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Compilation of open land bonus scales of the Gorno-Shirvan cadastral district and their distribution by land Plots

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Abstract

In our republic, works on the evaluation of soils are carried out according to the following methodology [4]: first, the standard soil and price criteria are selected in the studied area (usually these criteria are the reserves of humus, nitrogen, phosphorus, potassium in the soil in the root spreading layer and the total amount of absorbed bases) and based on these criteria the main credit rating scale is established. Then correction coefficients are found based on the correlative relationship between the productivity of agricultural plants and the internal diagnostic indicators of the soil, and at the final stage, a final bonity scale is established by applying correction coefficients (granulometric composition, soil layer thickness, salinization, shorification, erosion, waterlogging, etc.) and final credit scores are found. The studies usually end with the agro-production grouping of the lands and the drawing up of credit cartograms. At the moment, these studies on soil evaluation in our republic are genetic-production and more agroecologically oriented, and have entered the science under the name of "traditional soil evaluation". It should be noted that at the beginning of the 21st century, the assessment of land on an agro-ecological basis has become relevant again both in our country and abroad.

Introduction

Gaining state independence of our republic led to radical changes in all spheres of socio-political and socio-economic life of the country. During this period, the emergence of new political, social and economic relations in our Republic gave a new direction to the development of the country's agriculture. Radical economic reforms began to be carried out by the president of the Republic of Azerbaijan Mr. Heydar Aliyev in order to restore the destroyed economy of the country on a new basis and to ensure the establishment of a market economic system in the country. As a result of this necessity, the law of the Republic of Azerbaijan on "land reform" dated July 16, 1996 No. 155 IQ was adopted. This law defined the grounds for the implementation of land reforms in the Republic of Azerbaijan. As a result, three types of property – state, municipal and private property-were created on 8 million 641min 506 ha of land, which forms a single Land Fund of the Republic. The implemented land reforms served to create qualitatively new property relations on land based on the principles of economic freedom and social justice, to create a solid base for the development of the agrarian sector in Azerbaijan, to develop a market economy and business initiative, to achieve economic independence of the country, including food supply, as a result of which the material well-being The relevance of legal, socio-economic and environmental processes taking place on land in modern times determines the formation of scientific foundations of changes in this area and trends in their development. Of great importance is the scientific analysis of the current socio-economic and environmental situation of land resources arising from the realization of this necessity and the collected data on the state of land use at the current stage, which is an invaluable national wealth. From this point of view, the researches carried out in the direction of qualitative assessment of the Lands of the mountainous Shirvan cadastral district on the forms of ownership are of great scientific and practical importance.

Goals and objectives of the work.

The main purpose of the research work is to conduct a qualitative assessment of the lands of the mountainous Shirvan Cadastral district on the forms of ownership. In order to achieve the goal, the following tasks were set: study of modern natural-ecological conditions of the territory of the mountainous Shirvan Cadastral district; compilation of a soil map of the territory of the cadastral district on the basis of a comprehensive study of soil cover; conduct a qualitative assessment of territorial lands; establish open and final bonitet scales by applying; to carry out forest and agro-production grouping of Lands of mountainous Shirvan Cadastral district on the basis of open bonitet scale and draw up bonitet cartogram; to find the correlative relationship between soil fertility indicators and productivity of plant formations; to study the distribution of Lands of mountainous Shirvan Cadastral district on forms of ownership and conduct a qualitative assessment; to

Geographical position

Mountainous Shirvan Cadastral region includes low and medium mountainous areas of Shamakhi, Ismayilli, AGSU and Goychay administrative regions. Gobustan-Hilnational sub-region has been allocated within this Cadastral region taking into account land-landscape, climate and economic specialization. The total area of the cadastral district is 412290.66 ha, or 4.8% of the country's territory. Mountainous Shirvan Cadastral district is located on the south-eastern slope of the Greater Caucasus. Altitude indicators vary from 200 m to 1800 m. Mountainous Shirvan Cadastral district borders with Gabala region in the West, Ismayilli and Shamakhi regions in the North, Khizi

region in the East, Gobustan region in the South-East, Absheron, AGSU and Goychay regions in the South. The location of individual parts of the studied area at different heights above sea level has led to a change in natural factors here-climatic relief, soil, vegetation, subject to the law of vertical zonality.

