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FARM to FORK ACADEMY

Participatory CSOs and stakeholder consultation and dialogue toward strengthening the position of farmers in the value chain

NATIONAL REPORT
KOSOVO

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I. Executive summary

As part of the *Farm to Fork Academy for Green Western Balkans – Our Shared European Future* project, this report seeks to identify the key challenges, needs, and priorities of farmers, with the aim of informing policymaking and strengthening the position of agricultural producers within the vegetable and dairy value chains.

A key focus is placed on improving the economic sustainability of farmers while promoting fairer trade practices. The strategic foundation is aligned with the EU's Common Agricultural Policy (CAP), particularly the objective to balance power between farmers and other actors in agri-food supply chains. The findings of this report aim to support decision-makers in enhancing Kosovo's agricultural sector.

A qualitative consultative methodology was applied through five workshops conducted from November 2024 to March 2025, involving 76 participants. The discussions and SWOT analysis centered on the dairy and raspberry value chains. Strengths identified include Kosovo's fertile land, favorable climate, and established agricultural traditions. However, small farm sizes, outdated infrastructure, high production costs, and limited market access remain key challenges. Opportunities lie in branding, value-added products, and export potential, while threats include climate change, market volatility, and labor shortages.

To address these challenges and leverage opportunities, recommendations include modernizing infrastructure, improving market access, implementing cost-reduction strategies, enhancing farmer cooperation, and promoting organic and digital innovations.

The methodological approach includes the implementation of a qualitative consultative process and dialogue with stakeholders. In this context. 5 consultation workshops were held with a total of 76 participants during November 2024 and March 2025. The consultation workshops were guided by a broad list of pre-conceptually prepared main and additional questions for discussion and preparation of a SWOT analysis. Participants discussed strategies for improving their practices, adding value to products, negotiating better conditions and more effective access to markets. Particular emphasis was given to for grape/wine and honey value chains.

Based on the discussions and the recommendations, with particular emphasis on the vegetables and dairy sectors, several key insights have emerged.

Strengths within these sectors include the availability of fertile agricultural land, a variety of favorable climatic and soil conditions, and a longstanding tradition in farming and agricultural production. These factors provide a strong foundation for primary production and offer potential for further development, especially in regions with intensive vegetable cultivation and dairy farming.

Nevertheless, several weaknesses persist, hampering the competitiveness and scalability of the sectors. These include small and fragmented farm sizes, outdated production and storage infrastructure, limited application of modern farming technologies, and high input and production costs. Moreover, insufficient extension services and limited access to finance further constrain productivity and efficiency. Limited integration into formal markets and weak linkages between producers, processors, and retailers remain major barriers to sector growth.

On the other hand, there are promising opportunities that can be leveraged to strengthen these sectors. These include the rising consumer demand for fresh, local, and organic agricultural products, particularly among urban populations. There is also growing potential for the development of value-added products, improved processing capacities, and the establishment of regional brands that emphasize quality, traceability, and origin. Diversification of agricultural activities, adoption of sustainable farming practices, and increased participation in local and export markets could further enhance economic returns.

However, both sectors face significant threats. Climate change poses a direct risk to crop and livestock production through unpredictable weather patterns, increased frequency of extreme events, and water stress. Additionally, increased competition from imported products undermines the position of local producers, especially when foreign goods are priced lower due to subsidies or economies of scale. The outmigration of the rural workforce, ongoing labor shortages, and the ageing farming population also threaten the long-term sustainability of agricultural activities in Kosovo.

To address these challenges and unlock the potential of the vegetables and dairy sectors, coordinated efforts are needed among policymakers, producers, development partners, and the private sector, focusing on modernization, capacity building, and market development.

To address these challenges and seize the opportunities, a series of interventions are needed, such as: modernizing infrastructure, exploring strategies to reduce production costs, improving market access through domestic and international channels, and implementing climate change adaptation measures. To capitalize on strengths and opportunities, possible directions include promoting local production, developing value-added products and diversifying income sources, improving quality standards, strengthening producer association processes, and applying digitalization and innovation for improved efficiency and sustainability.

II. Introduction

Agriculture is an important sector in Kosovo's economy, contributing approximately 10% to its GDP and employing around 30% of the population. The sector is dominated by smallholder farming, with over 80% of farms covering less than 5 hectares. Key agricultural products include dairy, fruits (notably raspberries), vegetables, and cereals.

