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ABSTRACT

**of the submitted dissertation for the degree of Doctor of
Philosophy**

**THE ROLE OF EFFICIENT USE OF PASTURES AND
AUXILIARY PRODUCTION AREAS IN THE FORMATION
OF HOUSEHOLD INCOME**

Specialty: **5312.01 – Field economy**
Field of science: **Economic sciences**
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Ganja – 2022

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GENERAL CHARACTERISTICS OF THE WORK

Relevance and level of development of the topic:

Household research studies not only the activities of households, but also the structure and factors influencing the budgets of households formed as a result of these activities.¹

Of course, recent events in the geopolitical world and the world economy have affected and will continue to affect households and their budgets, both in Azerbaijan and around the world. Thus, against the background of the rapid growth of the world's population and households in return, providing them with new housing, meeting the growing food and other consumer needs is one of the most important issues facing all countries and states.

Household surveys allow us to determine both the “prospective” population and the number of households, as well as the direction in which consumer demand and the socio-economic situation of households have changed in response to this increase.

These views allow us to emphasize the importance of households in the country's economy and the social status of households at the heart of the economic policy of the state.

In accordance with the State Program, research is being conducted in Azerbaijan in the field of organization of household budget research, proper selection of families, harmonization of indicators with international standards and so on. On the basis of the household budget, surveys are conducted to calculate important economic indicators by family, settlement, region and republic, as well as by sectors, sections, types of activities, etc., and are transferred from special to general indicators. As a result, there is an opportunity to correctly calculate GDP, national income, prices, living standards, economic activity and other macro indicators, to identify the shadow economy.

However, these studies have not identified how pastures and personal subsistence farms, particularly in mountainous and foothill

¹ 2018-ci ildə ev təsərrüfatları tədqiqatının yekunları. / tər. ed. Azərbaycan Respublikası Dövlət Statistika Komitəsi, –Bakı: Rəsmi nəşr, –2019. –176 s.

areas, specifically affect household budgets and sources of income. Increasing the fertility of pastures, which are considered to be the natural fodder resources of our country, is one of the factors of special importance in the development of livestock. From this point of view, as in many regions of the country, summer and winter pastures located in the Lesser Caucasus play an important role in the economy of the republic (livestock development) as one of the main natural fodder bases. Therefore, in order to increase the economic efficiency of the use of these lands, first of all, it is necessary to study their ecological condition and eliminate the shortcomings in this area.

The liberation of our lands, which have been occupied for almost thirty years, as a result of the courageous policy of President Ilham Aliyev and the bravery of our victorious army, also creates new prospects in this area. The presence of large pastures in these areas, the re-involvement of these lands in agricultural production, and the provision of employment in the established settlements offer the potential for increasing household income.

Both the above-mentioned issues and this idea, ie the incomplete reflection of the role of pastures and subsidiary farms, significantly increase the importance and relevance of our research, which determines the research topic in this direction.

Household incomes and the factors influencing it have been in the focus of attention not only of the state but also of individual economists. Among Azerbaijani scientists Z.A.Samadzadeh, B.H.Atashov, I.H.Ibrahimov, M.C.Huseynov, N.A.Novruzov, E.R.Ibrahimov, N.V. Alibeyov, E.N.Kerimov, B.O.Osmanov, E.A.Guliyev, E.A.Salahov and others conducted various researches on this topic.

Also, foreign scientists such as V.I. Levashov, V.N. Cherkovets, N.Q.Menkyu, R.D.Kay, R.B.Ekelund, R.F.Hébert, H.Becker, S.Gary, D.R. Carmichael, D.I. Kertzer, D.B.Nagle have conducted research on various aspects of the problem.

Object and subject of research. The object of the study is the Ganja-Gazakh region of Azerbaijan in the Lesser Caucasus, pastures and households in the Kakhetya region of Georgia. It consists of research on the role of pastures and the efficient use of auxiliary

production areas in the formation of household incomes, the formation and improvement of their socio-economic situation.

