

THE ANALYSIS ON THE CHANGE OF FARMING LANDS IN THE TERRITORY OF MIDDLE LITHUANIA

Virginia Atkocevičienė, Daiva Gudritienė, Vilma Sudoniene

Lithuanian University of Agriculture; National Land Service under the Ministry of Agriculture, Lithuania

Summary

Land means the basic part of the natural environment, the basic instrument of human life, activity and immovable property, which is being disposed of in the process of land relation. Land should be used when coordinating private and public interests as well as environment protection requirements. At present this question is especially topical for land management specialists, land users and institutions coordinating use of land and land management works, because after the finishing of the land reform in rural areas it is very important to properly use farming lands according to their principal specific purpose. The article aims to analyse if such factors, as the land productivity point, processes of erosion, natural and climatic conditions as well as the suitability of land to form large and competitive farmers' farms, influence the change of farming lands. In order to develop agricultural activity it is necessary to find measures able to stop the decrease of the number of rural inhabitants and the loss of traditional farming ways.

Keywords: agrarian zoning, farming lands, rural development, alternative activity, agriculture.

Introduction

The change, use and structure of our country's farming lands were conditioned by social, economic as well as by ecological processes. Essential changes of farming lands occurred with the expansion of forest areas (which spontaneously overgrew in abandoned and uncultivated farming lands), in other unused lands and bogs. Due to the extensive agricultural production areas of arable land had decreased. Large differences of the change of farming lands are seen when using different record data as well. Different results are presented when evaluating declared land areas.

Due to natural and geographic peculiarities the territory of the Republic of Lithuania is characteristic for its uneven natural and geographic features as well as for different economic and social historical development of separate regions. Land designated for agricultural purposes is the main measure for the activity of subjects (farms) producing agricultural production. The territorial dislocation of cultivated lands, meadows and pastures used for this activity depends not only on natural characteristics of soils but on the work done by humans (while reclaiming these areas from bogs, bushes or forests, while regulating humidity regime and improving land productivity) as well.

In order to properly administrate the abandoned land it is very important to know situation on areas in all regions. Land inventory works are rather expensive; therefore, the choosing of the proper method can be only considering labour and time expenditures, objectivity of data determination and the desirable periodicity of the data renewal. It is aimed to stimulate the activity of rural people through the rural development measures while using land, creating new working places, managing and beautifying landscape and improving environment protection requirements. In the Master plan of the Republic of Lithuania, approved in 2002, 7 agricultural specialization zones were singled out (Lietuvos Respublikos teritorijos..., 2002). Soil characteristics of agricultural farming lands, farming traditions, dislocation of enterprises producing agricultural production should be taken into consideration when specializing farms. This work was prepared following the statistical data of the Land fund. The data is presented by the State Enterprise the Centre of Registers.

First of all, in the country's agrarian use policy the master plan aims to coordinate main branches of production of farms with the specialization of agrarian activity corresponding (best of all) to natural conditions. The changes of the use of agrarian territories are foreseen when agricultural subjects gradually specialise in the production of such agricultural products, which are the mostly demanding in foreign countries. Soil characteristics of agricultural farming lands, farming traditions, dislocation of enterprises producing agricultural production should be taken into consideration when specializing farms. In the territories, where conditions for agricultural activity are not so good, the decrease of agricultural production is being predicted when developing non-traditional agricultural branches, alternative (not agricultural) activity as well as when transferring part of the land for afforestation purposes.

The novelty of the carried out investigation work is characteristic for the analysis of the change of farming lands in the agro-economic territory of Middle Lithuania for the period of nine last years (2001-2010). The chosen theme is a topical one, because the data on the land use are necessary for the preparation of the country's development strategies while foreseeing support measures, performing territorial planning, and for farmers – while choosing the most efficient ways of land use.

The aim of the investigation: to analyse the change of farming lands in the territory of agro-economic zoning of Middle Lithuania using statistical data.

Main tasks to be solved:

- 1) to characterize the change of farming lands in the Republic of Lithuania;
- 2) to analyse the change of farming lands in the agro-economic zone of Middle Lithuania while choosing the territories of the municipalities of 6 districts;
- 3) to foresee measures for the rational and sustainable land use.

The change of main farming lands in Lithuania was going on relatively gradually during early ages: farming land areas increased and forest areas decreased. Basic changes began with the start of the land reform after the restoration of the Independence of Lithuania. Due to the restoration of ownership rights the groups of land owners, land ownership forms as well as the use of land have changed during the land reform. Basic political, economic and social changes occurring in the country influenced the change of farming lands.

The problem of the use of land is very topical in Lithuania. In order to preserve natural resources and give priority to general interests of society, the state regulates the use of land. It is especially important how agricultural farming lands and other landed property will be used in the future. People should use land not violating the established rights and duties of land users. People should preserve natural resources, which can decrease and lose their value due to anthropogenic activity.

Laws regulating land relations are directly and indirectly connected with the majority of legal acts on which basis the use of the territory is being planned, activities connected with land and forestry are being carried on, structures are being constructed and earth entrails are being exploited. The general rights on land are presented in the Civil Code and the Law on Land of the Republic of Lithuania, which were prepared following the Constitution of the Republic of Lithuania.

