

AGRICULTURE RAPID MARKET ASSESSMENT BRIEF

Lebanon



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EXECUTIVE SUMMARY

Swisscontact's rapid agricultural assessment of Akkar, Lebanon, conducted in collaboration with IZRAA, reveals a sector constrained by structural fragmentation, economic instability, and underdeveloped infrastructure. The study, based on surveys of 60 farmers and interviews with cooperatives and value chain stakeholders, highlights the region's reliance on small-scale farming, limited labour, and informal market channels.

Key findings include:

- **Farm Structure:** Most farms are under 5 dunums, with seasonal labour and low mechanisation.
- **Crop and Livestock Diversity:** Farmers cultivate a mix of vegetables, grains, fruit trees, and fodder; 37% also raise livestock.
- **Productivity and Income:** Wide disparities exist, with average annual income at \$4,039. Crop rotation and drip irrigation correlate with higher land efficiency.
- **Market Access:** Farmers rely on informal sales and lack digital engagement, despite interest in online platforms.
- **Input and Financial Constraints:** High costs, poor input quality, and limited access to credit hinder productivity.
- **Value Chain Gaps:** Post-harvest losses, weak infrastructure, and dependence on imports reduce profitability.

The assessment identifies strategic opportunities:

- Promote crop diversification and value-added production.
- Strengthen training in modern farming, irrigation, and post-harvest handling.
- Improve market access through digital platforms and cooperative models.
- Facilitate affordable credit and financial literacy.
- Foster institutional linkages and integrated sectoral approaches.

Addressing these challenges is essential to enhance resilience, unlock productivity, and support sustainable agricultural development in Akkar.



1. INTRODUCTION

Lebanon's agricultural sector has long faced deep-seated structural challenges. Historical data consistently highlight a sector characterized by highly fragmented landholdings, with the vast majority of farms operating on small, often subsistence-level plots. This fragmentation has limited the potential for economies of scale and widespread adoption of modern farming practices.

Furthermore, the sector's reliance on imported agricultural inputs and food products has been a significant vulnerability, exacerbating production costs and exposing farmers to global market and currency fluctuations. Issues of inadequate infrastructure, particularly in post-harvest management, have also been well-documented, pointing to a severe shortage of certified storage facilities, leading to high levels of spoilage and economic loss. Similarly, weak market linkages and underdeveloped supply chains have confined farmers to informal, low-value sales channels.

This brief provides a summary of key findings from Swisscontact's rapid agricultural assessment of Akkar in collaboration with IZRAA.

Based on recent surveys and stakeholder interviews, it provides up-to-date insights into the profiles of local farmers, their production practices, economic realities, and the specific challenges they face in the current socio-economic climate, including the impacts of Lebanon's ongoing financial crisis.

By understanding current issues and considering long-term obstacles, this assessment aims to outline recommendations based on identified challenges while focusing on opportunities for enhanced productivity, improved market access, and greater resilience for Akkar's agricultural communities.