Climate

The climate of the mountainous Shirvan Cadastral region is characterized by a mild-hot climate with relatively dry summers, rainy autumn and mild-cold winters. E.M.Shikhlinski [1,4], A.A.Madatzade [1,2] attributed Ismayilli and Shamakhi forestry to the temperate-humid climate region of the Greater Caucasus.

In the mountainous Shirvan region, solar energy and heat fall most into the foothills and make up 2200-2500 hours of solar energy, while in the middle mountainous zone it is 1900-2200 hours. 10^0C high active temperatures totaled 3000-38000s across the region [1,7,6]. The most windy days are observed in August, while the direction of the winds is northwest. The thickness of the snow cover does not exceed 20 cm. The first snow cover is observed no earlier than the end of November, the melting of snow falls on the beginning of March. Early frosts are observed on November 22, and late frosts on April 18.

The average monthly temperature in the winter months is 1.90 S in AGSU, while in Ismayilli this indicator is 0.70 S. In the south-east of the territory, the air temperature rises again to 4.00 S [4]. The average annual precipitation is 503 mm in Goychay, 510 mm in AGSU, 591 mm in Shamakhi and 809 mm in Ismayilli, 181 mm in cold period (I-II, XI-XII months) and 727 mm in Warm Period (IV-X months). It is typical that there are two Maxima (may and September) and two minima (January, August) in the annual distribution of precipitation. Despite the sufficient annual precipitation, drought conditions observed in July-August create tension in the moisture balance. Only in the mountainous part of Ismayilli region during the warm period of the year the amount of precipitation is slightly higher (424 mm).

The degree of study of the problem

Qualitative assessment of soils (bonitirovka) - means a comparative assessment of the quality of soils on the basis of their natural properties, which are stable and have a sufficient impact on the productivity of agricultural crops. According to another designation, soil bonitization is understood as the classification of soils important for the growth and development of agricultural crops and in close correlative dependence on plant productivity according to their fertility on the basis of objective signs and properties [12].

The purpose of soil bonitization is to assess the soil as a natural-historical object with fertility, in which the researcher evaluates the soil not from a specific organizational-economic point of view, but on the basis of the properties and signs acquired both in the natural-historical process and in the process of socio-economic development of society. To carry out bonitization work, it is necessary to study in detail all the properties of soils, to have a well-developed classification of soils, to have perennial information about the structure of the soil cover of the territory, about the productivity of leading agricultural crops cultivated on these lands [10].

When conducting bonitization of soils, the following two issues are solved: 1) it is necessary to differentiate soils according to their fertility, draw up appropriate scales and carry out classification

according to fertility; 2) it is necessary to determine the suitability of the soil for agricultural crops, that is, to draw up not a generalized scale, but a separate scale for each agricultural plant. Issue 1-refers to general bonitirovka, and Issue 2 individual bonitirovka. In recent times, the importance of general bonitirovka has decreased, and the importance of individual bonitirovka has increased. This is due to the fact that with the development of soil ecology, it has become clear that the ecological demand of each plant for soil is diverse. Therefore, individual bonitization on individual agricultural crops has become more realistic and relevant.

When conducting a qualitative assessment of soils, diagnostic indicators for each evaluated land region should be selected by thoroughly studying the soil cover, collecting indicators on the productivity of agricultural crops and studying the influence of individual factors of soils on the productivity of cultivated plants. The assessment of land in the land-price district is carried out in the following sequence [13]:

1) determination of the average values of indicators characterizing individual properties and signs;

2) determination of average annual productivity of agricultural crops cultivated on different soils;

3) selection of the main diagnostic indicators;

4) compilation of a bonitet scale based on natural indicators of soils and productivity of major agricultural crops.

