

CHALLENGES OF FOOD SECURITY AND THE NEED TO PROMOTE LOCAL PRODUCTION IN THE REPUBLIC OF ARMENIA

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ABSTRACT

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Food security is one of the most urgent challenges facing the Republic of Armenia, as domestic production cannot fully meet the population's grain demand. Currently, Armenia produces only about one-third of its wheat and barley requirements, with the remainder imported mainly from the Russian Federation. Several factors limit local production, including low profitability for farmers, outdated agricultural machinery, pest infestations, and insufficient government support. This research examines the current state of food security, production costs, yield fluctuations, and the challenges that discourage farmers from cultivating land. Based on field observations, official data, and media reports, the authors propose policy measures to enhance domestic production. These include targeted state subsidies, modernization of farm machinery, improved pest and risk management, land optimization, strategic food reserves, and education programs for farmers. Implementing these measures is essential for ensuring sustainable food security, reducing import dependence, and strengthening Armenia's economic resilience.

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1. INTRODUCTION

Agriculture represents a vital component of every nation's economy and a foundation for sustainable development and social stability. It provides essential food resources for the population, creates employment opportunities in rural areas, and contributes significantly to national income and overall economic resilience (Mezentseva et al., 2024).

In the case of the Republic of Armenia, the role of agriculture is even more critical due to the country's geographical characteristics, limited natural resources, and the relatively high share of the rural population engaged in farming activities (Millns, 2013). Therefore, the agricultural sector serves as an economic driver and a

strategic instrument for ensuring food security and social well-being.

Simultaneously, the continuous development of agriculture remains one of the key prerequisites for Armenia's macroeconomic stability, food self-sufficiency, and long-term socio-economic growth (Manucharyan, 2021). Despite its importance, the sector faces persistent structural and organizational challenges. These include the gradual reduction of arable land, the low profitability of agricultural production, outdated machinery, and insufficient levels of state assistance. Such issues have deepened over time, making it difficult for many farmers to sustain productivity and investment in rural areas.

Under these circumstances, the question of food security has become one of the most urgent and multidimensional policy priorities. It is now regarded not merely as a matter

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of food availability but as a fundamental aspect of national and economic security. In a country where climatic and soil conditions are not always favorable, agriculture remains the main source of livelihood for thousands of families across rural regions.

However, recent socio-economic and environmental developments have demonstrated that Armenia's food security is exposed to serious vulnerabilities, including dependence on imports and declining local production capacity (ArmenianClub.com, 2022).

2. LITERATURE REVIEW

Food security in Armenia remains highly dependent on imports, particularly wheat and other grain crops (Ministry of Agriculture of the Republic of Armenia, n.d.; Ministry of Economy of the Republic of Armenia, n.d.). According to official data, Armenia produced 97.2 thousand tons of wheat in 2021; in the same year, imports amounted to about 275 thousand tons.

In 2022, domestic demand reached 377 thousand tons, of which over 70% was imported from the Russian Federation.

In 2023, domestic production increased to 177.9 thousand tons. However, around 45.6 thousand tons were lost due to unfavorable conditions, bringing import volumes to 464.9 thousand tons. In 2024, figures again declined, returning almost to the 2021 level (Factor.am, 2023).

The dynamics of wheat cultivation areas also indicate sector instability. Wheat was cultivated on 58 thousand hectares in 2021, 57 thousand hectares in 2022, 70 thousand hectares in 2023, and 64 thousand hectares in 2024. One of the main causes of this decline was the spread of field mouse infestation, which caused serious damage to cultivated lands.

The situation was particularly severe in Shirak and Aragatsotn regions, where arid lands were massively infested by field mice. As a result, productivity dropped significantly, and many farmers abandoned cultivation due to high crop failure risks and the absence of effective state measures.

Additionally, the agricultural machinery market is problematic. Over the years, many tractors, combines, and other equipment became inoperable due to wear, repair costs, and limited spare part availability. Even with state programs to boost local production, implementation would be challenging without proper technical capacity (FAO, 2022).

3. MATERIALS AND METHODS

The research focuses on Armenia, particularly the Shirak, Aragatsotn, and Ararat Regions, where most wheat and barley are cultivated. These regions were chosen due to high agricultural activity, frequent pest problems, and yield fluctuations.

Data were gathered from multiple sources, including the following:

- Official statistics from the Ministries of Agriculture and Economy;
- Field observations in Shirak and Aragatsotn, including interviews with farmers;
- Media reports from Hetq.am, Factor.am, News.am, and ArmenianClub.com;
- Scientific literature addressing productivity, pest management, and agricultural economics (Azaryan, 2020).

Quantitative data on production, yield, and imports were analyzed using descriptive statistics. Comparisons between official and field-reported data highlighted discrepancies affecting policy. Qualitative data were analyzed thematically to identify key economic, technical, and environmental challenges.

4. DISCUSSION AND RESULTS

4.1 General Overview of the Problem

A comprehensive strategy is needed, addressing land cultivation, machinery restoration, modern technologies, and farmer support. The current trend of land abandonment leads to soil degradation, desertification, and economic decline in rural areas. Armenia lacks a stable, predictable, and independent food system because most imports depend on Russia, posing risks during geopolitical instability.

