

THE USE OF AGRICULTURAL LANDS IN AUKŠTADVARIS REGIONAL PARK

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Abstract. Analysis of the declared agricultural land and crop areas situated in Aukštadvaris regional park, which is situated in southeastern Lithuania, is presented in the article. Almost the entire territory of the park is situated in Trakai district. Paluknys subdistrict, situated in the southeastern part of Trakai district, was chosen for the comparison of agricultural lands in the regional park. Following the data of the Agriculture information and rural business center, the total area of agricultural lands and crop covers 1955.14 ha, that makes up 11.48 per cent of the total area of the regional park. The number of the farmers, who declared their crops, is 471. The area of the declared agricultural lands in Paluknys subdistrict – 2065.45 ha and it makes up 14.75 percent of the total area of the subdistrict. 164 farmers introduced declarations. The declared areas of the Aukštadvaris regional park and Paluknys subdistrict, for which direct payments are paid, are analyzed in the article as well.

Keywords: protected areas, regional park, land use, agricultural lands, farming activity, declared areas.

1. Introduction

Agriculture has been one of Lithuania's most important occupations for many centuries. Agriculture in Lithuania always had and has very important social, economical and ethno-cultural functions; therefore it is an exceptional (priority) branch of economy having large influence on the living nature. The entire environment surrounding us, landscape as well as the variety of the wildlife nature depend on the activity of agriculture, therefore the necessity to coordinate the activity of agriculture and the preservation of biodiversity arise.

The land designated for agricultural purposes comprise the plots of land used or allotted for the functioning of agricultural enterprises and farmers' farms and other land plots used or intended for the development of agricultural activity. These territories are specific, because agricultural lands (improved land areas having the fertile soil layer and are suitable for the growing of agricultural plants) occupy the largest part of these territories. It is the main measure of the production in agriculture. However, the area of agricultural lands is limited, their productivity depends upon the soil characteristics of the locality, therefore, this land should be protected in the same way as other non-renewable natural resources. The necessity to conserve and suitably use land as an important component of natural environment is emphasized in strategic international and national documents (Aleknavičius and Aleknavičius 2010).

In one of these documents, i.e. in the Rural development program for Lithuania 2007-2013 (Lietuvos žemės... 2007), the priorities/objectives of the implementation of the second strategic axis are as follows: to protect and enhance biodiversity, to promote the use of environment-friendly farming practices (ecological farming, inducements for the representatives of the agrarian environmental protection programs, payments to farmers farming in the "Natura 2000" territories as well as in the lands designated for agricultural and forestry purposes), to take measures for the improvement of soil and water quality, to support first afforestation of agricultural lands and sustainable forest management, knowledge accumulation and the good farming experience and, without any doubt, large investments into the primary production and the processing industry of agricultural products according to the first axis, as well as diversification of the activity and the alternative environment-friendly activity, local cooperation and partnership, the objective of which is to improve living conditions in rural areas (according to the third axis).

After the achievement of the objectives of the strategy following the planned measures in the fields of ecological farming, renewable energy sources, climate change, soil protection and forestry, the EU environment protection requirements would be implemented.

Protected areas are land and (or) water areas with clear boundaries with recognized scientific, ecological, cultural or other values and to which a special regime for

use and protection is being defined by legal acts (Lietuvos Respublikos... 2001; 2005; 2007).

Economic activity is being limited in protected areas and conditions for the natural development of nature are being created. The richer, more natural and the more varied landscape persist in protected areas raising positive emotions by its aesthetic characteristics. In protected areas, very often objects of cultural heritage supplement the elements of nature. The entire variety of the country's landscape should reflect in the system of protected areas.

The conservation safety of Lithuanian landscape as well as its condition are reflected by the quantitative and qualitative development of the protected area network of the conservation priority (reserves and conservation areas), complex (national and regional parks) and partially biosphere monitoring (biosphere reserves and polygons) as well as by its presentability from the point of view of the landscape variety, the development of the valuables of natural and cultural heritage (Bukantis *et al.* 2008).

