THE ROLE OF EFFECTIVE USE OF LAND IN GRAIN-GROWING ENTREPRENEURSHIP IN AZERBAIJAN

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Abstract

One of the main groups in agriculture is plant cultivation. The crop production combines growing of grain, cotton, vegetable, viticulture, tobacco cultivation, etc. One of the main factors in the activities of plant-growing as well as in grain-growing is the efficient using of land.

Agriculture is characterized by number of specific socio-economic, natural and technological characteristics. Unlike other sectors of the economy, the main means of production is land. Land differs from other agricultural production facilities. Land is not a product of human activity, it is the product of nature. The land area can not be increased nor decreased as other means of production, its natural fertility and productivity can be increased.

Land area has been divided into zones according to its location, quality and rating. Agricultural farming on unfavourable land areas requires more funds than on favourable land plots.

In the article, using grain crops efficiency data, increase of soil fertility and issues in the direction of increasing productivity facing entrepreneurial farms were studied.

Key words: agriculture, efficiency, entrepreneurship, grain-growing, land use

Introduction

Azerbaijan is one of countries where husbandry culture has been founded, there are ancient traditions on grain-growing as well. Archaeological excavations carried out in different regions of Azerbaijan, proves that grain-growing has history at least of 70 centuries. Husbandry and cattle-breeding, being leading spheres, were basic engagement of local population and has formed the base of their economic life. In this period tools of wood, stone and partly of bone for grain-growing were used. There were favourable conditions for development of not irrigated husbandry in mountainous and hilled territories. Of course, in grain-growing dominated local grain sorts and traditional husbandry technologies. In Middle Ages in Azerbaijan such sorts of wheat and barley as gurgani, yellow wheat (saribugda), black awn (garagilchig), blackberry wheat (garagilabugda), topbashbugda, white barley (ag arpa), black barley (gara arpa), sheshari barley, etc. were grown. Most popular in grain-growing economy were autumnal wheat and barley. The experience achieved in development of grain-growing and improvement of husbandry system enabled providing of need of people in grain on territory of Azerbaijan. Historic sources give the information that by end of 19th century the population produced cereals themselves and there was no need to import them. Statistics of the first decade of 20th century shows that grain produced in the Azerbaijan territory was even exported, because grain sowing in large area on appropriate for agriculture production soils allowed it. In 1913 grain crops were sown on area of 67% of territory of Azerbaijan. I coming period area of grain crops decreased. As noticed many scientists, this tendency continued until the beginning of the 90s of the last century, when this issue become very important due to demand of providing of food safety in independent Azerbaijan (Yasimov A. 2005). Grain-growing already about ten years have leading role between tools guaranteeing food safety and financial support for its realization has been improved. Modern demand of husbandry is the basic principle of development of conception of grain-growing. In efficient husbandry system it is suitable source due to minimum resources and labour costs, providing more crop production from land unit (Mirzayev, 2018).

The total area of Republic of Azerbaijan is 8.6 million hectares. In agricultural sphere of national economy land available for agricultural production makes up about 60%, 36% of which makes up arable land and 52% - pastures. Agricultural production depends on quality and location of agricultural land. This creates conditions for more efficient use of the land stock, labor resources and production facilities. Currently, growing of grain, cotton, vegetables, grape, tobacco, tea, fruits and other cultivated plants have been placed in accordance with natural and economic characteristics of the land. Grain-growing mainly took place in the Republic of Karabagh-Mil, Shirvan, Mughan-Salyan and Sheki-Zagatala.

Methodology of research and materials

Production of wheat, rice and other grain crops, being considered as food delivery to the end consumers is the main factor which defines the character of food problem. Grain-growing plays an important role in providing of population with main food products, as well as in strengthening of fodder base for cattle-breeding and supply of enterprises with raw material. On national level for solving the problems in guaranteeing of national food safety should be developed detailed conception of grain-growing. At the same time with development of economic prosperity in business, the main principle should be guidelines of innovation policy (Mirzayev, 2016).

The countries being the main exporters of grain products, depending on specific historical stages of development of grain-growing, have accepted different priorities of strategy, giving an advantage to comparative preference. With this purpose as a main means of production the quality of soil resources and level of its use should be estimated. On the basis of analysis of production costs of various crops and comparative analysis of efficiency of its sale the suitable structure of crops has been defined. Suitable sowing structure depends on market economy regulation forms together with activity of economy itself and economic subjects, as well as different property forms.