The purpose and tasks of the research. The purpose of the research is to study the theoretical and methodological basis of the mechanism of household income generation, to explore potential opportunities to increase household income and to develop theoretically and practically important proposals and recommendations in this direction based on science.

In accordance with these objectives, the following tasks have been identified:

- research of theoretical and methodological bases of the mechanism of formation of household incomes;
- defining the role of pastures and subsidiary farms in increasing household incomes;
- assessment of the current level of household income and the factors affecting it;
- determining the efficiency of pasture use in households;
- determining the efficiency of the use of subsidiary farms in households;
- defining the role of pastures and efficient use of subsidiary farms in increasing employment;
- identification of ways to increase the role of subsidiary farms in increasing household incomes and efficient use of pastures;
- regulation of the relationship between the level of employment and household income.

Research methods: In order to identify territories and households in both Azerbaijan and Georgia various methods of "sampling method", a systematic approach, comparative analysis, graphs, tables, as well as the Excel program- MAX were used to minimize deviations in the calculation of income and expenses.

The main provisions of the defense are as follows:

- the existence of not only consumer but also producer functions of households;
- assessment of the role of different areas of agricultural activity in the formation of household income;
- to determine the impact of internal and external factors on the

formation of household income;

- study of the potential for income generation of households located in mountainous and foothill areas;
- mechanism to increase the efficient use of pastures and ancillary production areas;
- identification of factors influencing the stimulation of household members' employment in agricultural activities;
- directions for regulating the relationship between the level of employment and household income.

The scientific novelty of the research is as follows:

- the importance of the producer function of households in improving the country's food supply is substantiated;
- on the basis of a comprehensive analysis of the efficiency indicators of the use of pastures and auxiliary production areas in households, the ways of their effective use have been identified and scientifically substantiated;
- the importance of establishing a single accounting system to determine the role of pastures and subsidiary farms in the formation of household income is substantiated;
- the main directions of ways to ensure a balance between pastures and the number of animals and the formation of a legislative mechanism in this regard have been identified;
- potential sources of income and directions of their use in increasing household incomes and forming their budgets were identified;
- ways to regulate the relationship between the level of employment and household income are shown.

Theoretical and practical significance of the research.

Suggestions and recommendations made on the basis of the results of the dissertation research can be reflected in programs and projects that can be implemented in this direction, as well as be of practical importance for diversifying the income of the population and in exchange for improving their budgets.

Approbation and application of the results of the dissertation: The content of the dissertation is reflected in 12 published articles and theses (including one with an impact factor).

The results of the research on the topic of the dissertation were discussed and approved at scientific-theoretical and practical conferences. The results of the research were discussed at the Volkswagen Science Foundation in Germany and considered expedient for resignation.

Name of the organization where the dissertation work was carried out: The dissertation work was carried out at Azerbaijan State Agricultural University.

Volume and structure of the dissertation. The dissertation consists of introduction, 3 chapters, conclusion, 133 bibliography, appendices and 268031 characters. The introduction is 7 pages and consists of 10023 characters, the first chapter is 41 pages and consists of 73722 characters, the second chapter is 54 pages - 80664 characters, the third chapter is 40 pages - 74807 characters, the results are 7 pages - 10832 characters and the list of 133 used literature is 13 pages - 16571 characters. The total volume of the dissertation is 171 pages of computer writing. The general text of the dissertation (excluding tables, graphs, appendices and bibliography) is 134 pages of computer writing or 240597 characters.

3 graphs, 1 picture and 20 tables and 6 appendices are given in the dissertation.

SUMMARY OF THE RESEARCH

The introductory part of the dissertation explains the relevance of the topic, the state of the study of the problem, the goals and objectives of the study, the object, subject, scientific novelty, practical significance and approbation.