The interests of preservation and economic use unavoidably intercross due to the importance of the landscape and biodiversity, the uneven position of the valuables of natural and cultural heritage, the universal value of natural resources and human activity in these territories. The economic activity in protected areas is being regulated (Raudonytė 2009).

Having in mind that human health and welfare depend upon the condition of the environment as well as upon the stability of the landscape and the biodiversity and that the changes of natural processes (conditioned by human activity) are the long-term ones and their negative impact can show up after many years, it is necessary to take into consideration the wants of future generations as well as to preserve the integrity of protected areas, to assess the suitable usage regime as well as to evaluate the benefit of the possible functioning and non-functioning. All this should be achieved through the clear, particular and legal regulation of these especially important territories (Ivavičiūtė and Gurskienė 2010).

The abundance of normative acts, their legal ambiguity (supremacy of some acts over others) and especially linguistic variety of the content of norms cause many practical problems when applying normative acts and making use of their interpretational possibilities when the questions over land ownership, construction works in the protected areas are solved.

The number of legal acts (that are in force at present) should be reduced, the order of the giving of various certificates (licences) should be simplified, the system of compensation should be improved, the personal responsibility over the decision-making as well as over the evaluation of legal acts from anti-corruption viewpoint should be tightened.

The fact that our state has insufficient possibilities of financial compensations for the solving of various problems inflames the situation, and the legal base of the environment protection is insufficiently perfect in some cases as well (Bukantis *et al.* 2008).

Consequently, it is necessary to form the clear and sufficient policy over the compensation for the restric-

tions of the farming in protected areas, which should decrease the load of ordinary economic activity in protected areas and their usage should become more favorable for protected valuables.

The object of the investigation. Agricultural land use in Aukštadvaris regional park and Paluknys subdistrict.

The aim of the investigation. To carry out the comparative analysis (as well as the one of the declared areas for which direct payments are paid) of the agricultural lands situated in Aukštadvaris regional park and Paluknys subdistrict.

Tasks of the investigation:

1. To characterize Aukštadvaris regional park.
2. To carry out the analysis of the declared agricultural lands in Aukštadvaris regional park and Paluknys subdistrict.
3. To analyze the declared areas situated in the regional park and subdistrict, for which direct payments are being paid.

2. The method of the investigation

Comparative, analytical as well as statistical and logical analysis methods were used for the investigation.

The analysis of the agricultural lands in Aukštadvaris regional park and Paluknys subdistrict was carried out following the data of the Agriculture information and rural business center on the declared areas of agricultural lands and crops.

The influence of the regulations applied to Aukštadvaris regional park upon the intensity of agricultural use was tried to be determined after the carried out investigations.

3. Characterization of Aukštadvaris regional park

Aukštadvaris regional park is situated in southeastern Lithuania, in the most remarkable part of the Dzūkai upland. Almost entire territory is situated in Trakai district. Only the small northwestern part belongs to Prienai and Kaišiadorys districts. The area of the regional park covers 17032.43 ha, in which Mergiškiai nature reserve (covering the area of 157 ha) is situated. There are 15 reserves in Aukštadvaris regional park: Antakmeniai, Tabaliukai, Verniejus, hydrographical reserves of the sources of the Strėva and Verknė, Mergiškiai, Saloviškiai, Spindžius, Vilkokšnis, Skrebis botanical reserve, Verknė botanical-zoological reserve, Moša archeological reserve, Aukštadvaris urbanistic reserve, etc.

27 territories correspond to the criteria of the habitats of European importance.

There are over 100 objects of cultural heritage in Aukštadvaris regional park (RP): 39 archeological places, 33 places of interment, 20 mythological places, over 20 valuable constructions and paraphernalia and urbanized localities (Aukštadvario 2011).

The entire territory of Aukštadvaris regional park is incorporated into the physical-geographical region of South Lithuania, into the sub-region of the Dzūkai upland. Hilly and lake moraine uplands cover the largest part of the territory of Aukštadvaris regional park. Because of the expressive relief and the abundance of lakes

the territory is especially valuable from the aesthetical point of view.