Factors, influencing rise of productivity of grain area, are:

- implementation into practice of modern regulations on optimal regime of agro-technics;
- increasing of efficiency of use of mineral fertilizers;
- strengthening of measures against diseases and pests;
- enlargement of irrigated sowing areas and broad application of latest achievements of irrigation;
- increase of seed- farming, strengthening of elite seed basis;
- complex mechanization and automation of production processes;
- continuation of selection work at a higher level;
- development of production infrastructure relating to grain cluster;
- precognition of vegetation period for grain and leguminous plants;
- enumerated factors, including specialization and integration, cooperation and corporative management factors (Mirzayev, 2017).

Efficiency of use of grain sowing areas, change of sowing system has a special place within the agro-technical measures carrying out improvement of soil fertility and productivity. Changes in sowing system should be putted in practice taking into consideration soil-climatic statement of land and some other factors. Fertility of the soil is the main factor, selecting efficient schemes of disposition of sowings. It is necessary in disposition of sowings to increase the proportion of main plants, which applies for fertile soils, but on less fertile soils it is necessary to replace the main plant with less demanding plants. On the other hand, if grain plants take nitrogen and phosphorus from soil a lot, but potassium little, leguminous plants take potassium more. Perennial leguminous and grain plants and their mix bring the structure and physical matters of soil alongside providing the protection of planting layer from water and wind erosion. Sort of hard grain “Shirvan3” grows in irrigated and not irrigated places. The best plants before this sort are perennial grass, beans and interlinear plants. High harvest level can be achieved on black soil in not irrigated areas, but it requires a lot of fertilizers. Such soil under main tillage demands at least 90 kg of phosphorus and 50-60 kg potassium, as well as 110-120 kg nitrogen fertilizer per hectare (calculating in influencing matter).

There have been made a lot for development and improvement of legislative acts in accordance with modern stage of agrarian sector in Republic of Azerbaijan. The law “On Land Reforms”, “On Food production”, “On Selection Achievements” (1996), “On seed-growing” (1997), “On Grain” (2000), “On Giving Tax Privileges to Agriculture Products Consumers” (2001) have been accepted. Priorities in grain growing in regard to the health and safety of the population should be justified applying environmental requirements - soil, water, plants, and animals. Development processes as a leading area of agriculture and the national economy in general should be regulated and managed. Provision of food is one of the global challenges in front of humans in the new millennium. New aspects have been actualized in the problem itself and its solution. So, the problem of food quality was added to the problem of food shortage.

Discussions and results

In development of grain and resources, first of all, the use of land resources is directly related to the dynamics of the share of grains in general planting areas (table 1).

Table 1

Dynamics of proportion of areas of cereals and grain in economic regions of Azerbaijan
(2011 – 2017, %)

Economic regions	2011	2012	2013	2014	2015	2016	2017
Absheron	0.2	0.2	0.2	0.2	0.1	0.2	0.3
Ganja–Gazakh	93	9.4	9.2	9.5	9.5	9.0	9.1
Shaki-Zagatala	16.4	15.9	15.5	15.7	15.2	15.0	15.2
Lankaran	9.0	9.0	8.6	8.4	9.1	9.2	9.0
Quba-Khachmaz	8.5	9.4	10.3	9.9	10.4	9.6	9.2
Aran:	31.7	32.8	32.1	32.8	33.8	33.4	34.2
Upper–Karabakh	10.1	8.8	9.1	8.7	8.2	8.1	8.0
Kalbajar-Lachin	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Mountainous Shirvan	10.7	10.5	11.1	11.0	9.6	11.2	11.2
Nachchivan Autonomous Republic	3.8	3.8	3.7	3.6	3.9	4.1	3.6
Total	100	100	100	100	100	100	100

Source: own elaboration, using statistical data of annual reports

Analysis of the dynamics of the proportion of cereals crops in 2011 - 2017 shows that in economic regions Guba-Khachmaz and Aran the share of grain cultivation increased in the total area of crops, but in other economic regions this indicator slightly decreased. In the Upper-Qarabagh and Nakhchivan considerable decrease in this indicator is worthy to the special attention.

Due to specialization of grain farms the dynamics of proportion of areas of cereals and legumes in 2011 – 2017 in Guba-Khachmaz and Aran economic region have increased, so these economic regions provides a great part of the country's needs. The development of agriculture at the modern stages is based on use of application of scientific achievements. As the main means of production of grain is land and also the intensification of relevant production should be primarily based on the rules for the efficient use of land resources. The renewal of melioration and irrigation systems and application of progressive technologies in order to prevent soil erosion, also to reduce dependence of grain-growing from natural conditions is very important. At the same time soil and water pollution is technogenic factor - the result of cereal crops cultivation process, which increases the negative impact of product quality.