The Law on Land establishes the relations of ownership, management and use of land in the Republic of Lithuania. Land relations pertaining to land are being regulated in such a manner as to create conditions for the satisfaction of the needs of the population, rational territorial distribution and development, protection and improvement of the natural environment, rational land use (Žin., 1994, Nr.34-620).

The basic social and economic changes that had occurred influenced the land use intensity: the number of meadows and pastures arranged in the arable lands is unproportionally large in the country.

In order to ensure the sustainable rural development it is purposeful to regulate this process when preparing and implementing territorial planning documents, differentially applying state support measures as well as when improving legal acts regulating land use and territory management (Aleknavičius P.).

The Law on the Territorial Planning regulates the territorial planning of the Republic of Lithuania, the rights and duties of physical, juridical persons, institutions of states and municipalities in this process. Territorial planning aims to form land parcels, to reserve territories for the development of the infrastructure of inhabited areas and of the farming lands of different types (Žin., 2004, Nr. 21-617).

On May 9, 2002, the Government of the Republic of Lithuania had passed the decision "Over the approval of the order on the change of the forestry land into other landed property" (Žin., 2002, Nr. 48-184). It states that the land designated for forestry purposes can be turned into other landed property only in exceptional cases while coordinating interests of the state, forest owner and society.

Analysing the land use problems in rural areas P.Aleknavičius wrote in his article that about 200-250 thousand hectares of agricultural farming lands existing in the private land can be used, however, they are not declared due the reasons characteristic to the process of the land reform – unformed economic structures, the unreadiness of farmers to cultivate land and low economic support. The possibilities of the further returning of the remaining area (the difference between the recordable and probable area) of agricultural farming lands reaching almost 300 thousand ha for agricultural activity are connected with the evidence of the expediency of land reclamation works. The problem, on how much these changing tendencies of agricultural farming lands are useful or harmful from the aspect of agriculture

and rural development, is being analysed after the evaluation of the land privatisation process, the degree of the formation of economic structures and the intensity of the land use. (Aleknavičius, P.)

According to the data of 2009 large agricultural farming land areas (500-600 thousand ha) are not used for agricultural purposes in Lithuania. This problem occurred because of the attempts of land reform and agricultural sectors to adapt to market conditions. The cultivation and afforestation of these areas as well as the expansion of woody areas is an important factor when improving environmental, social and economic situation of our country.

According to A.Petkevičius, during the appliance of various record method of the uncultivated land it was defined that there were 150 thousand hectares of uncultivated land in Lithuania in 2003, in 2005 – 84 thousand hectares. Different results are achieved comparing crop and land areas. There were 3464 thousand hectares of farming lands in 2009, and 2642 thousand ha of crop were declared in them. So, we can draw a precondition that 822 thousand hectares of the land are abandoned or are close to this category. Consequently, we have no reliable recording of the abandoned land (Survila, Leimontaitė, 2010).

Agriculture is one of the priority sectors with important economic, social and environment protection significance. The majority of the territories with big economic value are situated in rural areas. 61 percent of the country's land is used for agricultural activity. Small and semi-natural farms are predominating. Irrational land use, small farms, the shortage of cooperation and farmers' aging tendencies are the main factors impeding the competitive development of agricultural sector. Therefore, today we can see so many uncultivated and unused lands.

The ways for the land use optimisation in the Middle Lithuania were analysed by V.Gurskienė. After the analysis of the situation of the land use in the Middle Lithuania, land use improvement measures and the ways for the improvement of the land management designing works for farms were suggested as well as recommendations for the rational farming in the field of plant-growing were presented (Gurskienė, 2002).

National, social, economic, traditional and other circumstances had influenced the distribution of Lithuanian regional differences. Amounts of plant-growing and animal-breeding production and the corresponding level of incomes as well as the life quantity in different regions differ 3-4 times. Therefore, 7 territories of agro-economic zoning, in which the reasons and change of farming lands had been analysed, were chosen for this work.

In the article "The change of farming lands and forest areas in Lithuania" (Kavaliauskienė, Tarvydienė, 2005) districts specific to different natural-economic zones of the country were chosen in order to analyse, which factors influence the development of the areas of farming lands. The largest areas of farming lands (among which and the areas of arable land) are situated in the middle and northern districts of Lithuania, the smallest areas are situated in the landscape zone of the Middle Lithuania and the Žemaitija Uplands.

Methods of investigation

The statistical data on the agricultural farming lands for the period of 2001-2010 are presented in the analysis. Literature, statistical and comparative analysis methods were used in the work. The objects of investigation – 6 districts falling into the Middle Lithuanian territory of agro-economic zoning were chosen.

Investigation results and their discussion

1. The general survey of the change of farming lands in 2001-2010

Farming lands means areas of land differing from other areas by their characteristic natural properties or character of economic use (Žin., 1994, Nr. 34-620). According to the statistical data of 2010, farming lands cover 53 percent of our country's territory. In order to clear out the fluctuations of the change of farming lands statistical data of 2001-2010 were analysed. The structure of farming lands in 2001 is presented in Fig. 1.