Surroundings of Aukštadvaris are the most picturesque sites in Lithuania, what creates good preconditions for the development of recreation and tourism.

Aukštadvaris regional park is famous for its clear and clean lakes, which occupy almost 8 percent of the whole territory.

When the Government of the Republic of Lithuania had approved the plan of the buffer and protection zones of Aukštadvaris regional park and its zones on March, 9, 2005, the area of Aukštadvaris regional park increased by 482 ha (according to the new plan) and at present covers the area of 17032.43 ha. After the changes, the largest area is occupied by the functional priority zone – the territory of reserves covering 44.20 percent of the whole park’s territory, and the ecological protection priority zone, covering 16.47 percent of the whole park’s territory (Table 1).

Table 1. The areas of the functional priority zones of Aukštadvaris regional park

Number	The name of the functional priority zone	Area, ha	Percent from the RP area
1	Conservation priority zone - reserve	156.39	0.66
2	Conservation priority zone - parks	10551.10	44.20
3	Ecological protection priority zone	3932.69	16.47
4	Recreational priority zone	1474.29	6.18
5	Economic priority zone	692.64	2.9
6	The living zone	225.32	0.94
Total:		17032.43	71.35
The area of the buffer protection zones		6839.62	28.65
Total area		23872.05	100

The average efficiency of the agricultural lands in Trakai district is 33.4 points, i.e. is smaller than the average point of the Republic of Lithuania (39.1).

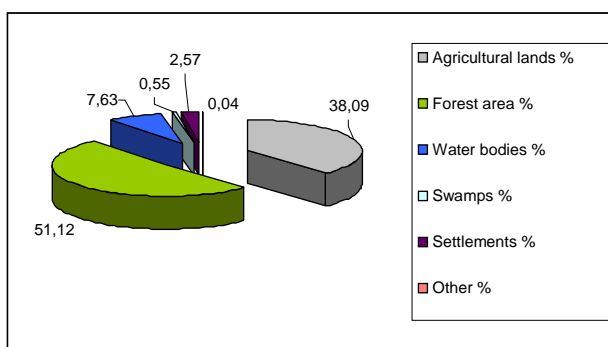


Fig 1. Distribution of agricultural lands in Aukštadvaris RP, percent

The agricultural lands in Trakai municipality makes up 32.7 per cent, roads – 2.5 percent of the urbanized territory, water bodies – 4.9 percent, other lands – 10.2 percent (Trakų rajono... 2010).

The agricultural lands in Aukštadvaris RP make up 38.09 percent of the whole park’s territory (Raudonytė 2009) (Fig. 1).

Forests cover the largest part of agricultural lands (51.12 percent). They are divided into forest massives 100-1700 ha each. Park forests are very different (from the point of view of types, age, etc.).

Pine-trees, birches, oaks, hornbeams grow in these forests (Aukštadvario 2010).

4. The analysis of the declared areas of agricultural lands in Aukštadvaris regional park and Paluknys subdistrict

Following the data of the Agriculture information and rural business center the declared area of agricultural lands and crops occupy 1955.14 ha, it makes up 11.48 percent of the total regional park’s area. The number of the farmers, who declared their farming lands, is 471. The average area of the declared farms is 4.15 ha.

Paluknys subdistrict, situated in the southeastern part of Trakai district, was chosen for the comparison of the use of agricultural lands in Aukštadvaris regional park. The territory covers the area of approx 14 thousand ha. There are 14 villages in the subdistrict. Due to the low productivity of soils in the subdistrict the most profitable is the production of dairy products. Part of the inhabitants upholds the traditional agriculture (Trakų rajono... 2010).

The declared area of the agricultural lands in Paluknys subdistrict covers 2065.45 ha and it makes up 14.75 percent of the total subdistrict’s area. 164 farmers introduced declarations. The average area of the declared farms – 12.59 ha.

Having carried out the analysis of the data of the declared areas of the farmers’ farms in Aukštadvaris regional park one can see that spring crops cover the largest areas (59.87 percent), winter crops cover 19.18 percent of the areas, and the areas of potatoes and vegetables make 4.64 percent (Fig. 2).