The importance of qualitative land assessment (bonitirovka) is that it allows planning agricultural production, proper specialization, Organization of an effective system of land reclamation measures, fertilization, determining the profitability of farms, correctly setting the price of land, determining the optimal limits of land use. The bonitization of lands as a logical continuation of the complex study of land, allows for its economic assessment. Soil scientists consider bonitirovka to be an independent branch of soil science, while surveyors and economists view it as an integral part of the land Cadaster and economic assessment.

Despite the fact that the work on the differentiation and assessment of soils by quality was carried out in Ancient Egypt, Mesopotamia, China, Rome from the very beginning BC, the author of the first scientific methodology in this area was V.V.Dokuchaev [6]. He conducted his research on the Lands of the Nizhnegorod and Poltava provinces in 1882-1894, studied these lands on 27 indicators, using indicators of chemical, granulometric composition, moisture content, water permeability, capillarity, evaporation. At the next stage, for each type of soil studied, they built diagrams according to the thickness of the soil, the amount of humus, nutrients, physical properties, determined the average indicators, the best soil was determined by 100 points, the score of other soils was calculated in proportion to it. The figures were compared with the average yield of the plant over the past few years.

V.V.Dokuchaev [10] divided the land-assessment work into two parts: natural-historical (bonitirovka) and agricultural-economic (Economic Assessment). About this V.V.Dokuchaev wrote: "the correct results of the assessment should be deduced after determining the natural and economic conditions of the area where the farm is located. Only two-way control and a wide and comprehensive analysis of the natural-historical and economic factors that shape the income of the land will allow us to get away from false conclusions." V.V.Along with Dokuchaev on the training of land bonitirovka N.M.Sibirtsev [15] worked, was the author of the first textbook on Soil Science, allocated a special chapter on the bonitization of soils in the textbook. V.V.Dokuchaev

[10] and N.M.During the bonitization of soils according to sibirtsev [15], natural qualities reflecting the fertility of soils should be taken as the basis.

R.A. Akbirov [12] suggested using the following diagnostic indicators when bonitizing the soils of the forest-steppe zone of the Republic of Bashkortostan: the thickness of the humus layer, the percentage content of humus, physical clay and silt in the soil, the reserve of humus, nitrogen, phosphorus and potassium in the soil, mechanical composition, acidity, the sum of absorbed bases, soil absorption capacity, etc.

V.F.Ivanov, A.S.Ivanova [10] studied perennial soils on the Crimean Peninsula and developed a new method of bonitization of fruit trees, taking into account their biological characteristics. According to this method, soil assessment is carried out on the entire root spread layer (0-100-150-300 cm), and the thickness of the root spread layer, its physical properties (specific weight-g/cm3 or the amount of physical clay,%) and humus reserve (t/ha) are taken as the measurement criteria for bonitirovka.

O.A.Makarov [12] selected criteria for soil bonitization by applying complex models with a factor of 8-10. V.V.Medvedev and I.V.Plisko [14] proposed more than 20 criteria during the bonitization of lands. It includes: soil indicators (thickness of the spreading layer, humus content, physical clay content, pH content, density, P_2O_5 mg/kg, K_2O mg/kg, depth of the clay layer, soil specific resistance), climatic indicators (reserve of productive moisture in a layer of 0-20 cm, active temperatures total-100c, air temperature, hydrothermal coefficient), technological criteria (incline, passport indicators of fields, These selected criteria make it possible to assess the ability to produce real crops, comprehensively characterizing the" soil-climate-field " ecosystem. Scab, pollution, Stony, skeletonism, salinization, etc.as correction coefficients. taken into account.

Since land is the main and indispensable means of agricultural production, the issue of economic assessment of land is considered a measure of national importance. All states, regardless of their socio-economic structure, are interested in implementing measures in this area. The demand for economic assessment of land is always present, it seems that this problem is eternal, just as agriculture is eternal. In modern times, in the era of land reform in connection with the transition to a market economy, this problem has become relevant again, and at present it remains relevant, as land is real estate, an object of purchase, sale, taxation.