During 2023–2024, field mouse infestation caused a significant decline in productivity, particularly in the Shirak and Aragatsotn Regions.

Most affected areas were Tsaghkahovit, Artik, Maralik, and Aragatsavan. Previously, one hectare of wheat yielded 4.5–6 tons. Due to infestation, it dropped to 1.5–2 tons (Harutyunyan et al., 2023). Barley fields also declined from 2–4 tons/ha to 0.7–1.3 tons/ha.

This reduced overall production and discouraged farmers from land cultivation, resulting in complete abandonment in some areas.

Official data from Armenia's Ministry of Agriculture and Ministry of Economy often present optimistic figures, highlighting production increases or expanded cultivated areas (Ministry of Agriculture of the Republic of Armenia, n.d.; Ministry of Economy of the Republic of Armenia, n.d.). Field observations indicate that actual yields are significantly lower.

For example, farmers in Shirak report that one hectare of wheat yielded 1.5–2 tons instead of 3–4 tons claimed officially (News.am, 2023).

This discrepancy results in poor planning, inefficient state support, and reduced trust in agricultural governance (Caucasus Watch, 2023).

Many farmers abandon cultivation because market prices for wheat and barley do not cover production costs. Imported wheat costs around 65 AMD/kg; local prices range from 90–120 AMD/kg, sometimes higher. Guaranteed prices (e.g., 130 AMD for barley and 150

AMD for wheat) could stimulate local production, increase rural employment, reduce unemployment, and boost agricultural machinery use.

4.2 Recommendations for Improving Food Security

1. Promotion of local production through subsidies:

- Encourage wheat, barley, and other essential crops through state subsidies;
- Implement productivity-linked differential support.

2. Modernization of agricultural machinery:

- Establish public-private leasing with affordable interest rates;
- Create community-based centers for shared equipment use.

3. Pest and natural risk management: Rapid state-level response programs: monitoring, pesticides, coordinated actions.

4. Land resource mapping and redistribution: Map arid lands, prioritize irrigation modernization, and provide clear farmer information.

5. Strategic food reserve system:

- Maintain at least a six-month supply of essential grains.
- Replenish state reserves with local production to reduce import dependency (World Bank Group, 2024).

6. Data transparency and accountability: Ensure community oversight and independent verification of official.

7. Education and technical training: Develop educational programs and field workshops for modern agricultural methods (WFP, 2023).

Given the significant presence of unused or underutilized land in the country, it would be prudent to classify all arable land as a zone of strategic national interest. Doing so would enable the government to manage land more effectively and reduce the nation's reliance on imported food products.

A feasible approach would involve the state setting a clear policy for every idle plot. For instance, each hectare could be offered for lease at approximately AMD 30000–40000 to citizens or companies willing to cultivate the land and engage in production actively.

Such a policy could achieve multiple outcomes. It would boost domestic agricultural output, lessen import dependency, stimulate employment in rural areas, and create new job opportunities. Ultimately, this would make Armenia's food security more resilient and predictable, regardless of external economic or political fluctuations.

To maximize the efficiency of state agricultural subsidies, it is necessary to establish dedicated monitoring committees. These committees should

operate at local and regional levels, tracking the allocation, use, and appropriateness of subsidies. Their oversight would minimize wasteful spending and promote transparency in the use of public funds.

A notable issue with the current system is that subsidies are disbursed after sowing, typically during the plant development stage. This delay prevents farmers from covering essential pre-sowing expenses such as seeds, fertilizers, and fuel.

5. CONCLUSION

The state of food security in the Republic of Armenia is alarming due to the country's excessive dependence on imports, low level of domestic production, and insufficient government support.

Currently, Armenia can cover only about one-third of its domestic wheat demand with local production, relying on imports mainly from the Russian Federation for the rest. This dependency creates a serious risk to the country's food security because any disruption in international supply could quickly affect the availability of essential grain products.

The challenges go beyond imports. Agricultural land is not being used efficiently due to multiple factors: widespread field mouse infestations, outdated and poorly maintained machinery, and a growing lack of interest among farmers in cultivating their fields. Inaccurate official data, overstated production statistics, and slow government action only make the situation worse. The regions most affected by these problems are Shirak and Aragatsotn, where environmental conditions and pest damage are particularly severe.

Economic analysis shows that if the state actively supported farmers for example, by setting fair prices (e.g. 130 AMD for barley and 150 AMD for wheat), restoring agricultural machinery, and offering crop insurance, more farmers would be willing to work their land. These measures could lower unemployment, increase rural participation, boost economic activity, and reduce poverty.

In short, Armenia needs a fresh, comprehensive approach to food security. This should be based on proactive government policies, strong support for local production, and a transparent, well-planned strategy. Only with such steps can the country ensure reliable food availability and genuine independence for its citizens.

The most effective solution would be to provide subsidy payments in advance, before sowing begins. This would allow farmers to invest immediately in production, while monitoring committees could continuously document the use of funds, ensuring accountability and encouraging effective investment of public resources. Implementing these measures would not only expand agricultural production but also strengthen trust in state support and foster the economic stability of rural communities.

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