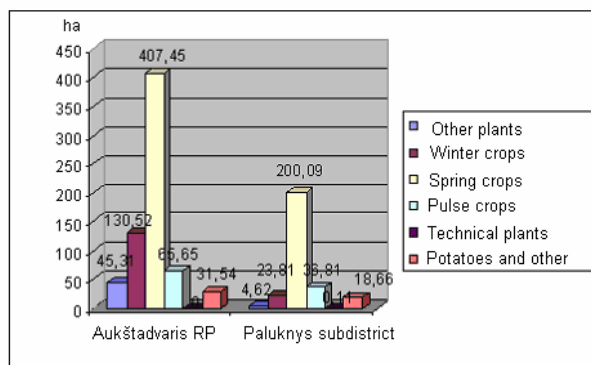


Fig 2. The declared farmers’ farms crop areas in Aukštadvaris RP and Paluknys subdistrict, ha (data source: the Agriculture information and rural business center)

Having analyzed the data of Paluknys subdistrict over the declared areas of agricultural lands we came to the conclusion that spring crops cover the largest areas (70.42 percent) (the same as in Aukštadvaris RP), whereas winter crops make up 8.38 percent of the area of the grown cultures, i.e. approx 10 percent less in comparison with the declared area of winter crops grown in the regional park. Pulse crops make 12.96 percent, i.e. by three percent more in comparison with the analyzed park.

The farmers farming in Aukštadvaris regional park did not declare technical plants. The area of 0.11 ha of these plants was declared in Paluknys subdistrict.

Calculations carried out during the investigations as well as received data are expressed in percent from the area of the declared agricultural lands. The method of comparison was used for the fulfillment of analysis.

Comparing the data received from Aukštadvaris regional park and the municipality of Trakai district over the declared areas of agricultural lands one can see that the crop structure in the arable land is very similar – larger land areas are used for the growth of spring and winter crops (Fig. 3). Consequently, the regulation of the activity carried out in Aukštadvaris RP does not have influence upon the intensity of land use.

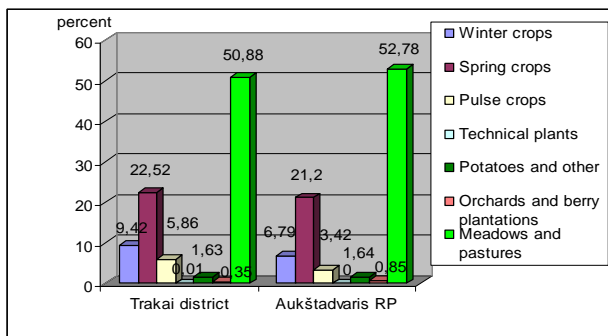


Fig 3. The declared farmers' farms crop areas in Aukštadvaris RP and Trakai district

Rye cover the largest area of winter crops grown in Aukštadvaris RP (69.72 ha or 53.42 percent), barley occupy the smallest area (13.79 ha) (Fig. 4). The area of rye covering 13.77 ha (57.83 percent) was declared in Paluknys subdistrict, no barley areas were declared at all. Comparing the data expressed in percentage one can see that wheat makes up 12.63 percent of winter crops grown in the park, they make 27.34 percent in the subdistrict. However, the areas of triticale distribute in the following way: 23.38 percent in the park and 14.83 percent in the subdistrict.

In the Trakai district municipality wheat makes up 9.01 percent of the area of declared winter crops (in the Republic of Lithuania – 64.18 percent), rye – 54.3 percent, the same in Aukštadvaris RP and in Paluknys subdistrict. Meanwhile, in Lithuania rye makes up 14.14 percent of the area of declared winter crops. In the Trakai district municipality, the area of the declared triticale makes up 35.85 percent of the winter crops area, in Lithuania – 17.67 percent (Žemės ūkio... 2009).