Chapter 1 of the dissertation, entitled “**Theoretical and methodological bases of household income generation**”, discusses scientific views on the concept of household, research of sources of household income and expenditure, the role of pastures and ancillary areas in household income formation.

In a market economy, the household plays an important role. Household management is based on a number of important tasks. It is also seen as a place where labor is spent, as a regulator of employment.

Family business is created under households, the basis for the formation of market relations against the background of the creation of the necessary resources and family capital. The fact that households have real estate, capital and financial assets, and durable goods (property) creates a competitive environment for them in a market economy. The importance of the household is also evident in the face of shortages of goods and commodities. In certain economic and social crises, social production does not meet demand, and households are self-sufficient through private production. As in the current period, the share of household products and services in the total volume of products produced in the country will increase in the future².

It is important to note the relevant functions performed by households in modern conditions in terms of relevance:

➤ Households play the role of consumers and buyers of goods and services produced by enterprises;

➤ Acting as a manufacturer, they offer their products to these enterprises;

➤ Households form real financial assets - foreign exchange resources, directing a certain part of the total income from production to savings³.

The household, which is one of the three main subjects of economic activity (the other two - the state, the firm), covers the economic entities in which a person lives and the processes that take place there. A household is made up of one or more people, who provide economic resources and spend the money they earn on goods and services that meet their material and spiritual needs.

A household is a group of people united by a common job, place of residence, budget, and usually family ties. The activity of the family in the household is determined by biological, demographic, psychological, social and other factors.

² Ataşov, B.X. Financial theory. Textbook. / B.X. Atashov, NA Novruzov, EA Ibrahimov - Baku: Cooperation –2014. –p.648

³ Samedzade, A.Z. The structure of consumption of the population and socio-economic factors of its improvement: / dissertation of the doctor of philosophy on economics / –Baku, 2016. –148 p.

Thus, we call an economic entity consisting of one or more people a household. Mainly as a consumer of human activity (especially in urban areas), and in some cases as a producer, households spend a portion (sometimes a large portion) of their budget on goods and services and the rest on collection. These collection funds are used to meet future needs. While savings are generated from household income, they become a source of future expenses. The sources of income and expenditure of households are different.

Chapter 2 of the dissertation, entitled “**Current state of household income: efficiency of pastures and use of subsidiary farms**”, analyzes the current state of financial results of households, efficiency of grazing and use of personal subsidiary farms: dynamics of financial results (or profits).

Scientific methods are used to obtain systematic information about the economy. As a result, it is possible to understand the essence of economic events. As with all economic research, our study is based on a systematic approach and comparative analysis method. *A method* is a set of rules and methods used to perform a task in a more purposeful way. This method consists of four main stages. In the first stage, detailed information on research objects was collected and, as a result, specific research objects were selected. In the next step, questionnaire forms were developed to analyze and compare the current situation in households with the collected facts. Surveys were conducted in households on the basis of questionnaires. In the third stage, the financial indicators collected as a result of the survey were analyzed with the help of various computer programs. At the last stage, the results obtained on the research objects were compared and final opinions were formed, relevant proposals were put forward.

The study was conducted in the Ganja-Gazakh region of the Republic of Azerbaijan and the Kakheti region of Georgia, as described in Figure 1. Scientific research was conducted in six

villages, including three districts and one village in each of the two republics.



Figure 1. Research areas: Ganja-Kazakh economic region and Kakheti region

The choice of the study area, which covers the mountainous regions of the two countries, is not accidental. Thus, both regions were selected with the same climate type, the same geographical relief and territorial structure, altitude, the same agricultural traditions. That is, Ganja-Gazakh regions of the Republic of Azerbaijan and Kakheti regions of Georgia were selected as research areas. After that, 3 districts were identified for each region. A number of data were collected from the municipalities of the selected districts to identify research villages. Number of villages in each region, their height above sea level, number of households in villages, condition of livestock and agriculture, number of nomadic farms, area (arable land, share land, yard, pastures, summer and winter pastures, etc.) data were collected. The collection of this data was not accidental, as certain criteria were set for the selection of villages.