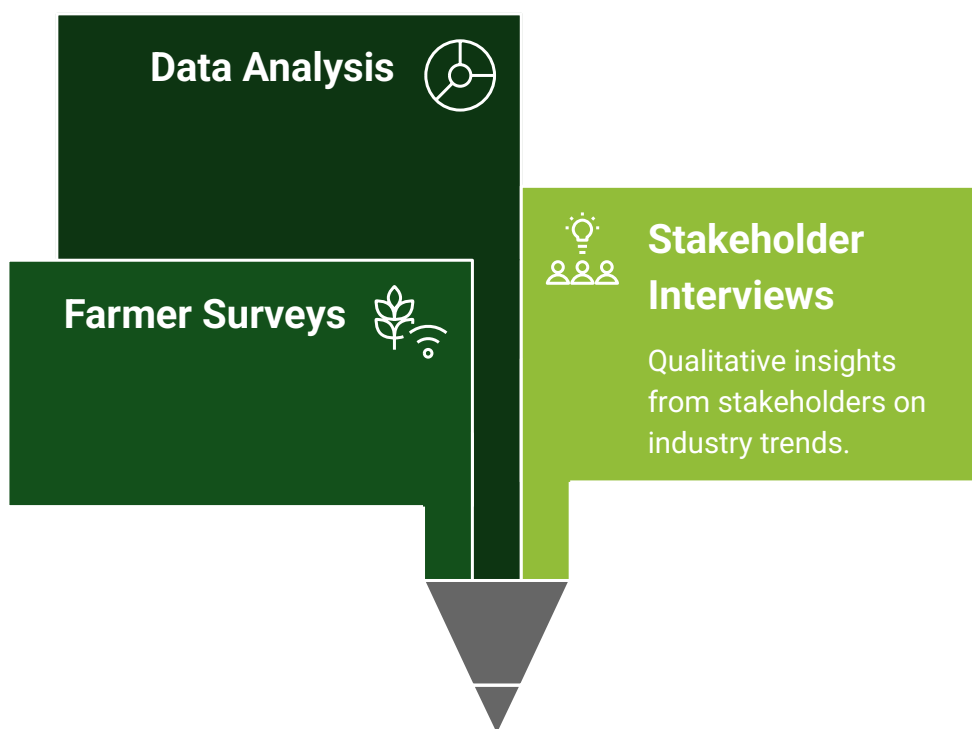
2. METHODOLOGY

The insights presented in this report are derived from a mixed-methods approach, combining both quantitative surveys with qualitative interviews to provide a comprehensive understanding of the agricultural sector in the Akkar region.

The quantitative data were primarily gathered through a survey administered to 60 farmers. This diverse sample predominantly consisted of male farmers (95%) and covered key agricultural areas within Akkar, specifically Kweshra, Machta Hassan, Kobayat, and Wadi Khaled. The survey aimed to collect detailed information regarding farm profiles, labor use, landholding patterns, crop preferences, production volumes, income levels, irrigation methods, pesticide usage, and post-harvest practices.

In addition to the farmer surveys, qualitative data were gathered through interviews with cooperatives and key agricultural stakeholders to better understand market dynamics and sector-wide challenges. Cooperatives interviewed included Aidamoun, Ouweinat, Qobayat, Menjez, Chadra, and Aandket, each representing different community structures and agricultural practices.

Further insights were provided by interviews with an agricultural pharmacy, an agro-production facility, and a wholesaler in Wadi Khaled. These stakeholders offered perspectives from across the value chain (input supply, production, and distribution), highlighting issues such as input quality, limited market access, and post-harvest constraints, often reinforcing or expanding upon the survey findings.



Triangulation: Comparing and validating data findings

2. FARM PROFILES, CROP PREFERENCES, AND PRODUCTION

PROFILES AND LANDHOLDING PATTERNS

The agricultural landscape among the surveyed farmers in Akkar is characterized by small-scale farms, with an average cultivated land size of 12.7 dunums. However, the majority of these farmers manage even smaller plots, typically ranging between 2 and 5 dunums. This fragmentation is a key structural challenge, aligning with national trends where most Lebanese farms operate on less than one hectare.

In terms of labor, most surveyed farms (54 out of 60) operate with a limited workforce, employing two or fewer workers. This labor force is predominantly seasonal, underscoring the temporary nature of farm employment in the region. The educational background of farmers varies, with 48% having attained elementary education and 35% secondary education. Farmers possess extensive experience, averaging approximately 15 years, with about half identifying as generational farmers who began farming alongside their families.

CROP PREFERENCES

Crop selection among surveyed farmers highlights the diverse cultivation preferences within Akkar's agricultural sector, encompassing vegetables, grains, fruit trees, and fodder crops. This diversity reflects varied strategies related to food security, market demands, and livestock integration.

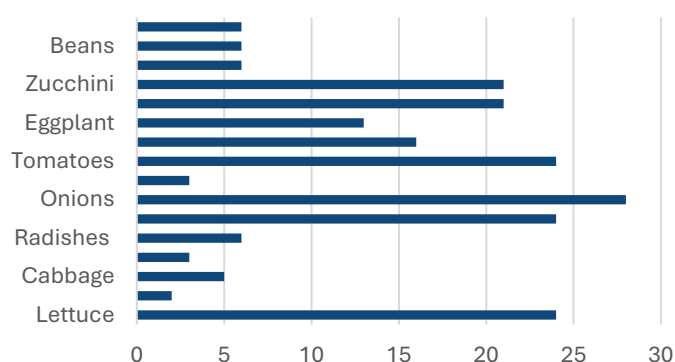


Figure 1: Agricultural Production Categories Among Farmers

Vegetables represent the most commonly grown crops, with onions, lettuce, tomatoes, and potatoes being the most frequently cultivated varieties. Other notable vegetables include cucumbers, zucchini, and peppers.