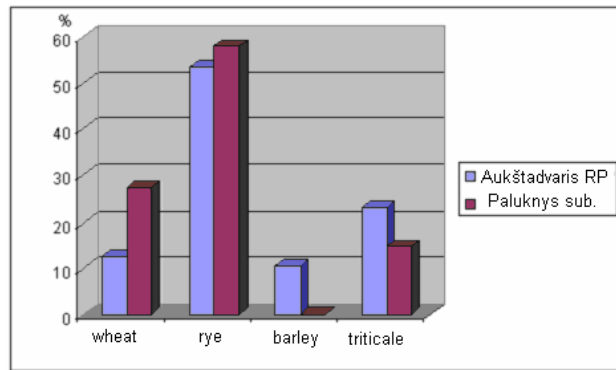


Fig 4. The declared areas of winter crops in Aukštadvaris RP and Paluknys subdistrict, ha (data source: the Agriculture information and rural business center)

As it was mentioned above, spring crops make up the largest part of the cultures grown in Paluknys subdistrict. In Aukštadvaris regional park, the largest areas are occupied by oat (39.22 percent) and buckwheat (29.32 percent), maize occupies the area of only 0.2 ha (Fig. 5). In Paluknys subdistrict, maize makes up the largest areas of declared spring crops (28.17 percent), wheat makes up 21.78 percent and spring barley – 21.94 percent, oat – do not exceed six percent. Both in the regional park and in the subdistrict no malted barley is grown.

In the municipality of Trakai district, buckwheat makes up the largest part of the declared spring crops (45.08 percent), whereas in Lithuania – only 4.82 percent. In the republic of Lithuania, spring barley makes up the largest part of spring crops – 48.02 percent, in the municipality of Trakai district – 9.38 percent (Žemės ūkio... 2009).

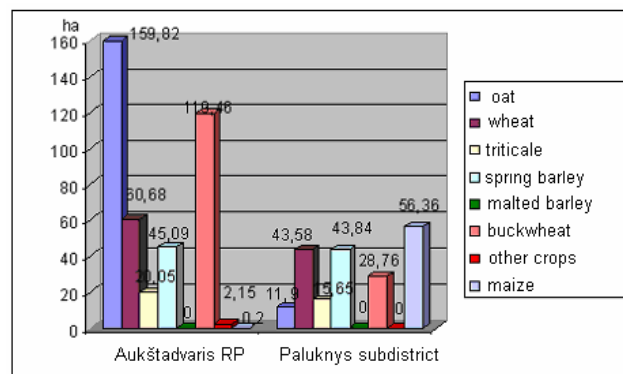


Fig 5. The declared areas of spring crops in Aukštadvaris RP and Paluknys subdistrict, ha (data source: the Agriculture information and rural business center)

Pulse crops make up 9.65 percent of all crops grown in the regional park and 12.96 percent of all crops grown in Paluknys subdistrict. Sweet lupines cover the area of 49.84 ha (75.92 percent) in the park, field beans – only 2.44 percent (Fig. 6). The areas of the pulse crops declared in the subdistrict distribute a little bit differently, i.e. the areas of sweet lupines and field beans were not declared at all. Vetches and their mixtures make up the

largest area of pulse crops (89.73 percent or 33.03 ha), the rest of the area is occupied by peas (10.27 percent).

The largest part of the declared pulse crops in the municipality of Trakai district (the same as in Aukštadvaris regional park) is occupied by sweet lupines (60.22 percent) and peas (28.93 percent), whereas in the Republic of Lithuania the areas of the declared peas make up 58.4 percent, and lupines – 24.01 percent (Žemės ūkio... 2009).

