

Economic analysis of permanent plants by categories of farms of the Kyrgyz Republic

Esenbek Belek uulu^{1*}, *Asel Kokoevna Shaiyldaeva*², *Ulan Tyrgootovich Chortombaev*³,
*Klara Kapanovna Shakirova*², *Emilia Umbetovna Nazarbekova*², *Nazira Omurkulovna Kasymova*²

¹Kyrgyz National Agrarian University named after. K.I. Scriabin, Bishkek, Kyrgyzstan

²Kyrgyz National University named after J. Balasagyna, Bishkek, Kyrgyzstan

³Kyrgyz State Technical University named after I. Razzakov, Bishkek, Kyrgyzstan

Annotation. The article gives an assessment of the current state of agricultural crops and perennial plantations in terms of qualitative and quantitative indicators, as well as a correct statistical analysis by category of farms in the Kyrgyz Republic. The purpose of the article is to study the analytical support of the process of managing perennial plantations, in particular, to identify the methodological features of the analysis of perennial plantations. Development of a system of analytical indicators to assess the process of reproduction in the field of perennial plantations, as well as statistical analysis of arable land of agricultural crops and perennial plantations by category of farms of the Kyrgyz Republic. In the future, the horticulture sector, especially fruit and berry crops in all regions, is more favorable for the development of the economy of the republic. The efficiency of the use of agricultural land and the development of perennial plantations, fruit and berry crops are considered. This suggests that the bulk of agricultural land is privately owned, and peasant (farmer) households aim to use their private land for perennial plantings to produce the most cost-effective and efficient crops.

Keywords. Draft law, perennial plantings, accounting features, statistical analysis, economic analysis, economic indicators, categories of farms.

1. Introduction

This study provides an economic analysis of the categories of state, joint (cooperative), peasant (farm) and private perennial gardens based on the Constitution of the Kyrgyz Republic and land legislation. According to regional indicators, the area under crops of fruit crops for three years is compared. Our republic differs from neighboring states in terms of natural and climatic conditions. The peculiarity of the regions in the republic does not differ much from each other. In the future, the horticulture sector, especially fruit and berry crops in all regions, is more favorable for the development of the economy of the republic. There is a question about the problem of varieties of perennial plantations, planting cultivation

* Corresponding author: esenbekbelekuulu@gmail.com

technology, as well as an important issue of soil fertility, which affects the growth and productivity of perennial plantations. The efficiency of the use of agricultural land and the development of perennial plantations, fruit and berry crops are considered.

2. Materials and Methods

In accordance with the Constitution of the Kyrgyz Republic, the Law of the Kyrgyz Republic "On regulatory legal acts of the Kyrgyz Republic", a draft resolution of the Government of the Kyrgyz Republic "On amendments to the Law of the Kyrgyz Republic" On the introduction of a moratorium on the transfer (transformation) of irrigated arable land to other categories and types land" [1]. The law mainly deals with the efficient use of agricultural land, as well as the conservation and development of farmers and farms in the Kyrgyz Republic. For a full assessment and analysis of crops by categories of interest, in particular for perennial plantations, it is necessary to take into account and rely on all relevant legal documents, as well as laws related to land resources, namely agricultural land[2]. According to the economic and statistical analysis of arable land of agricultural crops and perennial plantations in the republic can be divided into the following categories:

1. State farms
2. Collective farms (cooperatives)
3. Peasant (farming) households
4. Personal subsidiary plots of citizens

According to Article 1 of the Law of the Kyrgyz Republic "On the introduction of a moratorium on the transfer (transformation) of irrigated arable land to other categories and types of land" provides for non-distribution to the transfer (transformation) of irrigated arable land to other types of land in lands occupied by perennial fruit plantations with a bonitet score below 40[2]. For the development of perennial plantations, some adjustments and amendments to the Law of the Kyrgyz Republic "On the introduction of a moratorium on the transfer (transformation) of irrigated arable land to other categories and types of land" are needed [2]. According to the statistics of the Batken region, about 3,500 hectares of irrigated arable land are occupied by perennial fruit plantations, and in the Kyrgyz Republic their area is 49.2 thousand hectares. In recent years, farmers in the Batken region have begun to expand the areas of fruit crops, such as: sweet cherry, apricot, peach, etc., which are considered economically beneficial for the region. Many business entities have begun planting perennial fruit plantations on all areas of shared plots[3].