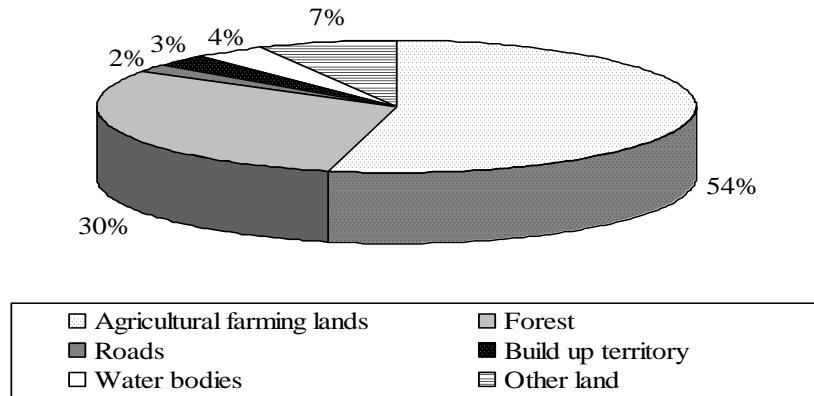


Fig.1. The land fund structure in the Republic of Lithuania according to farming lands for January 1, 2001 (The Land Fund of the Republic of Lithuania, 2001)

From the data of Fig. 1 we can see that agricultural farming lands covered the largest area – 54 percent of the total area. Agricultural farming lands consist of arable lands, orchards, meadows and natural pastures. Forests – one of the main Lithuania’s natural resources. Forests made up 30 percent of the country’s territory.

There are many water resources in Lithuania. Open internal water reservoirs made up 4 percent of the total country’s territory. Other (remaining) land made up 7 percent of the total area. The remaining land consists of forest and bush plantations, bogs, damaged or unused lands.

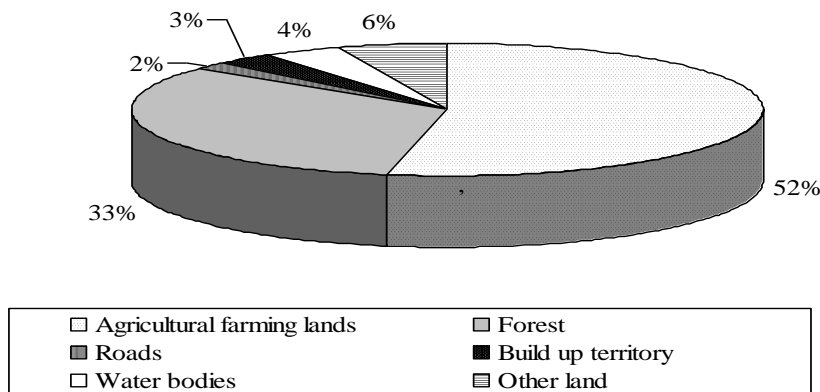


Fig. 2. The land fund structure in the Republic of Lithuania according to farming lands for January 1, 2010 (The Land Fund of the Republic of Lithuania, 2010)

Analysing the statistical data of 2010 we see that agricultural farming lands make up 52 percent of the total country’s area.

Comparing the data on agricultural farming lands for the years 2001 and 2010 we see that the areas of farming lands decreased by 2 percent. The largest changes in the record of agricultural farming lands occurred in the areas of meadows and natural pastures. Forest areas increased by 3 percent. The areas of other landed property decreased as well.

When analysing statistical data it is very important to pay attention to the principal specific purpose of the land use. According to the data of January 1, 2010, the land designated for agricultural purposes makes up 60.6 percent of the total country’s areas. The change of the farming lands in the land designated for agricultural purposes is presented in Fig. 3.

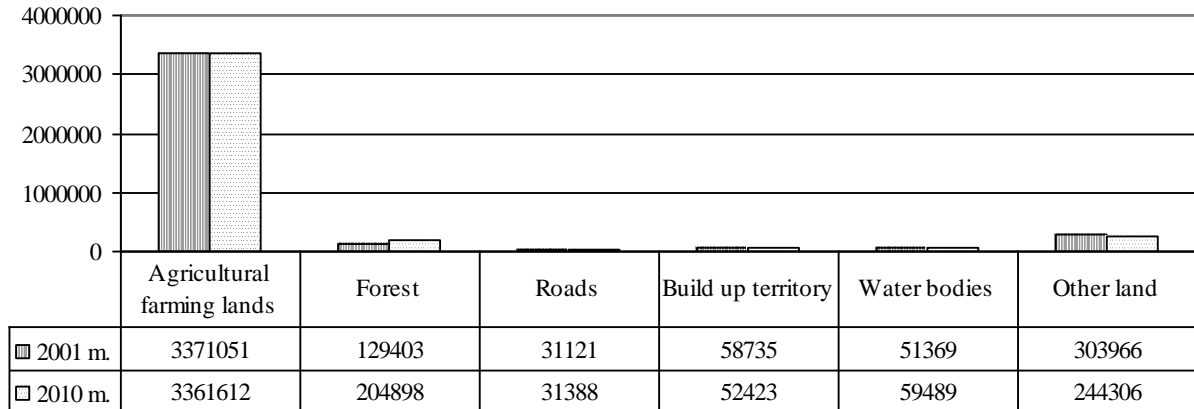


Fig. 3. The changing of the farming lands (of the Republic of Lithuania) in the land designated for agricultural purposes during 2001-2010
(The Land Fund of the Republic of Lithuania, 2001; 2010)

When analysing the fluctuations of the change of farming lands we can see the marginal increase of farming land areas and the increase of forest areas. Areas of other lands increased as well. The changes of the farming land areas when planning agricultural activity are very important. The change of the farming land areas in the land designated for agricultural purposes is presented in Fig. 4.