Kosovo's agri-food trade is characterized by a high dependence on imports, particularly processed food products. In 2023, agricultural exports were valued at €120 million, while imports exceeded €500 million, resulting in a significant trade deficit. This highlights the need for increased domestic production, improved processing capabilities, and enhanced export potential.

Based on the geographical configuration and climatic conditions, Kosovo has conditions and potential for the development of agriculture, taking into account that nearly half of the territory or 420,482 ha is classified as utilized agricultural land. In 2022, agriculture together with forestry contributed 7.4% to the total value of the Gross Domestic Product and nearly 23% to total employment. The value of the Gross Domestic Product at current prices was 8,936 million €, with GDP per capita in the amount of 4,486 €. The unemployment rate at the country level was 20.7%. The total utilized area of agricultural land was 420,482 ha, and it is presented with this categorization structure in percentages as follows: Meadows and pastures (including common land) with a participation of 52%, Arable land-fields 45%, Vegetables (in open field and greenhouse as first crop), gardens and nurseries 2%, Fruit plantations 2% and Vineyard plantations 1%. According to the latest Agricultural Economy Survey 2022, there was an increase in the area of agricultural land used by only 0.04% compared to 2021. The biggest increase is in areas with vegetables in greenhouses for 3.74%, nurseries for 7.14%, tree plantations 2.3% and vineyards with 0.03% as well as vegetables in the open field 1.10%

Regarding agribusiness enterprises in Kosovo, a total of 3,164 active enterprises were recorded in 2022, employing 17,178 people and generating a total turnover of €888.7 million.

Despite its importance, the agriculture sector faces numerous challenges, including declining employment, an aging workforce, fragmented land structures, and a persistent trade deficit. These issues, compounded by limited modernization and outdated infrastructure, hinder Kosovo's ability to fully capitalize on its agricultural potential. This report provides an in-depth analysis of the current state of agriculture in Kosovo, focusing on employment trends, demographic challenges, farm structure, and the agri-food trade balance. Agriculture has historically been a major employer in Kosovo, particularly for rural communities. However, the sector has experienced a significant decline in employment over the past decade.

According to the Kosovo Agency of Statistics (KAS), the number of agricultural workers has dropped from approximately 80,000 in 2014 to around 40,000 in 2023, with the sector's share of total employment falling from 15% to 7% (KAS, 2023). This decline is not primarily due to increased productivity or mechanization but rather to socioeconomic factors such as migration to higher-paying industries, rapid urbanization, and rural depopulation. Many rural residents, particularly younger workers, are moving to urban centers or seeking opportunities abroad in sectors like construction, services, or manufacturing, which offer better wages and working conditions. The lack of investment in modern agricultural practices and limited access to training further exacerbate the sector's labor challenges (Kosovo Institute for Agricultural Research [KIAR], 2024).

One of the most pressing issues facing Kosovo's agricultural sector is its aging workforce. Data from KAS indicates that only 5% of agricultural holders are under 35 years old, while 60% are over 55 (KAS, 2018). The farm registry further shows that young farm holders (up to 40 years old) account for just 12% of registered agricultural holdings (Ministry of Agriculture, Forestry and Rural Development [MAFRD], 2022).
This demographic imbalance highlights a critical challenge: the sector is struggling to attract younger generations. Low wages, limited access to modern technology, and the perceived lower quality of life in rural areas make farming less appealing compared to other career paths. Additionally, the lack of educational programs tailored to modern agricultural techniques and insufficient support for young farmers, such as access to credit or land, further deter youth from entering the sector. If this trend continues, Kosovo risks a severe shortage of skilled farmers in the coming decades, threatening the long-term sustainability of its agricultural sector (KIAR, 2024).

The structure of Kosovo's agricultural sector is dominated by small, fragmented family farms, which pose significant challenges to productivity and modernization. According to the latest Farm Structure Survey, Kosovo has over 130,000 farms, with the average farm size being approximately 1.4 hectares, often divided into multiple small parcels (KAS, 2018). These small-scale farms, typically less than 1.5 hectares, account for the majority of agricultural operations. In contrast, large commercial farms, while present, represent only a small fraction of the total number of farms. Over 60% of farms generate annual revenues below €1,500, underscoring the economic vulnerability of small-scale farmers (KAS, 2018). The fragmented land structure, combined with outdated infrastructure such as irrigation systems and storage facilities, limits economies of scale, reduces competitiveness, and hinders the adoption of modern farming techniques. Furthermore, limited access to affordable credit and modern equipment, as well as insufficient extension services, restricts farmers' ability to improve yields and invest in value-added activities like processing or packaging (KIAR, 2024).