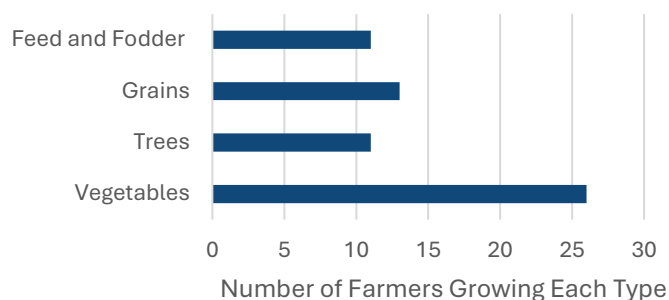


Figure 2: Crops grown by Farmers

Grains are also widely grown, with key crops such as wheat, corn, and chickpeas being cultivated by a significant portion of farmers. Fruit trees constitute another important component, primarily including olives and pomegranates, alongside smaller quantities of avocados and cherries. Additionally, fodder crops such as barley and vetch are produced to support livestock farming activities.

3. FARM PRODUCTIVITY, INCOME, AND IRRIGATION METHODS

FARM PRODUCTIVITY AND INCOME

Surveyed crop farmers show significant variation in production volume, ranging from 100 kg to 30,000 kg per season, with an average of 7,518 kg. This indicates major productivity disparities across farms, as Figure 3 illustrates that similar land sizes yield vastly different outputs.

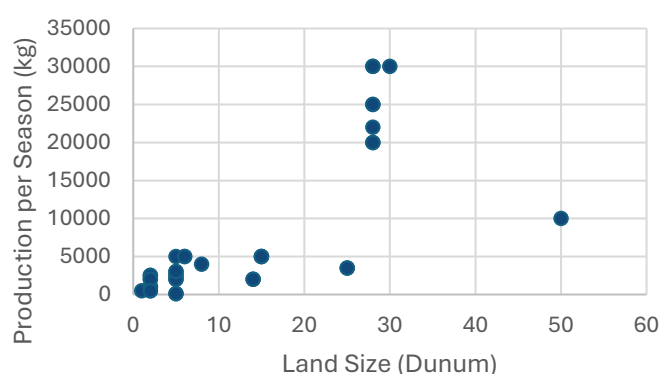


Figure 3: Crop Production Volume by Cultivated Land Size

Annual farming income for these farmers also varies widely, from \$0 to \$11,000, averaging \$4,039. Most earn between \$1,000 and \$4,000, highlighting the precarious economic conditions for small-scale

farming. Figure 4 confirms that larger land size does not consistently correlate with higher productivity or income, suggesting other factors like farming practices and crop choice are more decisive.

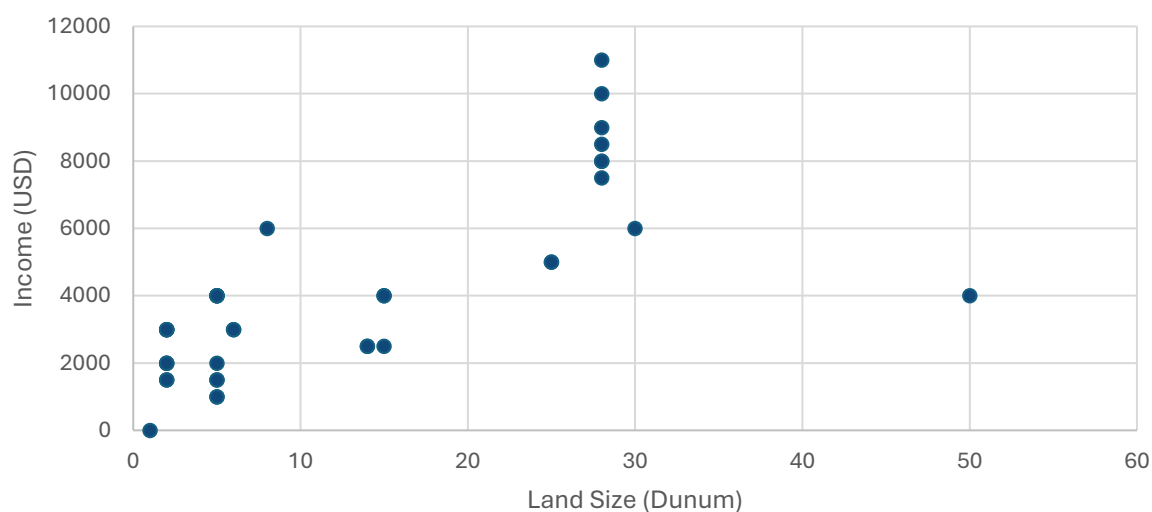


Figure 4: Annual Income by Cultivated Land Size

Furthermore, crop rotation appears to correlate positively with higher annual income. Farmers who systematically rotate crops or do so as much as possible report higher average yearly incomes compared to those who do not. However, the data also suggests that crop rotation may be more feasible or attractive to farmers with larger landholdings, indicating that land size can influence the ability to implement this beneficial practice.

