## 2. ՏՆՏԵՍՈՒԹՅԱՆ ԻՐԱԿԱՆ ՀԱՏՎԱԾԻ ՀԻՄՆԱԽՆԴԻՐՆԵՐ

### POTATO FARMING IN THE FOOD SECURITY SYSTEM OF RA

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Հոդվածը ստացվել է՝ 09.02.23, ուղարկվել է գրախոսման՝ 14.03.23, երաշխավորվել է տպագրության՝ 08.05.23

**Introduction.** Potato farming is one of the promising and profitable agriculture sectors in RA. This sector is of great importance in mountainous regions, due to the important role it plays in providing employment in rural areas, alleviating poverty, fighting against depopulation of villages and desertification of land, whereas the issues of the role, development and obstacles of potato farming in the economy of mountainous regions are still not fully explored and addressed.

Being relatively intensive and profitable branch of highland agriculture, potato farming simultaneously conditions a high level of production intensity, as well as a maximum level of self-sufficiency, stable growth and development. Extensive factors are more predominant in the development of this sector. Losses and sales costs are high, while the efforts of creating regional retail markets are insufficient, old export links have almost disappeared, disparity between wholesale and retail prices of farms is high, etc.

The disclosure of the causal relationship between low production efficiency, the optimization of sowing areas, intensification, loss reduction, creating an optimal ratio for prices, reducing sales costs, and ensuring the sustainable growth and efficiency of potatoes in the way of infrastructure modernization determine **the relevance** of the topic.

The purpose and problems of the research. The main purpose of the research is to study the role of potato farming in the context of food security, to identify the internal and external causal relationships hindering the economic efficiency of potato farming. In particular:

- > to study the role of potato farming in the agricultur and food security systems of RA,
- ➤ to justify the necessity of further growth of the economic efficiency of potato farming, the appropriateness of investing resources for that purpose,
- > to consider the problems of prospective development of potato farming and propose solutions aimed at their elimination.

**Literature review.** The concept of "food security" as a scientific term was put into circulation in the mid-1970s, when, in contrast to the obvious overproduction of food in

developed countries, hunger and malnutrition became massive problems in the so-called "third world" countries.<sup>1</sup>

Food security is a complex of legal, organizational, material-technical and other measures aimed at providing the necessary quality and sufficient quantity, healthy, complete food that is available to every member of society, including the most vulnerable segments of the population, and can be consumed at any time and in any situation. Food security is mainly provided through the development of agriculture, food production and import systems<sup>2</sup>. In the context of modern global challenges, the most serious problem of ensuring food security is the expansion of food production volumes with existing and gradually decreasing resources. Some types of food, including potatoes, provide an opportunity to solve this problem due to their worldwide geographical distribution, existing demand, and cultivation features. Potato is one of the cornerstones of food security, which can solve the issue of food security in developing countries and in the countries with high poverty and hunger<sup>3</sup>. Alongside with rice, wheat and corn, potato provides 50% of the world's food energy requirements4. These circumstances rise the urgency and importance of continuous improvement of potato cultivation technologies, strengthening potato's role in sustainable agriculture. Field researches particularly emphasize the question of increasing potato yield in the context of efficient, scientifically driven cultivation<sup>5</sup>, improvement of disease and pest control<sup>6</sup> and fertilization 7.

**Methodology.** The solution of the problems set in the scope of the research was obtained by implementing the methods of description, comparison, generalization and graphic presentation.

**Discussion.** The state of food security in RA is characterized, on the one hand, by insufficient food production and self-sufficiency, and, on the other hand, by low levels

<sup>1</sup> Avetisyan S., Urgent issues of food security in the Republic of Armenia. -Yerevan: Economist, 2014, ("Amberd" series), page 16. (original in Armenian)

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<sup>&</sup>lt;sup>2</sup> https://www.mineconomy.am/page/1333

Devaux, A. et al. (2020). Global Food Security, Contributions from Sustainable Potato Agri-Food Systems. In: Campos, H., Ortiz, O. (eds) The Potato Crop. Springer, Cham. https://doi.org/10.1007/978-3-030-28683-5\_1

