rapid increase of the EU sales of organic products, there exist certain obstacles for their production [12], such as poor soil and massive intensification of agricultural production (C. Dimitri and L. Oberholtzer [9]). Further growth of the markets of organic products offers opportunities for new producers from the developing countries, including Ukraine [5].

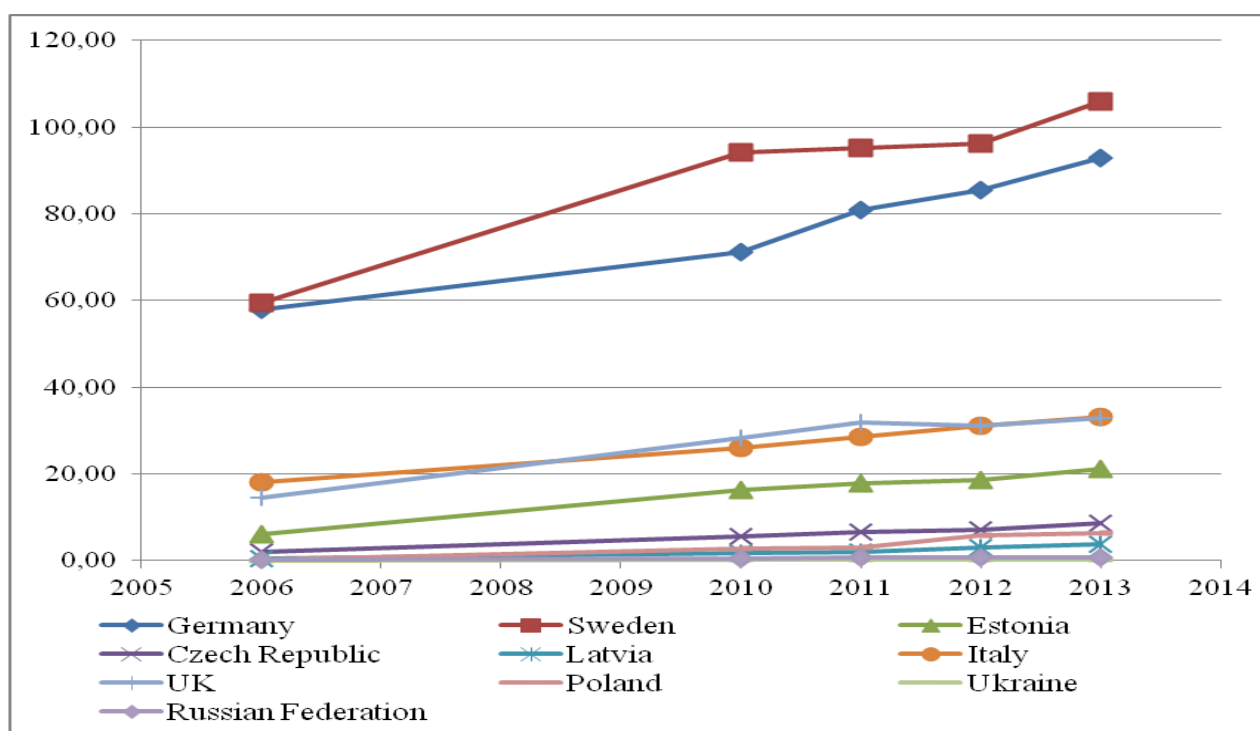


Figure 3. Consumption of organic products per capita, euro

Source: *Organic-World.net*

In addition, the feasibility of implementation of organic farming in Ukraine is conditioned by the following factors:

- the need for reproduction of soil fertility and environmental protection;
- the need for rural development and raising the level of life of rural population;
- the need to improve the efficiency and profitability of agricultural production;
- the need to provide consumer market with healthy quality products;
- the need to strengthen export potential;
- the need to improve the image of Ukraine as a manufacturer and exporter of healthy high quality organic products;
- ensuring food security in Ukraine;
- improving the welfare of the citizens of the state.

Conclusions. A specific approach to the typology of the rural tourism entrepreneurship based on different types of activity within a company, which is based on the use of cluster analysis. Proved that there are three types of rural tourism enterprises according to the similarity of their income structure, including: enterprises with mixed structure of income for which tourism revenues were less important or even unimportant; enterprises with mixed structure of income for which tourism has become an important source of income; active, sustainable and dynamic rural agricultural tourism enterprises that raise revenues primarily from tourism.

As a result of the typology of enterprises in the rural tourism we found the most important factors of efficient use of limited resources and leverage increased business activity of companies in this field of work. It is proved that for the sum of generalized cluster of rural tourism enterprises, incorporating mixed-income structure for which tourism activity has become an important source of income is more cost effective compared to others, which proves our hypothesis about the economic justification Diversification in agriculture, especially in the complex for agricultural production regions.

Also, we researched the importance of organic production in rural areas. Organic farming can adapt agricultural production to climate change and positively influence the socio-economic development of rural areas. One more positive aspect of the system of organic farming is that the prices for certified products are almost twice as high as those for conventional agricultural products. This, in turn, allows farmers to receive higher income and cover the cost of production even at low yields.

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