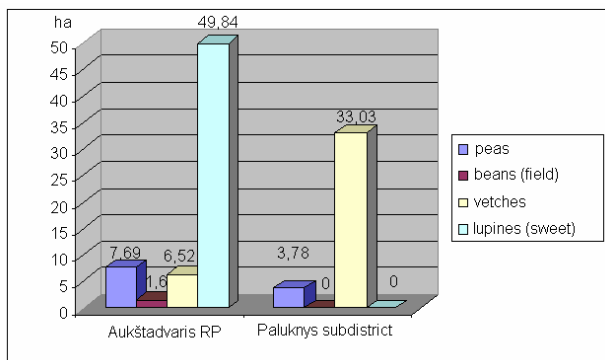


Fig 6. The declared areas of pulse crops in Aukštadvaris RP, ha (data source: the Agriculture information and rural business center)

In the municipality of Trakai district the areas of the declared technical plants cover 2.37 ha, of which winter rape cover 0.5 ha, spring rape – the area of 1.87 ha. In the subdistrict, the 0.11 ha area of spring rape was declared. There were no declared technical plants in Aukštadvaris regional park.

In the municipality of Trakai district, orchards and berry plantations cover 76.24 ha, in the park they cover the area of 16.35 ha, i.e. only 0.25 percent of the park's agricultural lands or 21.45 percent of the orchards planted in the municipality of Trakai district. The area of only 0.15 ha of the grown fruit trees was declared in the subdistrict.

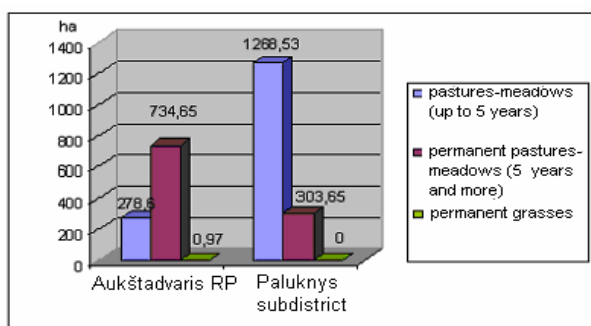


Fig 7. The declared areas of meadows and pastures in Aukštadvaris RP and Paluknys subdistrict, ha (data source: the Agriculture information and rural business center)

Farmers have declared the area of 10174.22 ha of meadows and pastures situated in the regional park, from which permanent pastures – meadows make up 72.5 percent (Fig. 7).

In Paluknys subdistrict predominate pastures – meadows up to 5 years (80.69 percent), and permanent mead-

ows make up 19.31 percent. There area of 1572.18 ha of meadows and pastures was declared in the subdistrict (84.65 percent of the agricultural lands area).

Pastures and meadows up to 5 years cover the largest part of the areas of pastures and meadows declared in the Republic of Lithuania (655805.47 ha). Permanent pastures – meadows predominate (64.27 percent or 7057.73 ha) in the Trakai district municipality.

5. The rural development policy for 2007-2013 and payments for the declared areas

As far back as 1997, at the conference of the European Council (held in Luxemburg) the European agricultural model was recognized as the base for the further development of the European agricultural policy. The main characters of this model are as follows: the stable and multi-functional agriculture and the multi-sectoral rural development. This model is substantiated by the balance between economical, social and ecological valuables. It influences the multi-functionality of the activity of rural localities manifesting not only in the agricultural production but in the preservation of rural environment and landscape and in the sustainable development in rural regions as well (Treinys 2005).

The main priorities of the rural development of the European Union and the Republic of Lithuania for 2007-2013 are as follows: expansion of the competitive ability of agricultural sector; improvement of the condition of the environment and landscape; increase of the life quality in rural areas and diversification of economical activity.

Special financial axes are planned for the achievement of every priority. One of the financial axes of the rural development policy is the improvement of the environment and landscape. Following priorities are being defined for this axis (Lietuvos Respublikos... 2007):

- Environment-friendly farming practices (23.36 percent of the main support of axis 2). It is intended to limit the intensity of farming activity in the places of high nature and landscape value.
- Climate change reduction (16.93 percent of the main support of axis 2). It is aimed to combat climate change through rational use of available land resources in particular abandoned agricultural land not used for agriculture as well as sustainable forestry development through afforestation.
- Preservation of biodiversity and development of traditional agrarian localities of high nature value (59.70 percent of the main support of axis 2). It is intended to ensure that suitable farming methods and forest management practice should be applied in the areas of biological variety.