<sup>&</sup>lt;sup>4</sup> Wijesinha-Bettoni, R., Mouillé, B. The Contribution of Potatoes to Global Food Security, Nutrition and Healthy Diets. Am. J. Potato Res. 96, 139–149 (2019). https://doi.org/10.1007/s12230-018-09697-1

Mulugeta Doboch, Andargachew Gedebo, Ashenafi Haile & Hussien Mohammed Beshir (2022)
Improving Potato Productivity through Optimum Agronomic Management to Ensure Food Security of Smallholder Farmers, Cogent Food & Agriculture, 8:1, DOI: 10.1080/23311932.2022.2131995

<sup>&</sup>lt;sup>6</sup> Ahmadu, T., Abdullahi, A., Ahmad, K. (2021). The role of crop protection in sustainable potato (Solanum Tuberosum L.) production to alleviate global starvation problem: An overview. Chapter in a book: Solanum Tuberosum-A promising crop for starvation problem. https://doi.org/10.5772/intechopen.100058

Gedefa Moreda Mijena, Andargachew Gedebo, Hussien Mohammed Beshir, Ashenafi Haile, Ensuring food security of smallholder farmers through improving productivity and nutrition of potato, Journal of Agriculture and Food Research, Volume 10, 2022, https://doi.org/10.1016/j.jafr.2022.100400.

of food accessibility. The characterization of regional food security is hard to provide, due to RA being a small territorial unit, rural residents are connected with urban residents by many threads, sending them food products that have not passed the sphere of commodity circulation, on the other hand, receiving significant internal transfers from urban residents.

This research was not purely guided by consumer demands, since such analysis wwould be scientifically insufficient and one sided, thus the research also emphasized the purchasing power of the population and food accessibility. Otherwise, we would have insufficient knowledge about demographic segmentation of the market and insufficient PR could cause "surpluses" of non-consumable products, which could be fatal for farmers.

Currently, potato farming is practiced in all regions of RA, but sown areas and production volumes are unevenly distributed between regions. It must be noted that in the regions of the Ararat plain and the foothill zone, early-ripening potato varieties are cultivated<sup>1</sup>, and in the main potato-growing mountain regions middle-ripening and, mostly, late-ripening potato varieties are cultivated. The data on the distribution and dynamics of sown areas of potato by regions are presented in table 1.

Table 1 The distribution and dynamics of sown areas of potato according to the regions of the RA  $^{\rm 2}$ 

Regions	Sown areas, thousand ha				Share, %				
	2019թ.	2020թ.	2021թ.	2022թ.	2019թ.	2020թ.	2021թ.	2022թ.	
Aragatsotn	1055	1062	1019	877	5.15	5.2	5.06	4.55	
Ararat	534	508	552	629	2.6	2.5	2.7	3.3	
Armavir	1252	1182	1285	1309	6.1	5.8	6.4	6.8	
Gegharkunik	8096	7995	7720	7004	39.5	38.9	38.4	36.4	
Lori	3432	3510	3543	3475	16.8	17.1	17.6	18.04	
Kotayq	645	637	646	670	3.15	3.1	3.2	3.5	
Shirak	3236	3536	3404	3566	15.8	17.2	16.9	18.5	
Syunik	1200	1128	1004	876	5.9	5.5	4.98	4.5	
Vayoc Dzor	124	125	106	101	0.6	0.6	0.5	0.5	
Tavush	838	783	766	693	4.1	3.8	3.8	3.6	
Total, RA	20477	20531	20125	19263	100	100	100	100	

The data of the table indicates that sown areas of potato are mainly located in the mountainous regions of country, among which Gegharkunik region is the leader. According to the data of 2022, 36.4% of the total sown areas of potato is located there. Shirak region is in second place with 18.5%, and Lori region is in third place with 18.04%. Yield maximization remains the main factor in increasing potato production

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<sup>&</sup>lt;sup>1</sup> Sarukhanyan N., Nightshade family crops, Yerevan 2016, Page 31 (original in Armenian)

<sup>&</sup>lt;sup>2</sup> RA Statistical Committee, Food Security and Poverty 2022, January-December, page 42, <a href="https://www.armstat.am">www.armstat.am</a>

and economic efficiency, as most costs (seed, tillage cultivation, irrigation water, fertilizers) are almost fixed costs per ha. The average yield of potato according to the RA regions is presented in table 2.