According to the results obtained at the first stage of the survey, we can say that 33-71% of the surveyed villages in Azerbaijan and 30-

47% in Georgian villages were involved in the survey. 62% of respondents are men and 38% are women. Also, 52% of respondents are the head of the family (male), 30% are the wife of the head of the family, and 18% are other family members. The average age of the interviewees is 51, while the age of the interviewees varies from 18 to 86 years. In Azerbaijan and Georgia, the labor force in the surveyed households is 71 and 68 percent of family members, respectively.

The number of family members for the model farm created in our study and the labor force were created and calculated accordingly, as well as indicators of different types of employment in the agricultural sector were determined.

Table 1. Indicators of model households created for research villages in Azerbaijan and Georgia

Indicators	Unit	Azerbaijan			Georgia		
		Atabey	Plankend	Karamli	Gombori	Arashenda	Shakhvetila
Family members	Person	5	5	5	4	4	3
Workforce	Person	3.3	3.3	3.6	2.88	3,17	2,49
Average area under cultivation	Ha	2,35	0,37	2,39	0,85	2,03	0,35
The average of the yard area	Ha	0,30	0,28	0,36	0,28	0,29	0,40
The average of the mowing area	Ha	0,96	0,32	1,8	0,30	0,14	0,51
Dairy cows	Head	2.3	2.	3	2.34	4,79	3,84
Ewe	Head	11.7	18	15	6.73	26,81	2,03
Poultry	Head	11.63	10	26	18	33,46	17,71
Beekeeping	Number	5	5	8	7	2,13	5,97
Grain	Ha	1,4	-	2	-	2,03	-
Potato	Ha	1	0,28	0,26	0,85	-	-
Grapes	Ha	-	-	-	-	1,14	-

The table was compiled by the author based on survey data from the Republics of Azerbaijan and Georgia

For the model farm, the average number of family members, labor force, as well as basic crop and livestock activities in the study villages of both countries were determined (Table 2).

At the analysis stage, the classification of income and expenditure, as well as the structure of sales, profit and profitability obtained in different areas of agricultural activity in six research villages were determined.

Table 2. Financial results of model households in research villages of Azerbaijan in 2015-2019

Villages		Plankend				Atabey				Karamli			
Agricultural activities	Unit	Income	Total Expenses	Profit	Profitability Level,%	Income	Total Expenses	Profit	Profitability Level,%	Income	Total Expenses	Profit	Profitability Level,%
Dairy cows	AZN / per dairy cow	741	341	400	117	828	348	480	138	884	436	448	103
Shepherding	AZN / per sheep	97	27	70	259	117	39	78	200	107	41	66	161
Goat breeding	AZN / per goat	103	28	75	268	100	39	61	156	103	39	64	164
Chicken	AZN / per chicken	53	30	23	77	31	19	12	63	24	14	10	71
Goose production	AZN / per goose	22	11	11	100	22	11	11	100	22	11	11	100
Beekeeping	AZN / a colony	147	55	92	167	180	53	127	240	216	58	158	272
Potato growing	AZN / ha	4144	1331	2813	211	5857	1625	4232	260	3798	2240	1558	70
Wheat	AZN / ha	-	-	-	-	697	357	340	95	697	342	355	104
Raspberries	AZN / ha	-	-	-	-	-	-	-	-	5000	1980	3020	153
Meadow	AZN / ha	338	235	103	44	360	223	137	61	389	309	80	26

The fact that households in Georgia are 10 percent more engaged in non-agricultural activities than in our households has led to a high share of this sector in Georgian villages. Thus, the income of households from non-agricultural activities is higher than that of households in Azerbaijan. The average income from non-agriculture in Gombori village is 225 manat (326 GEL), in Arashenda village 262 manat (380 GEL), and in Shakhvetila village 235 manat (340 GEL). This is 50-82 manat more than the research villages of Azerbaijan.