In addition, in many districts of Osh, Jalal-Abad and Issyk-Kul regions, where it is economically advantageous compared to other agricultural crops, planting of seedlings of fruit crops has also begun. Some regions are called the birthplace of a certain agricultural crop, for example: the Kadamzhai region is considered the birthplace of sweet cherries, the Batken region is considered the birthplace of apricot, the Aksy region is the birthplace of prunes, the Issyk-Kul region is the apple tree, etc. [4]. It can also be noted that the natural and climatic conditions of the republic, unlike other neighboring republics, are more favorable for the development of the horticulture industry in the future, especially fruit and berry crops, including pome and stone fruit crops. This industry will occupy one of the main directions of development of the country's agriculture in the future. Fruit growing products are considered export-oriented and economically beneficial for the development of the regional economy. In addition, it is of great importance in the development of tourism in our country.

Over the past four years, there has been a shift to the cultivation of perennials, as they are more likely to receive high incomes and, accordingly, to obtain a high quality crop. However, today there are still some problems in growing perennials due to weather and climatic conditions. In most cases, the problem of growing perennial plantations is

associated with planting technologies, as well as an important issue of soil fertility, which affects the growth and yield of perennial plantations. Conducting an economic analysis by categories of farms in the Kyrgyz Republic for all categories of arable land, crops and perennial plantations (ha), it should be noted that for the period from 2016 to 2020[5].

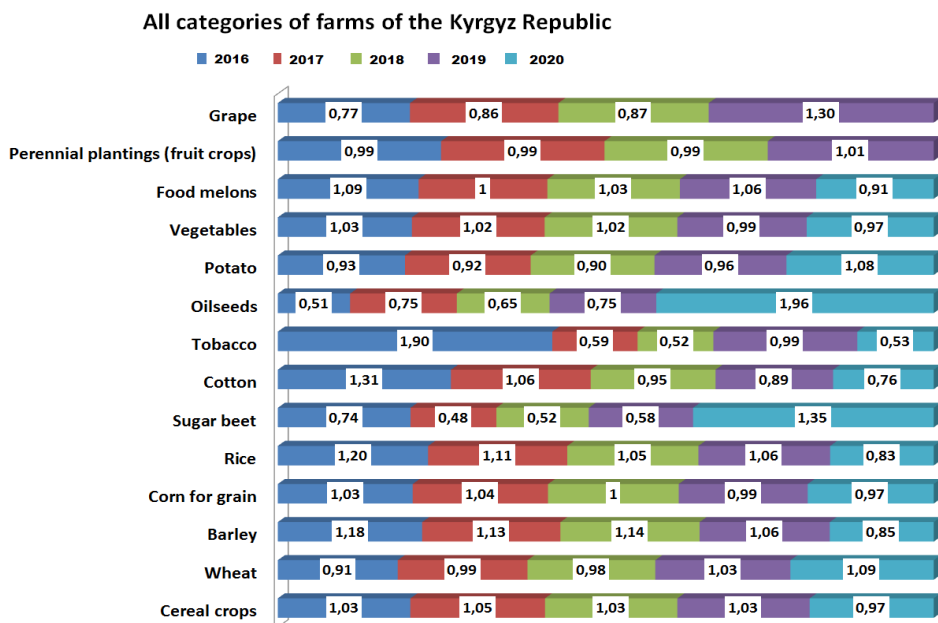


Diagram 1. Economic and statistical analysis of all categories of arable land (ha) of agricultural crops and perennial plantations by categories of farms of the Kyrgyz Republic from 2016 to 2020

From diagram 2 it can be seen that according to the results of the economic analysis for perennial plantations, there have been some changes that have a certain picture. Where most of the changes were in grapes, the area of which in 2016 was 0.77 thousand hectares, and in 2020 already 1.30 thousand hectares, the difference between them was 0.53 thousand hectares. We believe that these changes occurred due to the demand of this crop in the market, both domestic and foreign. Since grapes are a fairly profitable agricultural product for growing and have a wide range of applications in agricultural and other industries[6].