Potato yield according to RA regions <sup>1</sup>

Table 2

Table 3

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Regions		Yield, ce	2022 2010 1:55 0/		
	2019թ.	2020թ.	2021թ.	2022թ.	2022-2019 difference, %
Aragatsotn	214.9	268.2	203.7	217.1	1.02
Ararat	272.5	285.1	281.8	277.0	1.7
Armavir	320.0	389.5	341.3	322.8	0.9
Gegharkunik	210.2	219.2	176.4	181.4	-13.7
Lori	158.9	168.9	151.3	147.4	-7.2
Kotayq	186.2	190.7	189.7	179.3	-3.7
Shirak	210.7	216.5	170.6	170.6	-19.03
Syunik	144.6	149.8	122.0	146.3	1.2
Vayoc Dzor	131.3	138.4	116.6	124.9	-4.9
Tavush	59.9	71.0	81.8	92.4	54.3
P Δ average	100 2	212.8	170 3	182.1	-8.6

The data of the table indicates that there are significant achievements of increasing the yield for previous period in Tavush, Syunik, Ararat, Aragatsotn and Armavir regions. The 1% yield increase has very different economic meanings in those regions. It depends on the actual yield and sown area. In Shirak and Gegharkunik, the yield in 2022 compared to 2019 decreased by about 19.03% and 13.7%, respectively. The differences in the potato yield levels suggest that there are still serious reserves for increasing potato production in RA and in individual regions. Yield levels can be sharply increased, which will be a serious supply for exports.

Important issues for the sector development remain: irrigation, implementation of crop rotation, effective diseases and pests control, loss-free storage, selection of varieties that ripen in different periods and are well tested under given conditions, informing the public about the market situations and prices, organization of potato processing in mountain regions and using waste in animal husbandry, etc. The gross harvest of potato according to RA regions is presented in the Table 3.

The gross harvest of potato according to RA regions <sup>2</sup>

Regions	G	ross harvest,	2022-2019 difference, %		
	2019թ.	2020թ.	2021թ.	2022թ.	2022-2019 difference, %
Aragatsotn	22.7	28.5	20.8	19.0	-16.3
Ararat	14.6	14.5	15.7	18.0	23.3

<sup>&</sup>lt;sup>1</sup> RA Statistical Committee, Food Security and Poverty 2022, January-December, page 42, www.armstat.am

<sup>&</sup>lt;sup>2</sup> RA Statistical Committee, Food Security and Poverty 2022, January-December, page 42, www.armstat.am

Regions	G	ross harvest,	2022 2010 1:55 0/		
	2019թ.	2020թ.	2021թ.	2022թ.	2022-2019 difference, %
Armavir	42.9	46.6	51.0	42.3	-1.4
Gegharkunik	170.2	175.0	132.8	127.1	-25.3
Lori	49.4	59.3	53.6	51.2	3.6
Kotayq	12.0	12.1	12.3	12.0	X
Shirak	67.9	76.6	58.1	60.8	-10.5
Syunik	17.4	16.9	12.3	12.8	-26.4
Vayoc Dzor	1.6	1.7	1.2	1.3	-18.8
Tavush	5.0	5.6	6.2	6.4	28
Total, RA	404.1	437.2	364.6	351.4	-13,04

Despite occurring changes and shifts, the lion's share of potato in RA is obtained in mountainous regions. Those regions are Gegharkunik, Lori and Shirak regions, Aragatsotn region - Aparan and Aragats, Syunik - Goris and Sisian regions, which provide almost 80% of the total potato production of the RA. This is especially important in terms of alleviating poverty in mountainous regions. However, such a representation of the spatial distribution of potato still does not give a complete picture of food security and commodity resources.