However, Georgian villages lag behind Azerbaijani villages in terms of both agricultural income and pension income. The income in Arashenda village (530 manats), which has the largest share of agricultural income, is 2.1 times less than the income in Atabey village (1099 manats), which has the highest share in the relevant category.

Table 3. Financial results of model households in research villages of Georgia

Villages		Gombori				Arashenda				Shakhvetila			
Agricultural activities	Unit	Income	Total Expenses	Profit	Profitability Level,%	Income	Total Expenses	Profit	Profitability Level,%	Income	Total Expenses	Profit	Profitability Level,%
Dairy cows	AZN / dairy cow	787	277	510	184	828	302	526	174	866	355	511	144
Shepherding	AZN / per sheep	94	35	59	167	87	32	55	174	92	35	57	166
Goat breeding	AZN / per goat	70	30	40	132	70	28	42	148	70	30	40	135
Pig breeding	AZN / per pork	927	469	458	98	927	469	458	98	856	477	378	79
Poultry	AZN / per chicken	35	19	16	86	35	19	16	86	35	19	16	89
Beekeeping	AZN / a bee colony	210	52	158	301	210	45	165	368	210	49	161	328
Potato growing	AZN / ha	526	152	374	245	1183	400	783	196	1150	352	798	227
Wheat	AZN / ha	690	350	340	97	690	350	340	97	690	350	340	97
Viticulture	AZN / ha	-	-	-	-	1794	1185	609	51	1794	1185	609	51
Meadow	AZN / ha	539	414	125	30	539	414	125	30	539	414	125	30

The income of households in Gombori village, where the share of income from agricultural activities is the smallest (323AZN), is 1.5 times less than the income of households in Plankend village, which has the lowest share in the relevant category. In general, the total income of households in agriculture in three villages of Georgia (721 manat) is 3.5 times less than the total income of three villages in

Azerbaijan in the relevant category (2506 manat). Interestingly, the income from agriculture in 3 Georgian villages can only surpass the income of households in Plankend village in this category (470 manat). Arashenda village is the Georgian village that earns the most income from agricultural activities. As a logical consequence, the share of agricultural income in this village is higher than in other Georgian villages.

In general, pension receipts in three Azerbaijani villages are 1.2 times higher than in the corresponding villages of Georgia. Only in the village of Shahvetila, pension income (193 manats) exceeds the villages of Azerbaijan. The reason why the share of pension income in the income of a neighboring country is higher than the share of income in rural areas of Azerbaijan is due to the low share of income from agriculture in that country.

Thus, we found that household incomes in Azerbaijan are higher than in agricultural activities and pension income, while in Georgia, non-agricultural incomes are higher. However, when dividing income by the number of household members, Georgian households are ahead of Azerbaijani households in all three classifications (agricultural and non-agricultural income, pension income). Thus, while the average monthly income of households in Azerbaijan from agricultural activities is 113 manat per capita, this amount is 115 manat for Georgia. When we analyze the per capita income from non-agriculture, we see that households in Georgia (60 manats) earn 25 manats more than households in Azerbaijan (35 manats). In terms of pension income, Georgian households earn 47 manat per capita, and our households earn 36 manat. It is true that Georgian households were ahead of ours in terms of non-agricultural income. Thus, agriculture is the main source of income and pension income due to the small number of household members. As can be seen from the table showing the model household indicators (Table), while the number of household members in Azerbaijan is five, in Georgia this figure is four. This has clearly had an impact on both per capita income from agricultural activities and pension earnings.

Chapter 3 of the dissertation, entitled "**Improving the efficiency of the use of pastures and subsidiary farms to increase**

household income" examines the balance between grazing land and the number of animals, opportunities to increase household income, the relationship between employment and household income.