All categories of farms of the Kyrgyz Republic, the area of perennial plantings in 2016 was 0.99 thousand hectares, and in 2020 already 1.01 thousand hectares, the difference between them was 0.02 thousand hectares, that is, it increased [6]. If there has been a reduction in the opinion of farmers, one of the reasons for perennial plantings is the obsolescence of old orchards. Our farmers commented that the area of fruit-bearing plantations is decreasing due to the retirement of old orchards and an increase in the share of intensive type orchards [7]. The Ministry of Agriculture of the Kyrgyz Republic proposes to allow the transformation of land for the creation of perennial plantations. The Ministry of Agriculture of the Kyrgyz Republic proposes to develop land with perennial plantations (orchards, vineyards), lifting the moratorium on land transformation for this category [7]. The area of perennial plantations (fruit crops) in 2016 was 0.99 thousand hectares, and in 2020 it is already 1.01 thousand hectares, the difference between them was 0.02 thousand hectares. We see the following changes, that the area of perennial plantings in the country has increased [8].

The legislation of the Kyrgyz Republic introduced a moratorium on the transfer of irrigated arable land to other categories of land and types of land, except for cemeteries, the construction of educational facilities, health care, military, border facilities and outposts, small and large electric power production capacities and high-voltage electric lines, gas pipes, expansion of airport territories [9]. The Ministry of Agriculture proposes to add to this list the transformation into lands occupied by perennial plantations. The proposed moratorium will stimulate the development of intensive farming and perennial plantations, characterized by the development and application of new technologies in agriculture, the introduction of new high-yielding varieties and increased production [10].

Table 1. Categories of farms of perennial plantations (fruit crops) in the Kyrgyz Republic

Categories of farms of perennial plantations (fruit crops)	2016	2017	2018	2019
State farms	0,60	0,65	0,66	0,60
Collective farms	0,82	0,86	1,10	0,82
Peasant (farm) economy	1,03	1,04	1,04	0,97
Personal subsidiary plots of citizens	1,01	1,00	1,00	0,99

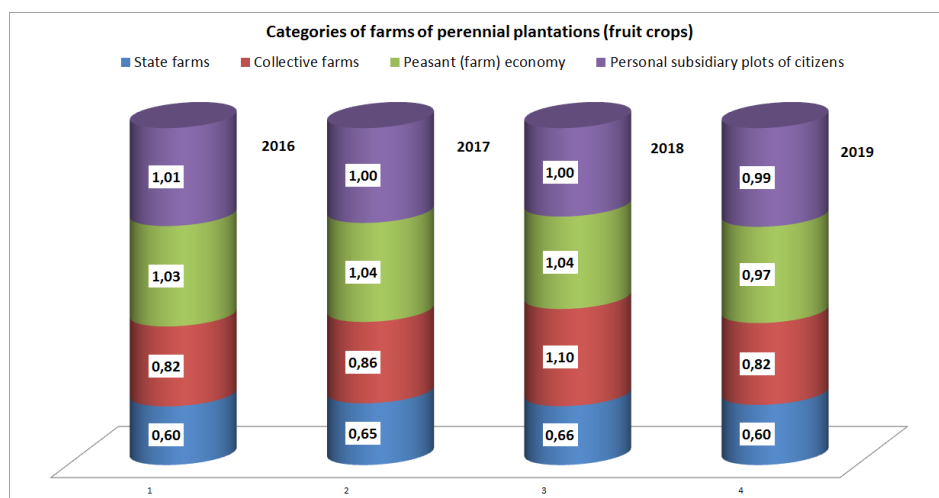


Diagram 2. By categories of farms of the Kyrgyz Republic for all categories of arable land of agricultural crops and perennial plantations (ha)

Statistical analysis of perennial plantations from 2016 to 2019 in terms of the area of all categories of farms in the Kyrgyz Republic:

The area of peasant farms in the Kyrgyz Republic in 2016 compared to 2019 amounted to a difference of 0.06%, in 2017 and 2018 compared to 2019, the area of perennial plantations was 1.04%. For the last 3 years, the area of perennial plantations has been higher than in 2019. In 2019, the area of perennial plantations decreased by 0.97% compared to the last three years.