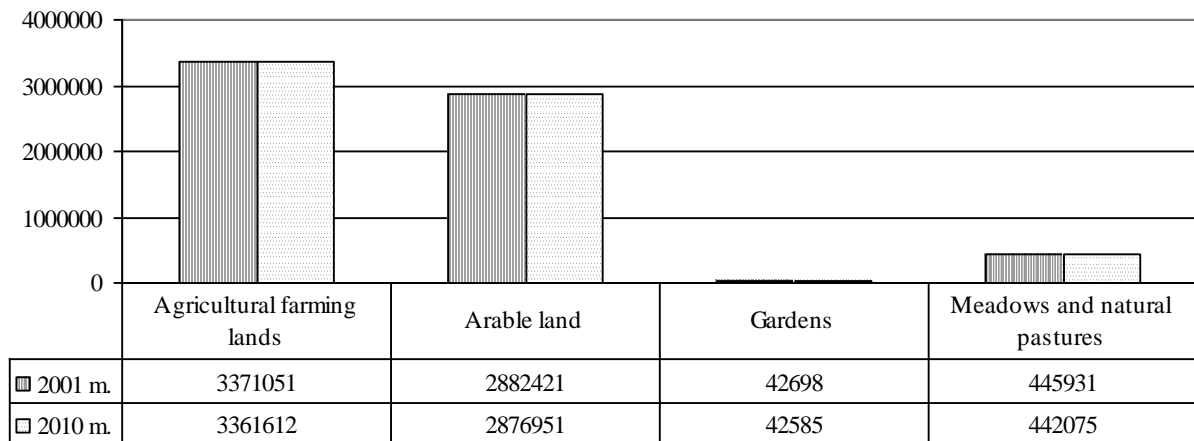


Fig. 4. The changing of the farming lands in the land designated for agricultural purposes during 2001-2010
(The Land Fund of the Republic of Lithuania, 2001; 2010)

When analysing data one can state that arable land decreased by 5470 ha, areas of gardens changed insignificantly. Meadows and natural pastures decreased by 3856 ha.

A. Aleknavičius analysed land use tendencies in the land designated for agricultural purposes as well as the possibilities for the development of farmers' farms in the districts of the Middle Lithuanian zone. According to A. Aleknavičius, the small area of the state-owned land reflects the following processes of the agricultural restructuring: farms are created more rapidly in such districts where the owners are interested in the expansion of their land-tenures. In the districts of the Middle Lithuanian zones land is valued more, therefore, it is leased more often than it is being sold (Aleknavičius A.).

In order to analyse the change of farming lands in the zone of Middle Lithuania the statistical data on the farming lands from the territories of the municipalities of 6 districts were analysed. The variation of the farming land areas in the territories of the municipalities of Joniškis, Kėdainiai and Radviliškis districts is presented in Table 1.

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Table 1.

The change of the farming lands in the zone of Middle Lithuania in 2001-2010

Farming lands	The zone of Middle Lithuania									
	Joniškis district municipality		Kėdainiai district municipality		Radviliškis district municipality		Changes			
	2001	2010	2001	2010	2001	2010	2001	2010	+ / -	%
Farming lands	83951	83106	109275	109275	105250	103320	298476	295701	- 2775	0,62
Forests	21046	22946	39612	42830	36520	41940	97178	107716	+ 10538	2,36
Roads	1920	1913	3382	3605	3209	3347	8511	8865	+354	0,79
Built up territory	2714	2617	4518	4294	3775	3823	11007	10734	- 273	0,61
Water bodies	2349	2349	4224	4224	3910	3846	10483	10419	- 64	0,14
Other land	3245	2294	6689	3472	10816	7204	20750	12970	- 7780	1,74
Total:	115225	115225	167700	167700	163480	163480	446405	446405	0	X

(The Land Fund of the Republic of Lithuania, 2001; 2010)

Analysing the data of Table 1 we saw that the largest changes occurred in forest areas. Forest areas had increased by 10538 ha during the analysed period. The areas of other land decreased by 7780 ha. The change of the forest areas occurred at the expense of agricultural and other land.

What kind of changes were defined in the territory of the municipalities of Jurbarkas, Kaunas and Vilkaviškis districts we can see in Table 2

Table 2.