IRRIGATION AND WATER MANAGEMENT

Surveyed farmers primarily irrigate from wells. The chosen irrigation method significantly impacts income and land productivity. Most use drip irrigation, with some combining it with traditional methods.

Farmers using both drip and traditional irrigation manage larger areas (25-50 dunums) and report the highest incomes. However, Figure 5 shows their land efficiency (income per dunum) is lower. In contrast, drip-only farmers achieve the highest median land productivity, optimizing returns from limited land. Traditional-only users show the lowest land efficiency.



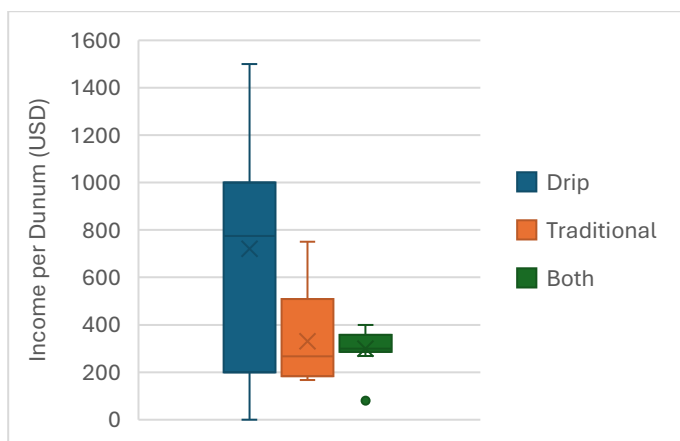


Figure 5: Comparative Land Efficiency by Irrigation Method

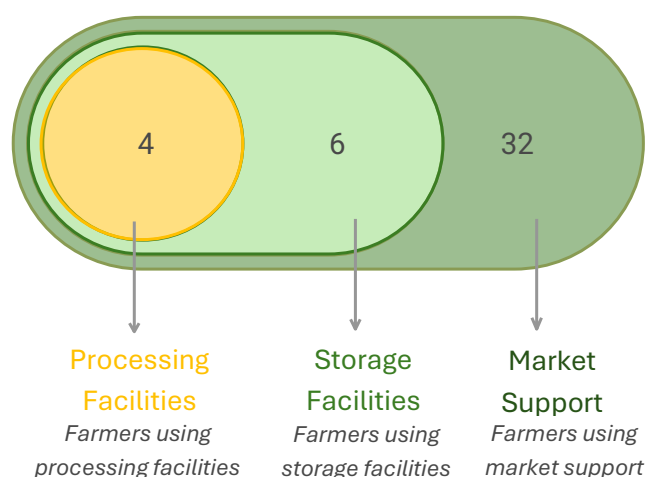
Despite individual farmers often reporting no water supply issues, stakeholder interviews highlighted water scarcity and inadequate infrastructure as major community-level agricultural challenges.

PESTICIDE USE

All farmers surveyed reported using pesticides (chemical-only or a mix). Despite this universal use, no clear pattern links pesticide type to higher income or land efficiency. Profitability seems influenced by other factors. Stakeholders note that pesticide use is often a reactive necessity due to regional climate and crop diversity, with limited technical support for optimized economic returns.

POST-HARVEST SERVICES

Surveyed crop farmers face significant post-harvest challenges. While market support is the most utilized service (32 farmers), storage (6 farmers) and processing (4 farmers) are less common. A major issue is the lack of storage facilities (18 farmers), contributing to spoilage for 11 farmers. Only 26% of farmers use storage or processing facilities, and 89% lack communal storage. While storage doesn't notably impact revenue, processing facilities link to significantly higher incomes, often for farmers with larger landholdings (averaging 32 dunums). Stakeholder interviews also revealed pervasive quality control issues with local produce and inputs.



4. LIVESTOCK, MARKET ACCESS, INPUT QUALITY, AND VALUE CHAIN CHALLENGES

LIVESTOCK MANAGEMENT AND FEED

Thirty seven percent of farmers surveyed are engaged in livestock farming, primarily raising cows (73% of livestock farmers, averaging 5 cows per farm), sheep (50%), and goats (32%). Feed management presents significant challenges, including high prices (59%), price fluctuations (36%), and quality issues. While farmers cultivate some feed like wheat and barley, most still rely on purchasing additional feed due to these barriers, with lack of land cited as a main reason for not growing their own.