Potato farming is of great importance in the agriculture and particularly in Gegharkunik region development, since there are all the preconditions for it. This region is the leader in terms of sown potato areas (see table 1). The dynamics of the potato sown areas in Gegharkunik region are presented in Figure 1. It must be noted that the sown areas of potato have decreased not only in Gegharkunik region but also throughout all the country.

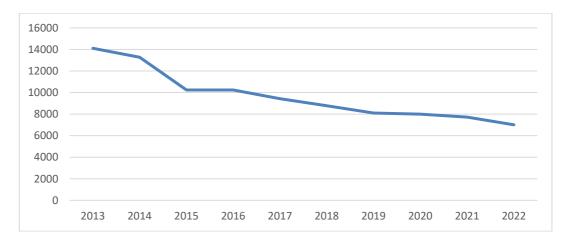


Figure 1. The dinamics of the potato sown areas in Gegharkunik region, 2013-2022, hal

<sup>1</sup> RA Statistical Committee, Food Security and Poverty 2022, January-December, page 42, <a href="https://www.armstat.am">www.armstat.am</a>

Farmers associate the reduction of sown areas with the problem of sales and the lack of financial resources. It is also a consequence of the inexpediency of working on small plots of land, where labor costs are high and profitability is low.

Farms with narrow specialization and enlarged production units allow widespread use of flow methods of performing basic technological operations, which, in its turn, makes it possible to avoid unproductive ride of equipment from one plot to another, as well as to complete all work on time. The use of this method makes it possible to significantly reduce the time spent for work, reduce labor costs and increase productivity<sup>1</sup>.

According to economic calculations, in the specialized farms of RA, with up to the minimum rational size of 3.0 ha and more, the concentration of potato sown areas and the intensification of production to the best existing level provide an opportunity to reduce production costs and receive an additional 150-200 thousand tons of commodity potato<sup>2</sup>. It must be noted that despite the decrease in potato sown areas, the level of potato self-sufficiency in the RA has registered an increase (see Figure 2.).

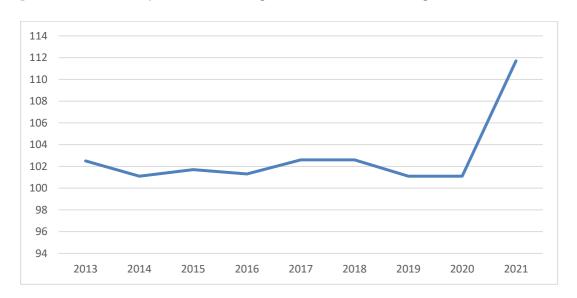


Figure 2. The self-sufficiency of potato in RA, 2013-2021<sup>3</sup>

The high level of self-sufficiency of potato creates opportunities to increase export volumes. The main export direction of vegetables from Armenia is Russia<sup>1</sup>. Realization

<sup>&</sup>lt;sup>1</sup> Manasyan V., Specialization and concentration of potato farming in the context of increasing the economic efficiency of the sub-sector in RA, "Banber of Yerevan University. Sociology, Economics", 135.5, 2011, page 64, (original in Armenian)

<sup>&</sup>lt;sup>2</sup> Same place

<sup>&</sup>lt;sup>3</sup> RA Statistical Committee, Food Security and Poverty 2022, January-December, page 68-76, www.armstat.am

and sales problems can be solved by creating new opportunities for potato exports to the Russian market. In this matter, the state intervention is important - in terms of increasing the availability of agricultural loans and subsidies. As it was already noticed, the economic efficiency of the sector is incomparably higher in specialized farms, in which significant arable areas are allocated to this crop, which allows to implement advanced technologies of cultivating and harvesting the crop, as a result, the yield of the potato is higher, the expenditure and labor costs per unit of output are lower, and therefore the level of profitability of the sector is high?

Potato farming is characterized by being labor intensive, by its complexity of processing technology, and by the high sensitivity towards significant seasonal fluctuations of high quality agrotechnical measures, time and labor use. Potato planting costs are 7%, maintenance costs are 16%, and harvesting costs are 52% of total farming expenditures<sup>3</sup>.