The change of the farming lands in the zone of Middle Lithuania in 2001-2010

Farming lands	The zone of Middle Lithuania									
	Jurbarkas district municipality		Kaunas district municipality		Vilkaviškis district municipality		Changes			
	2001	2010	2001	2010	2001	2010	2001	2010	+ / -	%
Farming lands	83951	83106	109275	109275	97303	97303	290529	289684	- 845	0,29
Forests	21046	22946	39612	42830	11122	13290	71780	79066	+ 7286	10,15
Roads	1920	1913	3382	3605	2291	2437	7593	7955	+362	4,77
Built up territory	2714	2617	4518	4294	3453	3107	10685	10018	- 667	6,24
Water bodies	2349	2349	4224	4224	2418	2418	8991	8991	0	
Other land	3245	2294	6689	3472	9311	7343	19245	13109	- 6136	31,88
Total:	115225	115225	167700	167700	125898	125898	408823	408823	0	X

(The Land Fund of the Republic of Lithuania, 2001; 2010)

Having analysed the changes of farming lands (from Table 2) we see that forests had increased by 7286 ha during the analysed period. The decrease of other lands is being noticed as well. Agricultural farming lands changed insignificantly – they decreased by 845 ha. Though the analysed territories are attributed to the zone of Middle Lithuania we see the general tendency of the change of farming lands – forest areas increase and the areas of other landed property decrease. In this zone agricultural farming lands should be used more rationally for the purpose of agricultural activity.

What influenced such changes of farming land? The main factors are as follows:

- the process of land reform, the ownership rights had been restored and land parcels had been returned during this period of time. The unevenness of the land reform works had direct impact on the formation of the structures of farms;

- the change of users – the majority of agricultural enterprises and companies were liquidated and lands were returned to owners;

- human economic activity influences the change of farming lands, because with the change of the purpose the structure of farming lands changes as well. This process is noticed near large towns. This factor can have negative influence on the changes of farming lands – uncultivated lands overgrow with bushes and the process of bog formation goes on;

- social processes, because human migration is noticed not only from villages but from the territories of towns as well. Due to the further decrease of the number of rural inhabitants the areas of productive lands can be abandoned or extensively used and the villages can simply disappear;

- the majority of meadows and pastures turned into bogs, overgrew with bushes and trees due to the inadequate use;

- in many places abandoned arable land plots are small and it is not easy to work with large agricultural machinery in them;

- preparation and implementation of the projects on the planting of forests in the land designated not for forestry purposes;

- spontaneous overgrowth with forests, farming lands used not according their purpose overgrow with trees and bushes.

In order to rationally use land, laws foresee that the change of the structure of farming lands is possible when improving soil characteristics, forming cultural landscape and aiming to ensure environment protection. When the land is used extensively economic features of the land worsen. In some places the land naturally turns into the farming lands designated for non-agricultural purposes, i.e. into forest, trees and bushes plantations, bogs and other unused land (Aleknavičius P., Aleknavičius A., 2010).

2. Zones of the agricultural specialization

Zones suitable for agricultural activity and agricultural activity recommended for the development in these zones are foreseen following the solutions of master plans and land management schemes. The direction of farm production has important significance on the structure of farming lands and crop rotation (Miknius, 2008).

The direction of farm production is being determined after the analysis of many factors as well as after the thorough evaluation of both inside and outside conditions.

In the article “The tendencies of the use of the land designated for agricultural purposes in Eastern Lithuania” D.Matoniene and V.Sudonienė (2004) analysed the use of the land designated for agricultural purposes. It is the region, where many to-be-solved questions interlace and there is not much territory suitable for farming in this region. The land is hilly and is affected by corrosion.

The land use system in the agrarian territories differ by the necessity to ensure proper social and economic conditions in rural areas and the rational use of soil potential and other natural characteristics, such as ecological stability, the change of agricultural farming lands, etc. Especially big attention was paid to the impact of natural environment on people and natural productivity of soils. In the master plan of the Republic of Lithuania approved by the Seimas of the Republic of Lithuania on 29 October 2002 (Resolution No. IX 1154), 7 zones of agricultural specialisation were defined (Lietuvos Respublikos bendrasis planas, 2002).

In his article “Peculiarities of the use of the land designated for agricultural purposes in Middle Lithuania” A.Aleknavičius (2003) wrote that in the territory of the zone of Middle Lithuania agricultural activity is one of the main ones. Agricultural farming lands make up 90 per cent of the total agricultural land area in these regions. In the districts of Middle Lithuania land reform works are being carried out more faster than in other districts since they are affected by better natural conditions. The development of agrarian territories in different zones was differentiated according to the land use conditions, social and economic factors (Table 3).

Table 3.