The area of personal subsidiary plots in the Kyrgyz Republic in 2016 was 1.01% compared to 2019, and in 2017-2018 it was 1% compared to 2019. In 2019, the area of personal subsidiary plots on perennial plantations decreased by 0.99%.

The area of collective farms in the Kyrgyz Republic in 2016-2017 compared to 2019 was 0.82% and 0.86%, and in 2018 it was 1.10% compared to 2019. In 2019, the area of collective farms on perennial plantations decreased by 0.99%.

State farms of the Kyrgyz Republic in 2016-2017 compared to 2019 amounted to 0.60% and 0.65%, and in 2018-2019 they amounted to 0.66% and 0.60%.

The area of perennial plantations in the Kyrgyz Republic in 2019 decreased sharply compared to the previous three years. The reason for the sharp decline in perennial crops in the Kyrgyz Republic is that many farmers are engaged in grain crops.

3. Results

The results of the study showed that for the period from 2016 to 2018, the use of perennial plantations in the republic is more in personal subsidiary and peasant (farm) farms than in state and collective farms. In our opinion, this suggests that most farmers are aiming to grow more profitable and economically profitable crops. In this regard, they study more sales markets both in domestic and foreign markets; in addition, farmers pay great attention to those crops that are adapted to the natural and climatic conditions of the cultivated area.

4. Conclusion

As shown, the results of the analysis study on the use of perennial plantations in the republic, most of these lands are used in peasant (farm) farms than in state enterprises. This suggests that the bulk of agricultural land is privately owned, and peasant (farmer) households aim to use their private land for perennial plantings to produce the most cost-effective and efficient crops. This process allows the peasant (farm) economy to adapt to the most rational and efficient use of agricultural land for perennial plantings.

However, we believe that for a more efficient use of perennial plantations, it is necessary to switch to high-quality crop production, which will compete both in the domestic and foreign markets. One of the main tasks of solving the problem of improving the use of perennial plantations is the direct control and support of peasant (farm) enterprises by the state. Also, improving the conditions for farmers to introduce a flexible system of tax deductions.

References

1. Draft law of the Kyrgyz Republic registration No. 6-6409/18. 04/03/2018
2. National Statistical Committee of the Kyrgyz Republic. Sown area of agricultural crops and perennial plantations by categories of farms of the Kyrgyz Republic.
3. U.E. Belek. Prospects for the development of the economy of modern agricultural cooperatives through the creation of centers for advanced training / U. E. Belek T. Zh. Zhumaliev // Bulletin of the Kyrgyz National Agrarian University. K.I. Scriabin. – 2021. – No. 2 (56). – S. 220–225.
4. Kyrgyz Republic Agricultural Policy Desk Paper World Bank.
5. Electronic version of the issues of the information magazine "Alma Bilim" 2015-2016-2017-2018-2019.
6. L. Todorova. Accounting for the cost of planting and growing perennial plantations and determining the initial cost of trellis structures / L. Todorova // Stiinta agricola. – 2009. – No. 1. – S. 71–74.
7. Kosyakin, A. S. Department of methodology, economics and design of perennial plantations / A. S. Kosyakin, N. Yu. Dzhura, V. F. Vorobyov // Fruit growing and berry growing in Russia. – 2010. – T. 25. – S. 344–360.
8. Todorova, L. Accounting for the cost of planting and growing perennial plantations and determining the initial cost of trellis structures / L. Todorova // Stiinta agricola. – 2009. – No. 1. – S. 71–74.

9. Egorov, E. A. Forms and methods of managing the reproduction of perennial plantations / E. A. Egorov, Zh. A. Shadrina, G. A. Kochyan // Horticulture and viticulture. – 2009. – No. 3. – S. 18–25.
10. Kosyakin, A. S. Department of methodology, economics and design of perennial plantations / A. S. Kosyakin, N. Yu. Dzhura, V. F. Vorobyov // Fruit growing and berry growing in Russia. – 2010. – T. 25. – S. 344–360.