In each study village, there is a “queue” of household members to graze the animals, as well as grazing by a hired shepherd. While grazing by hired shepherds is predominant in Azerbaijan, the opposite is observed in Georgia. In a neighboring country, households prefer to take turns grazing rather than paying the shepherd. In both countries, there are no official rules for the application of rotational grazing systems, the application and management of grazing norms. In almost all villages, in addition to mowing in the autumn, the fields are used for grazing animals after harvest. In some villages, there are unofficial rules applied by the local population. For example, in the village of Karamli, first the outer (remote) parts of the village pasture, and then the parts close to the village are grazed. Also, in the villages of Karamli and Atabey, the parts of the pasture close to the village are intended for households with a small number of animals. In Gombori village, pastures are grazed by households in the nearby area. Due to the existence of nomadic and semi-nomadic farms with a large number of animals in the villages of Atabey, Karamli, Arashenda and Shakhvetila, the amount of grazing per pasture area is reduced to some extent. Nomadic farms mostly pass through the villages of Karamli and Plankend. Although there is no official migration route in the villages of Gombori and Arashenda, there are still a few nomadic farms in these villages. The biggest problems with nomadic farms are in the villages of Karamli and Arashenda.

Thus, although our study revealed a large amount of grazing in pastures, the main problem was the lack of management and organizational mechanisms for grazing. Although signs of erosion and degradation were found in all six villages, these rates are higher in the three research villages in Azerbaijan. In Georgia, most of the signs of erosion and degradation are found in the village of Arashenda. Gombori is the village with the lowest grazing area. However, the lack of a system of pasture control leads to the gradual coverage of these territories with shrubs and forest trees. All research villages have only

local and informal self-government systems. Full and comprehensive control over these rules is impossible due to the lack of a mechanism.

In general, when analyzing the legal documents related to agriculture in both Azerbaijan and Georgia, we came to the conclusion that there are no specific articles on pastures, grazing areas and their management. Thus, it is necessary to work on the creation of a legal document to regulate issues related to pastures and grazing areas. This chapter also examines the possibilities for increasing household income and identifies their potential sources of income. Our research also highlighted the importance of household income diversification. The obvious negative impact of one-sided dependence on income sources on income and ways to eliminate this effect are revealed.

The results of the study show that diversification of household incomes is now normal. However, it should be emphasized that agricultural activities cannot be the only source of household income, especially in rural areas. This is especially true in the field of animal husbandry. This is because the growing number of animals is one of the main conditions for the long-term efficient use of pastures. One of the important conditions for improving household income is the creation of non-agricultural employment opportunities in the state agrarian policy program to prevent urbanization. These measures should include measures to improve pastures, adhere to grazing norms, and prevent degradation of pastures.

Although the provisions and characteristics of the legislation mentioned in the first chapter of the research on subsidiary farms create opportunities and conditions to increase household income at the present time, our research in rural areas has shown that this is not enough. Thus, it was observed that the legislation needs to be improved, as well as the inability of citizens to use subsidiary farms properly, and a number of economic activities are carried out spontaneously. Of course, there are a number of objective and subjective reasons for this. It would be expedient to develop and implement a control mechanism for subsidiary farms.

All these facts confirm that household income is inextricably linked with the level of employment. Thus, households responded to these surveys not blindly, but as a result of long-term activities. Thus,

the most lucrative field of activity is considered to be very important and significant for that household. In this chapter, we can actually prove the financial results obtained as a result of the calculations in the second chapter, based on the theoretical ideas obtained from the survey.

CONCLUSION

One of the main priorities of domestic economic policy is the study of household incomes and the sources of their formation, which differ in importance among economic entities in the context of market relations. As well as being privately owned, households have the ability to produce goods, provide services, and influence the continuity of reproduction. In this regard, households play an important role in the system of economic relations. Therefore, the study of the efficient use of actual sources of household income, the study of potential sources of income is one of the important issues in terms of improving the financial security of these economic entities.