Both an excessive amount of technical resources and a lack of them lead to a reduction in the economic efficiency of their use. On one hand, the technical resources are not fully used, and the costs per unit of sown area increase, on the other hand, the violation of the agro-technical deadlines for the implementation of technological operations reduces the yield, therefore, all other indicators of production efficiency also decrease. In the case of potato farming, there is a direct correlation between yield levels and labor costs and profitability levels.

Along with inter-economic specialization and concentration, the intra-economic specialization and concentration of the sector, which have significant impact on the strengthening of inter-economic units, as well as on the types of jobs and products produced, contributing to the specialization of work, are also important. The latter allows to concentrate production, use current technological processes and reduce labor and material costs per unit of potato production<sup>4</sup>. The intensification of production is no less important for the assessment of efficiency in potato farming. As the experience of agricultural farms testifies, the final results of potato production - yield and economic efficiency, are largely determined by the level of intensification.

**Scientific novelty.** As a result of comprehensive studies and analyses, the ways of solving the problems of the prospective development of potato farming in the food security system were outlined.

**Conclusions.** Potato farming is one of the most promising and profitable branches of agriculture in Armenia, which deserves special attention of state. Considering the fact

<sup>&</sup>lt;sup>1</sup> Harutyunyan K. et al., Food Security Assessment and Modeling in Short and Long Term, - Yerevan. Economist, "Amberd Series 48" 2021, page 92, (original in Armenian)

Manasyan V., Specialization and concentration of potato farming in the context of increasing the economic efficiency of the sub-sector in RA, "Banber of Yerevan University. Sociology, Economics", 135.5, 2011, page 51, (original in Armenian)

<sup>&</sup>lt;sup>3</sup> Same place, page 60

<sup>&</sup>lt;sup>4</sup> Manasyan V., Specialization and concentration of potato farming in the context of increasing the economic efficiency of the sub-sector in RA, "Banber of Yerevan University. Sociology, Economics", 135.5, 2011, page 60, (original in Armenian)

that Armenia is the only country in the region that has a potential and can increase potato export, it is necessary to initiate appropriate mechanisms for promoting that potential and increasing exports.

It is necessary to emphasize the issue of renewal of potato varieties and the use of high-quality planting material, which significantly affects the efficiency of potato farming and food security.

Degeneration of the potato plant is activated especially in hot conditions, which coincides with the intensive formation and growth phase of tubers, therefore it is not guaranteed to use potatoes grown in places with hot summer as planting material. Here the seeds grown in mountainous regions with cool summers should be used as planting material.

In regards of the problems of the prospective development of potato farming, in our estimation, there are realistic possibilities of increasing the production volumes of potato and its efficiency, mainly at the expense of increasing the yield. As for the prospects for the expansion of potato sown areas, we estimate it as a temporary phenomenon.

One of the important ways of increasing the efficiency of potato farming is the creation of a favorable agro phone for potato cultivation. The most radical measure in this matter is the application of correct crop rotations, in which case it is possible to provide the potato fields with the best predecessor plants. However, in the conditions of the current size of farms, the talk of crop rotations makes no sense.

It is important to restore the implementation of targeted subsidy programs for land cultivation in the most unfavorable zones for agriculture and to improve the mechanisms of their application, and the geographic expansion of the implementation of those programs. The latter will significantly contribute to the increase of potato cultivation areas and, as a result, to the increase of income per unit area of arable lands.

In the context of increasing the level of targeted use of agricultural land, the review of the state policy in regards of agriculture loans and credits is important, particularly in terms of increasing the availability of loans and subsidies of interest rates.

It is necessary to continue the loan interest rate subsidy program and expand its geography - providing the inclusion of the regions with less favorable conditions for agriculture (for example borderline regions, high mountain regions, a number of communities of Gegharkunik region, which became borderline as a consequence of the 2020 Artsakh-Azerbaijani war, etc.). This, as a lever of state regulation, can be effectively used not only for the purpose of increasing the level of arable land use, but also for promoting the preferred directions of zonal agriculture specialization.