In the 60s and 80s of the last century, in the conditions of a planned economy, in the conditions of an administrative-economic management system in agriculture, issues of a predominantly managerial nature were solved, at which time land, buildings, structures, etc. the reserves were distributed by the state and there was no need for a value price [9]. Currently, the states located throughout the former Soviet space have gained independence and entered a new era of economic relations, at which time the distribution of state property rights between individual consumers took place, the foundations of the land market were formed. At this time, a large amount of land objects entered the commodity circulation, and the formation of prices began to affect the distribution of the right to land ownership.

As a result of the land reforms carried out in agriculture, the management of land resources was shifted from administrative methods to economic methods. To improve the system of land valuation during the transition to a market economy, it was required to develop a new methodology and methodology for conducting land-Cadastral work. The changes carried out in accordance with the chosen political and economic direction after the independence of our Republic also required innovations in relations with the land. The establishment of the legal basis for land reforms in

Azerbaijan began in the mid-90s with the development of several important laws.

The law of the Republic of Azerbaijan "on state land cadastre, land monitoring and land formation" was adopted on December 2008, 22 in order to carry out general control over the use of the single Land Fund in connection with the implementation of agrarian reforms in our republic, as well as legal regulation on the rational use of land, increasing fertility, protection, regulation of land relations,

This law made it possible to carry out land use, quantitative and qualitative accounting of lands, their bonity and economic assessment at the level of state registration. This law not only determines the legal basis for the implementation of cadastral, monitoring and land construction work in the Unified Land Fund of the Republic, but also pursues the goal of regulating organization and management in this area. This law also outlines the basic principles and rules for conducting state land cadastre work. As a whole, state land cadaster and land construction work within the borders of the Republic is compiled and carried out on a compulsory, independent and unified system, regardless of forms of ownership.

In connection with the development of a market economy, land gradually began to turn into a commodity, which, in turn, required the determination of the consumer and market price of land. The dynamics of the work carried out in this area depends on the mechanism of land relations and the improvement of the legal framework. Land requires its own assessment as a natural resource, real estate and means of production. It should be noted that in World valuation practice, two types of land valuation are applied: mass valuation (for taxation and state purposes) and individual valuation (valuation of individual objects) [1]. In modern times, a lot of research works have been carried out on the economic assessment of land on land Cadastral issues[7,9,10].

Market relations formed in various sectors of the economy have brought to the fore the problem of economic assessment of Natural Resources. In solving problems in the field of economic assessment of Natural Resources, in organizing the correct and efficient use of natural resources, including land cover, there is an interest of both state bodies and newly formed owners. It is known that by organizing the rational use of land, which is the main means of production in agriculture, it is possible to increase the productivity of agricultural crops and ensure production efficiency. During the organization of rational use of land resources, state land cadastre work should be carried out in order to strengthen state management and control over a single Land Fund, to provide state authorized bodies, as well as landowners, users and tenants with authoritative, honest and scientifically obtained information about the state of land. It should be noted that the economic assessment of land together with the bonitization of lands, quantitative and qualitative accounting of lands, state registration of lands form the main components of the state land cadastre.

As the main means of production in agriculture, land has its own characteristics, it requires comparative assessment depending on natural conditions, including fertility. Agricultural production, unlike industrial production, is different depending on the fertility of the land, or in which of the lands with the same fertility more labor is spent, the additional income or rent on that land is greater than the others.

Although the development of productive forces and the application of scientific and technical achievements in agriculture increase the fertility of low-productive lands, it does not cancel the difference between soil fertility; as the level of low-fertility lands rises, the fertility of medium and high-level soils increases even more. In theory, this process is constant, so the difference between soil fertility and the differential rent formed as a result of this difference is always present [11].

The methodological basis of the economic assessment of soils is the economic training on soil fertility and differential rent [15]. The object of economic assessment of land is a single Land Fund, represented by Lands of various categories and agricultural land. The subject of the economic assessment of land is the economic fertility of the land [7,8].

Economic assessment of land is the characterization of the fertility of the land plot, which is the main means of production in agriculture, on the basis of economic indicators. The economic assessment of land acts as a single process in combination with the bonitization of land in determining the manufacturability of the land plot. So, the quantitative assessment of land precedes its economic assessment [95]. When bonitizing soils, the bonitet score of the soil is calculated only on the basis of the natural fertility and acquired properties of the soil, and the formation of economic price indicators of the soil, along with the productivity of the plant, affects the proximity of the land to the consumer market, industrial centers and transport hubs and other factors.