In most cases, the core of the household is made up of families. However, as we noted at the beginning of our study, not every household can be considered a family. Also, in economic analysis, households, not families, come to the fore.

In addition to the work carried out, the following measures can be considered expedient to achieve effective results in the relevant areas:

- a household is an economic entity consisting of a person or persons making joint economic decisions, having a single budget system, and owning the factors of production. The role of households in the system of economic relations is especially important because they are the owners of the factors of production that they own. Households are provide development of society as a whole and the provision of the national economy with sustainable labor resources;

- households given to one of the members of the right to control joint economic activity spend a certain part of their budget on products and services, and the rest on collection. In addition to this factor, the use of savings to meet future needs makes households more

recognizable as consumers. However, our research has shown that households, especially those living in mountainous and foothill areas, are not only consumers but also producers of goods and services. From this point of view, households should be considered as producers of goods and services, especially in agriculture;

- households, like other economic entities, have labor, capital and land resources. In this respect, households play an important role as participants in the cycle-flow model, taking their place in the value chain;

- The results of the activities of individual entrepreneurs, family farms and households are jointly published in the annual reports of the State Statistics Committee. The creation of a unified accounting system to differentiate the share of households in the production of agricultural products and services, the formation of a control mechanism for this system will further increase the importance of the existence of households;

- household income and the sources that generate them are influenced by various factors. One of these factors is the person and his personal qualities. The impact of people's abilities, knowledge and skills on income is justified not only in theory but also in practice;

- It is important to improve the grazing rate to ensure the sustainability of the efficient use of pastures by households. Appropriate action plans should be developed in this direction, a rotating grazing mechanism should be applied, and it should be monitored regularly for this mechanism to be useful;

- one of the important issues in both Azerbaijan and Georgia is the creation of a legal and regulatory framework that reflects specific provisions related to the use, management and control of pastures;

- Personal subsistence farms also create conditions for the creation of food stocks and increase the level of employment, and in meeting the needs of the population in food products through domestic production at least in part, of households located in mountainous and foothill areas. However, in order to highlight the importance of private farms, the accounting of the relevant sector, the share of products and services produced in this area, as well as the cost should be reflected in the statistics;

- the efficient use of living space can also play an important role in household income. However, our research has shown that not all households use their backyards efficiently, and in some cases not at all. In this regard, specific incentives should be implemented, especially in rural areas, for the impact of efficient use of living space on household incomes;

- despite the fact that the price of honey in the market is quite high, it lags behind other agricultural sectors in terms of its share in household income. Although there are several reasons for this, the main factor is the unprofessional maintenance of this area of activity. Our research shows that households that professionally care for their bee families have higher incomes in the relevant field. However, due to the small number of such households, the average is low. To increase the income of the population from beekeeping, it is important to conduct trainings and information events in the regions on how to care for bee colonies;

- In the regions surveyed in Azerbaijan, monthly incomes are higher from household agricultural activities and pension income, and in Georgia from non-agricultural activities. However, when determining the distribution of income per capita, the income of households in Georgia in all three areas is higher than that of households in Azerbaijan. The main reason for this is that the average number of household members in Georgia as a whole is 4, not 5. However, given that the main criterion is the average, then the level of household income in Georgia is better than in our country;

- Facilitating market access for households in mountainous and foothill areas, improving road infrastructure, and establishing sales channels for villages in geographically disadvantaged areas may be important in increasing household incomes and sources of income. If the control of specially created sales channels is entrusted to young people, their employment problems will be eliminated to some extent, and it will stimulate employment in agriculture;

- The creation and development of agritourism in research villages with high potential has a positive effect on household income, and the steps taken in this direction can also solve the problem of employment and encourage young people to “stay in the village”;

- State support for agricultural entrepreneurship can provide a significant impetus for increasing the efficiency of production in households. In this regard, the mechanism to stimulate entrepreneurial activity of households in the agricultural sector should be improved, the material and technical base and infrastructure of resource-saving production should be created in the appropriate direction;

- It is also one of the other conditions for households to provide information and consulting services at least in the regional centers close to them in order to produce high quality and competitive products;

- The level of education has a clear impact on household incomes, as evidenced by research. In many cases, household members also have to leave the countryside for better education. From the point of view of diversification of household income sources, taking measures in this direction and improving education in rural areas is one of the important factors.