The enlargement of the land plots is mandatory precondition for the implementation of crop rotation, the mechanization of potato cultivation and the use of advanced technologies. As foreign experience shows, the most acceptable way to increase production is cooperation of production - combining efforts and collaboration. There are different forms and levels of cooperation. In our opinion, it is advisable to start with primary forms of cooperation – starting with separate processes and actions, and in case

of positive results, expanding cooperation into villagers themselves for forming cooperatives, up to the point of establishment of joint production.

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# ԿԱՐՑՈՖԻԼԱԳՈՐԾՈՒԹՅՈՒՆԸ ՀՀ ՊԱՐԵՆԱՅԻՆ ԱՊԱՀՈՎՎԱԾՈՒԹՅԱՆ ՀԱՄԱԿԱՐԳՈՒՄ

# Մերի Գագիկի Մանուչարյան

Համառոտագիր: Հայաստանում կարտոֆիլագործությունը գյուղատնտեսության հեռանկարային և շահութաբեր Ճյուղերից է։ Այն լինելով լեռնային երկրագործության առավել ինտենսիվ և եկամտաբեր Ճյուղ, միաժամանակ պայմանավորում է արտադրության ինտենսիվության բարձր մակարդակ, ինչպես նաև ինքնաբավության առավելագույն մակարդակ, կայուն աձ և զարգացում։

Արտադրության ցածր արդյունավետության պատձառահետևանքային կապերի բացահայտումը, ցանքատարածությունների օպտիմալացման, ինտենսիվացման, կորուստների նվազեցման, գների օպտիմալ հարաբերակցություն ստեղծելու, իրացման ծախսերի նվազեցման, ենթակառուցվածքների արդիականացման ձանապարհով կարտոֆիլի կայուն աձի և արդյունավետության ապահովումն էլ պայմանավորել են հիմնախնդրի արդիականությունը։

**Հետազոտության նպատակը և խնդիրները։** Հետազոտության հիմնական նպատակն է՝ ուսումնասիրել կարտոֆիլագործության դերը պարենային անվտանգության համատեքստում, բացահայտել կարտոֆիլագործության տնտեսական արդյունավետությանը խոչընդոտող ներքին և արտաքին պատձառահետևան-քային կապերը, մասնավորապես.

- ուսումնասիրել կարտոֆիլագործության նշանակությունը Հայաստանի երկրագործության և պարենապահովվածության համակարգերում,
- հիմնավորել կարտոֆիլագործության տնտեսական արդյունավետության հետագա բարձրացման անհրաժեշտությունը, այդ նպատակի համար ռեսուրսների ներդրման նպատակահարմարությունը,
- դիտարկել կարտոֆիլագործության հեռանկարային զարգացման հիմնախնդիրները՝ առաջարկելով դրանց համար լուծումներ։

Հետազոտության մեջ դրված խնդիրների լուծումն իրականացվել է նկարագրական, համեմատության, ընդհանրացման, գրաֆիկական մեթոդների կիրառման եղանակներով։

**Գիտական նորույթ։** Համակողմանի ուսումնասիրությունների և վերլուծությունների արդյունքում նախանշվել են կարտոֆիլագործության հեռանկարային զարգացման հիմնախնդիրների լուծման ուղիները պարենաապահովության համակարգում։

Հաշվի առնելով այն հանգամանքը, որ կարտոֆիլագործությունը գյուղատնտեսության առավել հեռանկարային և շահութաբեր Ճյուղերից մեկն է, և որ տարածաշրջանում Հայաստանը միակ երկիրն է, որն ունի և կարող է ավելացնել կարտոֆիլի արտահանման ռեսուրսները, անհրաժեշտ է նախաձեռնել համապատասխան մեխանիզմներ։ Ինչպես նաև հարկ է ընդգծել կարտոֆիլի սորտաթար-

մացման և բարձրորակ տնկանյութի օգտագործման խնդիրը, որն էապես ազդում է կարտոֆիլագործության արդյունավետության և պարենային անվտանգության վրա։

**Բանալի բառեր.** կարտոֆիլագործութուն, ինքնաբավություն, պարենաապահովություն, հիմնախնդիրներ, զարգացում, արդյունավետություն, գյուղատնտեսություն, արտադրություն, մարզեր

# КАРТОФЕЛЕВОДСТВО В СИСТЕМЕ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ РА

## Мери Гагиковна Манучарян

**Аннотация.** Картофелеводство в Армении – одна из перспективных и прибыльных отраслей сельского хозяйства. Являясь наиболее интенсивной и прибыльной отраслью горного земледелия, оно одновременно обусловливает высокий уровень интенсивности производства, а также максимальную степень самодостаточности, устойчивый рост и развитие.