Land bonitization and land Economic Assessment have a very close relationship between themselves: both refer to the state registration of rights over land plots, quantitative and qualitative accounting of land, land survey materials and statistical materials on land production indicators. Land bonitization is of dual importance during land cadastre measures: firstly, it is included in the land cadastre as an independent measure, and secondly, in the economic assessment of land, soil bonitet indicators ensure its objectivity by directly participating in the formation of economic prices for land.

The economic valuation of land as a broader process than the bonitization of land has several different aspects. One of the main differences is that land bonitization studies soil only as a body of nature, without taking into account the economic conditions of agricultural production, and during the economic assessment of land, land is taken as the main means of production in agriculture. Therefore, the economic assessment of soils reflects the differences in the quality of land sites with sufficient accuracy, from the point of view of economic fertility, as well as in accordance with the level of intensity achieved in agriculture. Such assessment is carried out taking into account the local natural and production conditions, the location of the site, labor and funds spent on obtaining agricultural products. One of the differences is that the economic assessment of land is carried out not only on agricultural land, but also on the entire single Land Fund.

In the course of land-assessment work, it is important that the bonitization of soils and the economic assessment of soils are carried out according to the same taxonomic units, therefore, the economic assessment of soils is carried out according to agro-production groups, in which their species diversity is grouped according to the quality of soils.

As a result of land reforms carried out in the Republic at the end of the 90s, the emergence of new forms of ownership, a large number of new landowners, users and tenants increased the importance of land cadastre work on the rational use of land resources, increasing its fertility, protection and Protection, Regulation of land relations, the formation of the land market. In this regard, academician G.Sh. Mammadov [14]. Scientific-theoretical principles and methods of economic assessment of lands and conducting land - Cadastral works have been developed as a result of large-scale research work carried out under the leadership of. Since the formation of prices for agricultural products in a market economy takes place on the basis of new “laws”, there was a need for another consideration and improvement of the procedure for calculating indicators (gross product value, productivity, cost payment, differential income).

Since natural, artificial and economic fertility factors are involved in the formation of a uniform

fertility of the soil, all natural and economic conditions affecting its productive capacity should be taken into account during the economic assessment of the soil. The initial stage of economic assessment works includes the collection and development of economic indicators. Economic indicators are compiled on the basis of data on crop production from the annual reports of farms. Plant growing information includes [6]:

Production and cost of crop production;

- ❖ Costs for crop production;
- ❖ Sale of crop production.

During the economic assessment of land, it is required to correctly select price indicators, be objective and have practical significance. Price indicators are calculated separately for irrigated and non-irrigated lands. Depending on the goals and objectives, the economic assessment of land is carried out in two directions:

1. General assessment-by agricultural sites (arable, perennial plantings);
2. Individual assessment-on agricultural crops (grain, cotton, vegetables, potatoes, melons, tobacco, etc.).

The overall assessment includes the following price indicators:

- ➢ Gross Product, man / ha;
- ➢ Fee, times;
- ➢ Differential income, man / ha.
- ➢ The price indicators of an individual assessment are as follows:
- ➢ Productivity, sen / ha;
- ➢ Fee, times;
- ➢ Differential income, man / ha.

In earlier times, “Cadastral” prices were used to find the gross product. This price was taken conditionally, the same as for the Union [16]. In the period of currently forming economic economics relations, the old “Cadastral” prices for manufactured products are being replaced by state procurement prices for agricultural crops.

To calculate price indicators, the collected economic indicators are calculated per hectare. Basis indicators are calculated on the computer according to the calculated economic indicators. For this, specially developed tables are used, which include land and economic indicators of individual farms of administrative districts included in the cadastral (price) district.