The zones of the agrarian differentiation established in the master plan of the territory of the Republic of Lithuania

Number of zones	The name of zone	Area		The indices of land use conditions	
		km ²	percent		
I	The Southeastern Lithuanian zone	772	11,8	T ₃ E ₃ D ₃ Ū ₃	772
II	The Baltic hill zone	1239	19,0	T ₂ E ₂ D ₂ Ū ₂	1239
III	The Aukštaitija and Dzūkija plateau zone	692	10,6	T ₁ E ₁ D ₁ Ū ₃	692
IV	The Middle Lithuanian zone	2426	37,2	T ₁ E ₁ D ₁ Ū ₁	2426
V	The Žemaitija plateau zone	647	9,9	T ₁ E ₁ D ₂ Ū ₃	647
VI	The Žemaitija hilly zone	242	3,7	T ₂ E ₂ D ₃ Ū ₃	242
VII	The zone of the lower reaches of the Nemunas River and the Pajūris Lowlands	512	7,8	T ₁ E ₁ D ₂ Ū ₁	512
	Total	6530	100	X	6530

Explanation of indices:

T – territory is used for the growing of agricultural production: T₁ – large (agricultural farming lands make up more than 55% of the territory), T₂ – average (agricultural farming lands make up 40-54% of the territory), T₃ – small (agricultural farming lands make up to 40% of the territory);

E – soil sensitivity for the intense land cultivation: E₁ – less sensitive; E₂ – sensitive to water erosion; E₃ – sensitive to wind erosion;

D – productivity of agricultural farming lands: D₁ – productive lands (when productivity is 40 points or more), D₂ – medium-productive lands (when productivity 33-39 points), D₃ – unproductive lands (productivity up to 32 points).

Ū – conditions for the formation of perspective agricultural structures: Ū₁ – favourable conditions to form large farms; Ū₂ – favourable conditions to form medium-sized and small farms; Ū₃ – possibility to coordinate farms of various sizes and types.

These conditions were defined after the evaluation of the partition of farming lands, road network, sizes of fields and demand for land reclamation works, dislocation of rural inhabitants in small towns, compact villages (settlements) and individual farms.

Analysing the data of the table one can see that the Middle Lithuanian zone covers the largest area. It makes up 37.2% of the total country's territory. According to the land use conditions this zone is the most suitable for agricultural activity. Conditions are favourable for the formation of large farms in this zone. The worst conditions are in the Southeastern Lithuanian zone. These are areas affected by corrosion, productivity is up to 32 points, conditions for the formation of large farms are unfavourable as well.

Land cadastre indices of the analysed regions are presented in Table 4.

Table 4.

Main land cadastre indices of the analysed districts

Number	Names of district municipalities	Total area (ha)	Agricultural farming lands		Productivity point	Average farm size
			ha	%		
1.	Joniškis district municipality	115224,80	83106,26	72,12	48.9	40,70
2.	Kėdainiai district municipality	167700,30	109274,73	65,16	50.0	31,65
3.	Radviškis district municipality	163480,10	103320,13	63,20	46.9	38,78
4.	Jurbarkas district municipality	150745,00	81226,56	53,88	43.2	21,70
5.	Kaunas district municipality	149595,47	77584,61	51,86	49.8	15,71
6.	Vilkaviškis district municipality	125897,97	97303,17	77,29	43.8	22,55

Vilkaviškis district is characteristic for the largest area according to agricultural farming lands. Most fertile soils are situated in Kėdainiai district. According to the average size of the farm registered in the Farmers' Register – Josniškis district tops the list. All analysed districts are characteristic for the conditions for the development of agricultural activity. The change of farming lands in these districts has the main tendency – forest areas are increasing. The increase of forest areas is noticed at the expense of other land.

3. Measures for the rational land use.

For the avoidance of negative changes of agricultural farming lands, measures able to stop the decrease of the number of rural inhabitants and the loss of the traditional farming ways should be foreseen. It is necessary to restore agrarian land-ownership. The suggested measures are as follows: support of young farmers, stimulation of business, craftsmanship and rural tourism, construction of dwelling houses, development of the modern transport and communication system, economic activity favourable for the formation and protection of cultural rural landscape. These measures should enable to solve the main problems due to which the impendence of the total disappearance of villages in thinly inhabited territories occurs. The main reasons of these problems – unequal living conditions, industrial methods in agricultural production and amounts (which increased because of this reason) of agricultural production, the loss of rural identity, negative rural attitude.

In the country's agrarian use policy master plan aims to coordinate main production branches of farms with the agricultural activity specialization corresponding to natural conditions. Characteristics of soils, farming traditions, dislocation of enterprises processing agricultural production should be taken into account when specializing farms.

The further change of the farming land areas will depend upon the land use intensity if intense agricultural activity will be developed and the areas of agricultural farming lands will not decrease (Kavaliauskienė, Tarvydienė, 2005).

The negative outcomes for agriculture are being calculated by the value of unused or not received agricultural production from the abandoned agricultural farming lands. It was defined that about 300-350 thousand hectares of non-declared agricultural farming lands are situated in relatively productive, most often drained lands and it is economically efficient to use them for agricultural activity. Calculating that the value of agricultural production grown during one year is 1.7 thousand Lt/ha, of which the value of plant-growing production makes up 59%, the total losses from the negligent use of land (in indicated areas) reach about 320 million Lt per year. Besides, a part of direct payments for agricultural farming lands go to the land owners not cultivating lands and even not living in those places. (Aleksavičius, P.)