On the other hand, there are areas in which economical activity of the necessary level is not maintained and it endangers natural valuables existing in them as well as there are areas, which in the future will, in all probability, become abandoned, if no actions will be taken. Therefore it is necessary to implement actions stimulating local inhabitants to be occupied in suitable economic activity not

harming valuables of the environment. For this purpose such measures as „Nature 2000“, the support for farmers farming in less favourable for farming areas, afforestation and the sustainable development of forest husbandry, are invoked. The support for farmers farming in less favourable for farming areas is closely connected with the integrated support related principle, according to which farmers participating in the above-mentioned program must maintain good agricultural and environmental conditions in the supported land areas.

Compensations are paid to those farming in the localities with worse natural conditions for farming or some environmental restrictions are predicted as well as the support is given for the methods of agricultural production stimulating environment protection and landscape protection (Žemės ūkio... 2007).

The total area of agricultural lands, crops etc., for which the compensational payment according to the programs „Ecological farming“, „Landscape management“, „At-risk water bodies' condition improvement“ is paid, should not be less than 1 ha. The field area, for which payments are asked according to the following programs, such as „Landscape management“, „The management of natural and semi-natural meadows“, „Wetland management“, „The management of water bodies' coastal protection zone in meadows“, „Protection of water bodies from pollution and soil erosion in arable lands“, „Stubble fields during winter“, „Strips of woody plants in arable land“, „Ecological farming“, „The management of at-risk water bodies“, should not be smaller than 0.1 ha (Lietuvos 2008).

In Aukštadvaris regional park, direct payments are paid to 470 farmers for the area of 1921.56 ha, i.e. 98.28 percent from the total declared area and 29.62 percent from the regional park's agricultural land area. 56 farmers are not paid direct payments for the area of 33.58 ha, i.e. for 1.72 percent from the total declared area.

445 farmers (94.48 percent) farm in very unfavourable for farming localities (the total declared area – 1818.42 ha or 93 percent from the total declared area).

The total area of less unfavourable declared localities is 90.89 ha (4.65 percent), the number of farmers - 25.

21 farmer (2.83 percent) apply measures of ecological farming in the area of 151.84 ha and it makes up 7.77 percent from the total declared area. 7 farmers farm in Aukštadvaris regional park in the area of 20.79 ha of the Natura 2000 territory.

24 farmers (5.1 percent) are occupied in ecological farming, and the total area of ecological farms is almost 198 ha (10.11 percent from the total declared area and 10.28 percent from the declared agricultural land area).

163 farmers (from 164) in Paluknys subdistrict, who declared areas, get direct payment for the area of 2064.55 ha, i.e. 99.96 percent from the total declared area. Only 1 farmer does not get direct payment for the area of 0.8 ha.

162 farmers (98.78 percent) farm in very unfavourable for farming localities (the total declared area – 1971.43 ha or 95.45 percent of the total declared area).

No areas, concerning the farming in less favourable for farming areas, were declared.

Only 1 farmer from Paluknys subdistrict (0.61 percent) applies measures of ecological farming in the area of 15.19 ha. It makes up 0.74 percent from the total declared area.

Support recipients farming in the park get payments for the declared areas according to the measure „Landscape management“ of the Lithuanian rural development program for 2007-2013. In the field of activity „The management of natural and semi-natural meadows“ the area of 12.28 was declared (0.64 percent of the total agricultural land area, for which direct payments are paid). The declared area in Paluknys subdistrict (in the above mentioned field) was 93.62 ha (4.53 percent).

Support recipients participating in the activity „The management of natural and semi-natural meadows“ of the program „Landscape management“ must do the following: not to use pesticides, fertilizers and lime measures in meadows, to mow meadows every year, not to plough and sow meadows, to preserve single trees etc. (Lietuvos 2008).

According to the field of activity „Stubble fields during winter“ the total declared area is 2.23 ha, of which oat and their stubbles occupy the area of 1.27 ha, and spring, non-malted barley and their stubbles occupy the area of 0.96 ha. Rye and their stubbles occupy the area of 8.15 ha in the subdistrict (0.4 percent of the total agricultural land area, for which direct payments are paid), cereal-albumen (peas, field beans and sweet lupines) – oily plant mixtures (in which albumen plants predominate) and their stubbles occupy 30.00 ha (1.45 percent).