Calculation of base indicators

$$f(x) = //AX// \qquad (1)$$

It is carried out according to the minimization of the functional according to the formula (1) [16]. For this, the method of smallest squares is applied. As a result of the application of this method

$$yi = a_1*xi_1 + a_2*xi_2 + ... + an*xin \qquad (2)$$

the calculated EU coefficients (1) of the system participate in the calculation of base productivity, being coefficients that minimize its functionality. Since the lands of the cadastral

(price) districts for each given farm are divided into 4 Quality groups, the same for all products, the regression formula (2) is written as follows:

$$yi = a_1*xi_1 + a_2*xi_2 + a_3*xi_3 + a_4 * xi_4 \quad (i = 1,2,...,N), \qquad (3)$$

here, N – number of farms;
i - ordinal number of farms;
xi_1, xi_2, xi_3, xi_4 – I percentage indicators for quality groups for the farm;
y_i – i the economic productivity;
a_1, a_2, a_3, a_4- minimization coefficients according to quality groups.

after finding the coefficients a_1, a_2, a_3, a_4, the yhi yields calculated for each farm by means of the regression formula (3) are calculated. Then the calculated percentage of quality for each farm is found and the numerical averages M_1, M_2, M_3, M_4 are calculated on these four groups of percent. These numerical averages are the expression of the sought basis yield in sen/ha.

In addition to base productivity, the following are included in the list of basis indicators: D_k - cost of output, man/ha; X - costs, man/ha; monthly payment, times; DG_k-differential income, man/ha.

1. The cost of the gross product is determined for all plants, taking into account the area, productivity and price of plantings. The value of the gross product is found by the following formula [4]:

$$D = \frac{M_1A_1P_1 + M_2A_2P_2 + ... + M_nA_nP_n}{P_1 + P_2 + ... + P_n}, \qquad (4)$$

here: D – cost of gross product;
M_1, M_2,… M_n – productivity of agricultural crops;
A_1, A_2,…A_n – public procurement price of the product;
P_1, P_2,…P_n - area of agricultural crops.
The formulas (5) and (6) are used to calculate the cost of gross output:
Apart from planting and perennial plantings

$$D_k = M_k – SQ \quad (k = 1,2,3,4), \qquad (5)$$

here, D_k – product cost, man / ha;
M_k - calculated basis productivity;
SQ_k – selling prices of products.

For planting and perennial plantings

$$D_k = M_k \quad (k = 1,2,3,4), \qquad (6)$$

2. Costs are taken equally for all quality groups and calculated by the formula (7):

$$X_k = (x_1 + x_2 + x_3 + x_4) = \sum XtiS_k / \sum Si_k \ , \qquad (7)$$

here, X_k – costs for farm eligible products (man / ha),
S_k – suitable areas (ha).

3. During the economic assessment of soils, it is necessary to study the production costs of land of different quality, since only in conditions of the same amount of production costs can the formed indicators of productivity and value of gross product correctly reflect the quality of the soil.

The charge of the expense is an important indicator reflecting the fertility of the land in equal economic conditions of the economy during the economic assessment of the land. The payoff fee is found by means of the following formula:

$$MO_k = \frac{D_k}{T_k}, \qquad (8)$$

here, MO_k – fee, man;
D_k – product cost, man / ha;
X_k – costs, man / ha.

4. The economic efficiency of agricultural production on good and bad lands manifests itself in the form of pure income. The Clean income of land plots is found by subtracting the cost of production spent on its acquisition from the value of the gross product received from those plots. Differential income is an additional part of pure income. Rather, differential income is pure income created at the expense of more productive labor in places of good quality land compared to places of bad land. Differential income is a quantitative characteristic of relative fertility and represents the amount of cost savings of assessed lands compared to less productive ones.

Differential income is calculated on the basis of formula (9):

$$DG_k = D_k - X_k \qquad (9)$$

here, DG_k – differential income, man / ha;
D_k – product cost, man / ha;
X_k – costs, man / ha.

Thus, the amount of crop production obtained from 1 hectare of land and the costs spent on the production of this product are taken as the initial data for the economic assessment of land plots. Based on these indicators, the cost of gross output, cost payment, clean and differential income are calculated. On the basis of the obtained indicators, tables are compiled, which reflect the basic indicators on the quality groups of Lands of land Cadastral districts, and scales for the economic assessment of land locations.