Districts situated in the Middle Lithuania have the most perspective conditions for the formation of large and medium-sized parcels. The main agricultural fields are plant-growing and cattle-breeding, the rest part of farms are engaged in mixed farming activity, crop growing and pig-breeding. The number of farms diversifying their farms by economic activity, when beside traditional farming people are engaged in non-traditional activity or some other alternative activity, increases. The most popular additional economic activity of farmers is the procession of agricultural mechanized works and agricultural services, as well as the procession and marketing of agricultural products, timber processing. Ecological farming is getting very popular as well. The speeds of farm specialization and activity diversification basically are limited by the shortage of motivation, investments and entrepreneurship. Besides, small farms cannot survive under the modern competition conditions. It would be complicated to expand small farms because land market is not very intense. Modernization of farms would enable to increase the total efficiency of agricultural production.

The following measures are foreseen in the territories, where the conditions for agricultural activity are not so good: reduction of farm production, development of non-traditional agricultural branches, alternative activity and afforestation of the part of the land.

One more important problem had occurred, i.e. the management of drainage systems. In Lithuania 80% of the total farming land area were drained. However, about 54% of all drainage systems are functioning in a bad way, 15% of them are in bad technical state. Systems are not adjusted to modern

farming; therefore, it is necessary to improve the quality of drainage systems in order to create suitable conditions for farming as well as to ensure environment protection requirements.

The countryside should be an attractive and secure place to live in with good infrastructure, vital sectors of agriculture, forestry, fishery and other activities, with healthy environment as well as with the preserved and well-groomed landscape. All rural regions should be developed evenly while coordinating social and economic policy.

The priority fields of the financing of the rural development fund for the years 2007-2013 are the increase of the competitive ability of the forestry sector as well as the improvement of environment and the landscape (Žin., 2004, Nr. 124-4490).

Problematic rural development questions should be solved only in a complex manner while coordinating territory management works and state support measures. The preparation and gradual implementation of the master plans of the municipality territories, land management schemes and rural development land management projects are attributed to the works of the territory management in rural areas. When determining land use priorities master plans should plan agricultural areas used for agricultural activity, perform their territorial zoning according to soils and the recommended farm specialization, ensure the formation of the system of rural inhabited localities as well as the improvement of social conditions. The task of the land management planning documents – to define valuable agricultural farming land areas (necessary to be preserved), to foresee their improvement measures (road network, reconstruction of land reclamation systems, reclamation of virgin soil), to choose areas allotted for the build up and the dislocation of the objects of infrastructure, to define areas, in which afforestation is purposeful and supported one. The implementation of planned solutions should be carried out by municipalities and rural communities.

The state support is the most necessary to families living or housing in rural areas. The ways and volumes of their support depend upon the activity carried out by these persons as well as upon the suitability of land for economic activity (productivity).

Considering that the use of the financial means from the European agricultural fund for rural development as well as from the general financing should be more differentiated while the priorities of the allocation and conditions should be related with the peculiarities of localities as well as with the solutions of the territorial planning documents. It would correspond to the tasks of sustainable development and would allow reduce regional differences. The measures of the Lithuanian Rural Development Program for 2007-2013 should stimulate the more intense use of land (to the extent environment protection restrictions allow), to renovate land reclamation systems and increase the area of declared agricultural farming lands.

Land consolidation can be the only instrument able to implement such projects in rural areas. Without the improvement of agricultural structures (substantiated by the voluntary principle), land consolidation can join the ranks of the implementation of rural development measures and the reconstruction of drainage systems, to create preconditions for the development of rural infrastructure, to stimulate afforestation of lands and environment protection.

According to V.Daugalienė, the following possibilities occur when performing the land consolidation: to implement projects of rural communities, to take into consideration peculiarities of the region, environment protection and cultural heritage requirements, to prepare the complex reconstruction of entire territory. According to the author, road network, to-be-reclaimed areas, electricity lines will be designed, land areas suitable for recreation and tourism development will be afforested when preparing the land consolidation project. The process of land consolidation is long lasting and rather expensive (Daugalienė, 2006).

The rural tourism is being evaluated as one of the main directions of alternative trade, and the development of handicrafts is being evaluated as part of Lithuanian ethnic culture.

Stimulation of ecological farming is useful to the environment as well – to soil, water bodies and biodiversity. It is important to apply suitable farming methods, to sow damaged areas with perennial grasses as well as to afforest these areas.

Conclusions and suggestions

1. Processes occurring in our country have influence on the development of rural areas and agriculture: the changes of the number of rural inhabitants; the decrease of the agricultural farming land areas;

transformation of economic structures. These processes occur unevenly in separate regions of our country.

2. In Lithuania the land designated for agricultural purposes covers more than 60 percent of the country's territory, therefore it is very important to preserve and improve agricultural farming land areas in suitable territories.

3. When analysing the change of the farming lands situated in the Middle Lithuania we have noticed the uneven decrease of agricultural farming land areas and the increase of forest areas as well as the decrease of the areas of other lands.

4. Productivity point of agricultural farming lands, sensitivity of soils to erosion processes and favourable conditions for the development of large farms and agricultural farming land areas from the general zone area – these are the factors having not much impact on the changing processes of farming lands. Land users, human migration processes in rural areas, the origin of abandoned, uncultivated land areas and economic factors have the largest impact on the change of farming lands at present.