Выявление причинно-следственных связей низкой эффективности производства, оптимизация посевных площадей, интенсификация, снижение потерь, создание оптимального соотношения цен, снижение издержек реализации, обеспечение устойчивого роста и эффективности картофеля за счет модернизации инфраструктур определили актуальность проблемы.

**Цель и задачи исследования.** Основной целью исследования является изучение роли картофелеводства в контексте продовольственной безопасности, выявление внутренних и внешних причинно-следственных связей, препятствующих экономической эффективности картофелеводства, в частности:

- изучить значение выращивания картофеля в системе сельского хозяйства и продовольственной безопасности Армении,
- обосновать необходимость дальнейшего повышения экономической эффективности картофелеводства, целесообразность вложения средств на эти цели,
- рассмотреть проблемы перспективного развития картофелеводства, предложив пути их решения.

Решение поставленных в исследовании задач осуществлялось с использованием описательных, сравнительных, обобщенных, графических методов.

**Научная новизна.** В результате комплексных исследований и анализов намечены пути решения проблем перспективного развития картофелеводства в системе продовольственной безопасности.

Принимая во внимание тот факт, что картофелеводство является одной из наиболее перспективных и прибыльных отраслей сельского хозяйства, и что Армения является единственной страной в регионе, которая имеет и может увели-

чить экспортные ресурсы картофеля, необходимо инициировать соответствующие механизмы. Также необходимо выделить вопрос сортового обновления картофеля и использования качественного посадочного материала, что существенно влияет на эффективность картофелеводства и продовольственную безопасность.

**Ключевые слова:** картофелеводство, самообеспечение, продовольственная безопасность, проблемы, развитие, эффективность, сельское хозяйство, производство, регионы

#### POTATO FARMING IN THE FOOD SECURITY SYSTEM OF RA

Meri Gagik Manucharyan

**Abstract.** Potato farming is one of the promising and profitable agriculture sectors in Armenia. Being relatively intensive and profitable branch of highland agriculture, potato farming simultaneously conditions a high level of production intensity, as well as a maximum level of self-sufficiency, stable growth and development.

The disclosure of the causal relationship of low production efficiency, the optimization of sowing areas, intensification, loss reduction, creating an optimal ratio for prices, reducing sale costs, and ensuring the sustainable growth and efficiency of potatoes in the way of infrastructure modernization determine **the relevance** of the topic.

The purpose and problems of the research. The main purpose of the research is to study the role of potato farming in the context of food security, to identify the internal and external causal relationships hindering the economic efficiency of potato farming. In particular:

- to study the role of potato farming in the agricultur and food security systems of Armenia,
- to justify the necessity of further growth of the economic efficiency of potato farming, the appropriateness of investing resources for that purpose,
- to consider the problems of prospective development of potato farming and propose solutions aimed at their elimination.

The solution of the problems set in the scope of the research was obtained by implementing the methods of description, comparison, generalization and graphic presentation.

**Scientific novelty.** As a result of comprehensive studies and analyses, the ways of solving the problems of the prospective development of potato farming in the food security system were outlined.

Considering the fact that that potato production is one of the most promising and profitable branches of agriculture, and Armenia is the only country in the region that

has a potential and can increase potato export, it is necessary to initiate appropriate mechanisms for promoting that potential and increasing exports. It is also necessary to highlight the issue of potato cultivar renewal and the use of high-quality planting material, which significantly affects the efficiency and food security of potato cultivation.

**Keywords:** potato farming, self-sufficiency, food security, development issues, efficiency, agriculture, production, regions