CONCLUSION

On the economic assessment scales, the level of intensification of Agriculture is determined – by the size of production costs, production efficiency – by the cost of costs, the level of production – by the amount of gross output, the profitability of production – by the volume of differential income. At this time, it is common for sowing and perennial plantings by soil groups, agricultural crops (grain, grapes, vegetables, potatoes, etc.) for which individual assessment scales are compiled.

A qualitative assessment of the lands of the mountainous Shirvan Cadastral district on the forms of ownership was carried out: I and II groups of fertile lands were privatized and transferred to private ownership: 9.0% and 59.37%, respectively; III group of Lands is most owned by the state-48.7%; IV group of Lands was distributed almost the same amount between state and municipal property- (11.3%)-state and (10.9%)-municipal property.;

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REFERENCES

1. Huseynov A.I. Genetic-production bonitization and agro-production grouping of South mile plain soils. Agr. science. PhDr. ... diss. abstract. Baku, 2005, 19 p.
2. Guseynova G.A. Ecological assessment of forest soils of the southern slope of the Greater Caucasus. Biol. science. PhDr diss. abstract. Baku, 2007, 19 p.
3. Sh., Shabanov A.A., Mustafayeva Z.R., Kholina T.A., Abdullayeva G.M. Ecological foundations of the rational use of land resources of the Greater Caucasus. / Materials of the Republican scientific-practical conference on the topic of Agrarian Policy of Heydar Aliyev in modern independent Azerbaijan: realities and prospects. Ganja: ASAU, 2008, pp. 42-45
4. Abdullayeva G.M. Agroecological characteristics in the bonification of gray-brown soils of the northeastern part of the Greater Caucasus / Agroecological role of soil fertility and modern agrotechnologies. Materials of the international scientific and practical conference. UFA, BGAU, 2008, pp. 33-34
5. Bochkov, V.A. Economic fertility of lands in the agricultural sector // Izvestia Orel UNE / Series "Management, economics, law", 2004. No. 4, pp. 37-40.
6. Grossheim A.A. Vegetation cover of the Caucasus. M.: ed. Moscow Society of Nature Testers, 1948, 78c.
7. Zimovets B.A., Khitrov N.B. and others. Assessment of the degradation of irrigated soils under perennial plantations // Soil Science, No.11, 2001, pp.1377-1382.
8. E. Ustaoglu, C. Perpiña Castillo, C. Jacobs-Crisioni, C. Lavalle, Economic evaluation of agricultural land to assess land use changes, Land Use Policy, Volume 56, 2016, pp125-146, ISSN 0264-8377, https://doi.org/10.1016/j.landusepol. 2016.04.020.
9. E. Koomen et al. A utility-based suitability framework for integrated local scale land-use modelling Comput. Environ. Urban Syst. (2015)
10. T. Kuhlman et al. Exploring the potential of reed as a bioenergy crop in the Netherlands, Biomass. Bioenergy (2013)

11. Yakup Emre Coruhlu, Okan Yildiz, Geographical database for object-oriented land division modelling in Turkey, Land Use Policy,Volume 68, 2017, pp 212-221, ISSN 0264-8377,https://doi.org/10.1016/j.landusepol. 2017.07.059.
12. Mezenina O.B and Mikhailova A.D 2008 Intern. Kongress "Geo Siberia" (Novosibirsk) The need for legal zoning of the territory for the regulation of the economic development of the city 2, pp 95-99 Google Scholar
13. Lebedev Yu.V and Mezenina O B 2008 Vserosrussian Scientific Conference (Barnaul) Sustainable forest management: a scientific approach pp116-118, Google Scholar
14. Limonov E P and Mezenina O B 2012 collection of 8 All- Russian scientific-technical. Conference (Ekaterinburg: UGLTU) Russian legislation on forest land pp 60-65 Google Scholar
15. H.I. İnan et al. Data model for the collaboration between land administration systems and agricultural land parcel identification systems J. Environ. Manage. (2010)
16. C. Lemmen et al. The land administration domain model Land Use Policy (2015)