One of important tasks characterizes the application of intensive agro technologies in grain production. The analysis based on the parameters of average statistical region showed that it has given negative impact on quality of decisions according implementation of financial and operational functions. As a result in a real economy landscape, humidity, distance to the water basins and other parameters lead to losses in quantity and quality of grain. Therefore functional diagnostics should be based on a reliable data for making effective decisions. First of all diagnosis should be based on extensive statistical material, and should provide opportunities for its realization. Significant changes have taken place in the production structure of individual entrepreneurs, family farmers and households on plant and livestock areas (Kənd təsərrüfatı müəssisələrinin ..., 2017). The number of individual entrepreneurship farms and land plots allocated to them had been decreased in agrarian sector in 2011 - 2017 and the average size of land falling to one individual entrepreneur has increased by 2.8 hectares (table 2).

Table 2

Dynamics of the number of individual farms and their provision with land (2011 – 2017)

	2011	2012	2013	2014	2015	2016	2017	Difference, %
Number of individual farms	2618	2593	2451	2334	1624	1534	1468	- 56
Land allocated to individual farms, thousand hectares	45.7	41.5	47.3	43.1	33.2	32.5	29.8	- 65
Average size of individual farm, hectares	17.5	16.0	19.3	18.5	20.5	21.2	20.3	+ 16

Source: own elaboration, using statistical data of annual reports

In 2011-2017 the size of land plots for a single individual entrepreneur in the country although increased 16 % in average, due to intensification of production of agricultural products. Different regions of Azerbaijan have had different dynamics. On average the size of individual entrepreneur subjected to agriculture in Upper-Karabakh, Kelbejar-Lachin, and Ganja-Qazakh economic zones in 2017 was accordingly is 233, 70 and 54 hectares. These are the highest indicators of economic regions.

The area of land suitable for agriculture in individual entrepreneurship subjects in 2011 - 2017 on average has been increased (Kənd təsərrüfatı müəssisələrinin ..., 2017) (table 3).

Table 3

Dynamics of area of land of individual farms suitable for agriculture on average, 2011-2017, hectares

Economic regions	2011	2012	2013	2014	2015	2016	2017	Difference, %
Absheron	8.8	8.2	9.2	6.0	8.2	8.9	6.2	70
Ganja-Gazakh	43.3	39.7	40.2	43.9	56.1	52.1	54.1	125
Shaki-Zagatala	4.5	4.7	4.7	5.7	4.8	5.6	4.3	96
Lankaran	13.3	13.4	13.1	12.2	12.3	12.5	13.8	104
Quba-Khachmaz	7.4	10.6	11.7	5.8	5.3	6.6	7.0	95
Aran	9.3	9.7	10.4	10.6	12.9	13.0	12.8	138
Upper-Karabakh	161.8	125.0	171.2	162.1	172.8	272.8	232.7	144
Kalbajar –Lachin	33.5	37.0	34.5	32.7	58.9	74.3	70.0	208
Mountainous Shirvan	9.9	11.7	10.7	12.0	13.9	13.9	14.7	148
Nakhchivan	2.0	2.2	2.3	2.2	17.1	22.9	22.3	1125
On average in the country	17.5	16.0	19.3	18.5	20.5	21.2	20.3	116

Source: own elaboration, using statistical data of annual reports

The economic regions Ganja-Gazakh and Upper-Garabagh have positive dynamics of agricultural land in terms of one individual entrepreneur. Analysis showed that indicators of development of individual entrepreneurship in economic regions Absheron and Shaki-Zaqatala has been decreased (Azərbaycanın statistik nəticələri ..., 2017).

In the some time in Aran economic region average of useful for agriculture soil has been increased by 38%. Such problem appeared in the end of last century. Nevertheless, quality of food products becomes more acute in the last decade. The limited opportunities of traditional approaches to the discussed problem necessitated the involvement of genetic resources into economic turnover.

Conclusions and proposals

As result of research on the efficient use of soil in entrepreneurship subjects in the development of grain-growing in Azerbaijan, author considers, that agro-climate potential in many regions of Azerbaijan allows achieve high yields in grain production in order to increase productivity in the grain farming. It is important to have qualitative seeds, effective materials against weeds, use fertilizers in the optimum regime and effectively organize irrigation.

In modern conditions there is a close link between the effectiveness and development priorities of grain farmers. As key criteria in land use are resources (labor, finance, and others) in economic efficiency accepted by an entrepreneurs. Measures should be taken to improve efficiency both directly and indirectly.

Improving the productivity of grain growing it is possible to carry out agro-technical specifications in the optimum regime, to increase use of mineral fertilizers, means against diseases and pests, to expand regulated planting areas and implement the latest achievements in irrigation, improvement of elite seed base, mechanization and automation of production processes as well.

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