Support recipients participating in the activity „Stubble fields during winter“ of the program „Landscape management“ must keep to special requirements: to put in order straws after the harvest while putting them into bundles, chopping up and spraying them on the surface, not to spray pesticides and herbicides after the harvest, not to spray fertilizers on stubbles, not to lime, not to pasture livestock, etc. (Lietuvos Respublikos... 2008).

The declared areas in Aukštadvaris regional park (according to the measure „The first afforestation of the land designated for agricultural purposes“ of the Lithuanian rural development program for 2007-2013) are distributed in the following way:

- conifers with soft deciduous trees (not less than 20 percent) or soft deciduous trees (28.98 percent);
- conifers and (or) soft deciduous trees with the impurity of not less than 20 percent of hard deciduous trees and (or) lime-trees (71.02 percent).

According to the measure „The first afforestation of the land designated for non-agricultural purposes and the abandoned agricultural land“ the area of 3.68 ha (conifers and (or) soft deciduous trees with the impurity of not less than 20 percent of hard deciduous trees and (or) lime-trees) was declared.

In Paluknys subdistrict, the areas according to the above-mentioned measures were not declared. The ecological farming, afforestation and the expansion of woodedness in protected areas as well as others environment protection measures are very important factors for environment protection, ecological landscape, preservation of cultural heritage when evaluating such aspects as the rational use of agricultural lands and other ecological, social and economical functions.

6. Conclusions

1. Having carried out the analysis of the areas of declared agricultural lands and crops in Aukštadvaris regional park and in Paluknys subdistrict one can see that the areas of agricultural lands situated in the regional park distribute in the following way: pastures and meadows cover the largest part (59.28 percent), arable lands cover 39.76 percent, orchards cover 0.96 percent. The areas of agricultural lands situated in the subdistrict cover 84.69 percent, arable lands cover 15.3 percent, orchards – 0.01 percent.
2. In Aukštadvaris regional park, mostly are grown spring and winter crops (59.87 percent and 19.18 percent, respectively), in Paluknys subdistrict – spring crops (70.42 percent) and pulse crops (12.96 percent), winter crops make up 8.38 percent of the total area of grown cereals. Technical plants were not declared in Aukštadvaris regional park. 0.11 ha of spring rape were declared in the subdistrict.
3. Having compared the data of Aukštadvaris RP and the municipality of Trakai district over the declared areas of agricultural lands it was received that the crop structure in the arable land is very similar – larger land areas are used for the growth of spring and winter crops. Consequently, the regulation of the activity, carried out in Aukštadvaris RP, has no influence upon the intensity of land use.
4. 94.48 percent of farmers farm in very unfavorable localities of the regional park. 5.1 percent of the farmers, who declared their land, are occupied with ecological farming. 98.78 percent of farmers farm in very unfavorable localities of the subdistrict. Only 1 farmer from Paluknys subdistrict applies ecological farming measures in the area of 15.19 ha, it makes up 0.74 percent from the total declared area.
5. It is recommended to develop animal-breeding as well as ecological farming for the improvement of the condition of environment and landscape because of unfavorable localities in Aukštadvaris RP.
6. 470 farmers from Aukštadvaris regional park get direct payments for the area of 1921.56 ha, i.e. 98.28 per cent from the total declared area and 29.62 percent from the regional park's agricultural land area. 56 farmers do not get any direct payments for the area of 33.58 ha, i.e. 1.72 percent from the total declared area.
7. 163 farmers (out of 164, who declared their areas) from Paluknys subdistrict get direct payments for the area of 2064.65 ha, i.e. 99.96 percent from the total declared area. Only 1 farmer does not get direct payment for the area of 0.8 ha.
8. It is necessary to form clear and sufficient policy over the compensation for the restrictions of the farming in protected areas, which should reduce the load of ordinary economic activity in protected areas, and their usage should become more favorable for protected valuables.

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