5. 7 territories of agro-economic zoning are singled out in the country's territory. They are unequally suitable for agricultural activity. The Middle Lithuanian agro-economic zone has the best land use indices. Agricultural activity should be developed in this zone.

6. State support measures should be more differentiated according to the country's regions and localities in order to equalize incomes falling on squire unit for the subjects of agricultural activity.

7. In order to regulate rural development processes, the following measures are necessary: territorial planning documents, economic principle specific support and the improvement of normative legal acts regulating land use and territory management.

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Резюме

ВИРГИНИЈА АТКОЦЬВИЧЕНЕ, ДАЙВА ГУДРИТЕНЕ, ВИЛМА СУДОНЕНЕ. АНАЛИЗ ИЗМЕНЕНИЙ ТЕРРИТОРИЙ ХОЗЯЙСТВ В СРЕДНЕЙ ЧАСТИ ЛИТВЫ

Социальные, экономические и экологические процессы определили состав, использование и изменения земельных угодий Литвы. Существенные изменения земельных угодий произошли при расширении площадей леса, который естественным образом вырос на заброшенных и необрабатываемых землях и болотах. Оценка изменений земельных угодий осложняется несовпадением данных учета земли. Инвентаризация земли - достаточно дорогостоящая работа, поэтому правильный выбор подходящего метода возможен только с учетом рабочих и временных затрат, объективности установленных данных и возможности периодического их обновления.

Территория Литовской Республики в силу природных и географических особенностей неоднородна, кроме того отличается исторически различным экономическим и социальным развитием отдельных регионов. На общем плане Литовской Республики выделены 7 зон сельскохозяйственной специализации. Объемы производства растениеводства, животноводства и соответственно уровень доходов, а также качество жизни в различных регионах существенно различаются. Для анализа выбраны территории шести районных самоуправлений из агрохозяйственной зоны Средней Литвы, которая наиболее пригодна для сельскохозяйственной деятельности. Основными факторами, определившими сельскохозяйственную деятельность, явились высокий балл производительности сельскохозяйственных угодий, отсутствие ярко выраженного процесса эрозии почвы, благоприятные условия для формирования крупных хозяйств и высокий процент доли сельскохозяйственных угодий от общей площади территории.

Цель исследования – проанализировать на основе статистических данных изменения земельных угодий на территории агрохозяйственного зонирования Средней Литвы в 2001-2010 гг. и предусмотреть меры, способствующие более рациональному использованию земли.

Новизна проделанной исследовательской работы состоит в том, что проанализированы изменения сельскохозяйственных угодий агрохозяйственной зоны Средней Литвы, которые произошли за последние девять лет. Выбранная тема актуальна, так как данные об использовании земли необходимы при подготовке стратегии развития страны, чтобы наметить меры поддержки, осуществить планирование территорий, а для фермеров – выбрать наиболее эффективный способ использования земли. Данные статистики 2001-2010 гг. отражают общую тенденцию увеличения лесных массивов и уменьшения площадей неиспользуемых земель. Проведенный статистический анализ данных исследуемых районов показал, что сокращение сельскохозяйственных угодий происходит неравномерно, а увеличение лесных площадей идет за счет уменьшения других земель. Факторы агрохозяйственной зоны Средней Литвы на эти изменения в значительной степени не влияют.

Во избежание отрицательных изменений сельскохозяйственных угодий необходимо наметить меры, способствующие остановке сокращения сельского населения и утраты традиционного способа хозяйствования. В первую очередь общий план аграрной политики страны имеет цель согласования ведущих отраслей производства хозяйств с наиболее соответствующей природным условиям специализацией аграрной деятельности. Законы, регулирующие земельные отношения, прямо или косвенно соотносятся с множеством юридических актов, на основе которых планируется использование территории, осуществляется земельная или лесная деятельность, строительство, эксплуатируются недра земли. В целях обеспечения сбалансированного развития села целесообразно регулировать этот процесс, подготавливая и воплощая документы территориального планирования, дифференцированно применяя меры государственной поддержки, а также совершенствуя правовые акты, регламентирующие использование и благоустройство земли. Консолидация земли может быть единственным инструментом, способным воплотить проекты в сельской местности. Средства Программы по развитию литовского села в 2007-2013 гг. должны стимулировать интенсивное использование земли, приведение в порядок мелиоративной системы и увеличение декларируемых площадей сельскохозяйственных угодий.

Ключевые слова: аграрное зонирование, сельскохозяйственные угодья, развитие села, альтернативная деятельность, сельское хозяйство.

Reviewed by: assoc.prof. Antanas Miknius (LUA).

Virginija Atkocevičienė. Lector. Lithuanian University of Agriculture, Faculty of Water and Land Management, Department of Land Management. E-mail: virginija.atkocevicene@gmail.com.

Daiva Gudritienė. Lector. Lithuanian University of Agriculture, Faculty of Water and Land Management, Department of Land Management. E-mail: gudritiene@gmail.com.

Vilma Sudonienė. Dr. National Land Service under the Ministry of agriculture of the Republic of Lithuania. E-mail: VilmaS@zum.lt