MARKET ACCESS AND SALES

Both surveyed crop and livestock farmers heavily rely on informal local markets, severely limiting their growth and profitability. Digital market engagement is minimal, with barriers including distrust of online sales (98%) and lack of digital skills (65%), despite a strong willingness among 98% of crop farmers to adopt digital solutions if accessible. Key challenges identified include poor logistics, weak market linkages, price volatility, and minimal export participation, trapping farmers as price-takers and stifling production expansion.

INPUT QUALITY AND FINANCIAL CHALLENGES

Surveyed farmers consistently highlight escalating input prices for items like fertilizers, pesticides, and seeds. This is compounded by widespread issues of ineffective or counterfeit agrochemicals and low-quality feed, reported by both farmers and stakeholders. The sector faces severe financial constraints, largely due to Lebanon's ongoing economic crisis, which limits farmers' investment capacity and overall productivity. This precarious situation leads to a heavy reliance on external NGO support, underscoring the agricultural sector's inherent vulnerability.

VALUE CHAIN AND SYSTEMIC ISSUES

Lebanon's agricultural sector is marked by significant systemic challenges within its value chain. There is a heavy dependence on imported agricultural inputs (seeds, fertilizers, machinery, animal feed), which exacerbates vulnerability to global market fluctuations and currency instability. Domestically, fragmented landholdings and predominant reliance on traditional production methods severely restrict efficiency and scalability. Furthermore, inadequate post-harvest facilities lead to high levels of spoilage, quality control, and lost market opportunities. The interplay of limited financial access, weak public investment, and underdeveloped market infrastructure reinforces a cycle of low profitability and productivity throughout the sector.

5. PATHWAYS FOR AGRICULTURAL ADVANCEMENT IN AKKAR

The Akkar agricultural sector faces significant, interconnected challenges that limit its potential, yet these also reveal clear opportunities for strategic intervention and sustainable growth.

Table 1: Key Challenges, Opportunities/Recommendations, and Identified Skills Gaps

Key Challenges	Opportunities & Recommendations	Identified Skills Gaps & Market Needs
Land & Farm Size Constraints	Value-Added & Diversification: Promote high-value products; encourage crop diversification.	Crop diversification knowledge
Limited Productivity & Efficiency	Capacity Building & Training: Provide practical guidance on modern techniques, resource efficiency, and climate adaptation.	Modern Farming Techniques: Limited knowledge of efficient practices, productivity optimization, and climate-adaptive strategies.
High Input Costs & Poor Quality	Financial & Credit Support: Facilitate affordable credit for better inputs.	Pesticide Management: Decisions are often reactive and not optimized for economic return
Water Scarcity & Irrigation Constraints	Capacity Building & Training: Focus on water-efficient practices.	Water Management Skills: Limited expertise in efficient irrigation techniques and optimal water usage
Weak Post-Harvest Infrastructure	Strengthen Post-Harvest & Processing: Establish local facilities and shared logistics hubs to reduce spoilage.	Post-Harvest & Quality Control: Deficiencies in handling, grading, and packaging lead to lower prices and spoilage
Market Access Limitations	Improve Market Access: Build local hubs, foster direct partnerships; implement contract farming.	Market and Negotiation Skills: Limited capacity in accessing diverse market channels, negotiation with buyers, and export procedures.
Low Digital Engagement	Digital Market Solutions: Increase access to platforms; establish cooperative e-commerce.	Digital Skills: Lack of literacy hinders access to broader digital markets
Financial Instability & Limited Investment	Financial & Credit Support: Access to affordable credit; support branding/packaging investments.	Business & Marketing Acumen: Farmers act as "price-takers" due to limited skills in market diversification, negotiation, and export
Structural Sector Issues (e.g., import dependence, credit, public investment)	Integrated Approaches: Promote holistic strategies; enhance cooperation among all stakeholders.	Technical Innovation & Institutional Linkages: Weak ability to adapt to input supply disruptions through local innovation, and insufficient connections with government or extension services to support systemic change
Livestock Feed Quality and Availability	Capacity Building & Training: Encourage and optimize local feed production.	On-Farm Feed Production: Livestock farmers lack knowledge in optimizing local feed production and quality.



CONCLUSION

This assessment identified critical challenges faced by small-scale farmers in Akkar, notably limited farm sizes, inconsistent productivity, high input costs, and inadequate post-harvest infrastructure. Farmers also struggle with inefficient use of key inputs such as water and pesticides, alongside weak market access, minimal digital engagement, poor input quality, and water scarcity, further exacerbated by Lebanon's ongoing economic crisis and weak governance. These systemic constraints trap farmers in cycles of low profitability and productivity. Strategic interventions in training, financial support, market development, and infrastructure improvement are essential to enhance farmer resilience and unlock the agricultural sector's growth potential in Akkar.