The main provisions of the dissertation are reflected in the following scientific articles:

1. Huseynov, M.J., Mammadov, N.N. Improving the shared use of pastures. // Scientific works of Azerbaijan State Agricultural University №2, Ganja 2015. p.217-222.

2. Huseynov, M.J., Mammadov, N.N. Problems and opportunities for joint use of pastures. // Scientific works of Mingachevir State University №1, Mingachevir 2015. p.99-105.

3. Mammadov, N.N. The role of increasing the financial results of livestock activities in improving the living standards of the population in mountainous areas. // ADAU International cooperation in the development of agricultural science, food security and environmental protection. 8th International Scientific-Practical Conference (03-04 October 2016 Ganja / Azerbaijan)

4. Mammadov, N.N. The impact of increasing household incomes on living standards. // Scientific works of Azerbaijan State Agricultural University №4, Ganja 2017. p.191 - 198.

5. Allahverdiyeva, N., Mammadov N. The results financial activities of the model households in Azerbaijan. Current issues of finance, economics, accounting and management: Theory and practice –International scientific –practical conference. December 4, 2017- Poltava, Ukraine 66 – 69.

6. Mammadov, N.N. Socio-economic analyses of farming households in Azerbaijan and Georgia. / A Focus on Research and Higher Education in/on Central Asia and the Caucasus (Alma-ata, Khazakstan 2018)

7. Mammadov, N.N. Finance sources of households from agricultural activities in case study villages in Azerbaijan and Georgia.// NAKHCHIVAN STATE UNIVERSITY. SCIENTIFIC WORKS, 2019, № 2 (99) ISSN 2224-0829. Pages 180-182.

8. Jafarov, J.F., Mammadov, N.N., Zabolotnyy S. Income sources of the model households from agricultural activities in case study villages in Azerbaijan and Georgia . Ganja state agricultural university 02-03 may 2019 International scientific conference.

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11. Huseynov, M.J., Theoretical views and characteristics of households // Baku. Scientific-practical journal of cooperation.№3 (58) -2020 ISSN 2218-91-49 p. 5-11.

12. Huseynov, M.J., Financial results of households. // Baku. Scientific-practical journal of cooperation.№4 (59) -2020 ISSN 2218-91-49 p. 119-125.

13. Mammadov, N.N. Household income: analysis of income by areas of agricultural activity.// Baku. News of Azerbaijan State Economic University. Volume 9, January-March 2021. ISSN 2306-8426. P. 138-152.

14. Mammadov, N.N. Opportunities to increase the income of households located in mountainous and foothill regions.// –Ganja: Azerbaijan University of Technology. Journal of Innovative Economics and Management, - 2021.№2 / 6 –p.48-56

The defense will be held on “16” March 2022 at 14:00 at the meeting of the Dissertation council ED 2.42 of Supreme Attestation Commission under the President of the Republic of Azerbaijan joint operating at Azerbaijan State Agrarian University and Azerbaijan Cooperation University.

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Dissertation is accessible at the Azerbaijan State Agrarian University Library.

Electronic versions of dissertation and its abstract are available on the official website (www.adau.edu.az) of the Azerbaijan State Agrarian University.

Abstract was sent to the required addresses on 16 february 2022.

Signed for print: 11.02.22
Paper format: 60x84
Volume: 39993
Number of hard copies: 30