Agricultural sector struggles with a persistent trade deficit, reflecting its reliance on imports to meet domestic demand. In 2023, the value of agri-food exports reached €420.5 million, while imports climbed to €780.9 million, resulting in a significant trade gap (KAS, 2023). This imbalance highlights the challenges in achieving self-sufficiency in agricultural products. A key issue is the nature of Kosovo's trade: the country primarily exports low-value, unprocessed agricultural products, such as fresh fruits and vegetables, while importing higher-value, processed goods like dairy, meat products, and packaged foods

(European Commission, 2024). This trade pattern indicates a substantial gap in domestic value addition and processing capacity.

Factors contributing to this deficit include outdated technology, high production costs, limited access to international markets, and a lack of investment in food processing industries. Additionally, Kosovo's farmers face challenges in meeting the quality and safety standards required for export to markets like the European Union, further limiting their competitiveness (KIAR, 2024).

The EU context and "Farmers' position in the value chain" CAP objective

The EU's **Common Agricultural Policy** (CAP) is a common policy for all EU countries, managed and funded at European level from the EU's budget. The EU CAP is central to the European Green Deal and its Farm to Fork and Biodiversity strategies. Today the CAP supports a modern, market-oriented farming sector providing safe, affordable, high-quality food, produced sustainably and respecting consumer standards (environmental, animal welfare, food safety, etc.), as well as supporting investment in the broader rural economy. The CAP is a common policy for all EU countries, managed and funded at European level from the EU's budget.

The objective "**Farmers' position in the value chain**" within the EU Common Agricultural Policy (CAP) aims to address the imbalance of power between farmers and other actors in the agri-food supply chain. It focuses on ensuring that farmers receive a fair share of the final price of their products and have more bargaining power in negotiations with processors, retailers, and other stakeholders. This objective aims to improve the economic sustainability of farmers and promote fairer trading practices within the agricultural sector. Overall, the position of farmers in the value chain in the EU CAP has been influenced by changing policy objectives and market dynamics, leading to a complex and evolving relationship between farmers and other actors in the agricultural sector.

The European Union has implemented a range of measures to improve the position of farmers across various stages of agriculture. Farmers receive subsidies for purchasing inputs like seeds, fertilizers, and equipment, helping to reduce costs. Financial support, including direct payments and income support, is provided to enhance production techniques and improve yields. Additionally, farmers are assisted with grants and loans for processing and marketing, allowing them to modernize facilities, develop marketing strategies, and access new markets.

Infrastructure development funding improves transportation, storage, and distribution, helping farmers reach customers more efficiently and reduce post-harvest losses. Research and innovation programs encourage the adoption of new technologies, ensuring farmers remain competitive. The EU also supports sustainability through grants for conservation practices, organic farming, and biodiversity protection. Finally, training and education programs help farmers improve technical skills, business management, and adapt to changing market conditions and regulations. These measures collectively strengthen farmers' position and promote a more sustainable and competitive agricultural sector.

The specific objectives of the study and their connection to Objective 3 of the National Program for Agriculture (NPA) are as follows:

Objective 1: To assess the current situation of farmers in Kosovo's dairy and vegetable sectors, analyzing their production capacity, organizational structure, and key challenges.

Objective 2: To examine the factors influencing farmers' bargaining power, with a particular focus on pricing, quality standards, and group organization.

Objective 3: To provide a foundation for strategic recommendations based on an analysis of the current reality through a consultative process.

Report Structure

This report begins with a general introduction to the agriculture sector in Kosovo, followed by an overview of the dairy and vegetable sectors. The methodology section describes the process of sector selection, data collection, and analysis methods. Subsequently, the main findings and discussions are presented, followed by a SWOT analysis for each sector under review. The report concludes with key conclusions and recommendations for each analyzed value chain.

Objective and scope of the assignment

In the frame of the Farm to Fork Academy project, **the main objective of this assignment** aims to identify challenges that relevant stakeholders face in green transition and key success factors that accelerate this transition. This process helps identify the needs and priorities of farmers and relevant rural stakeholders. The findings aim to provide a valuable resource to inform policy making process and influence solutions toward strengthening the position of farmers in the value chains in North Macedonia.

The **methodological approach** includes conducting a qualitative stakeholder's consultation and dialogue process that sought to gather input from small farmers and their associations and other rural stakeholders. This process is conducted in parallel in each of the six Western Balkan countries within the Farm to Fork Academy project, hence the outcomes are to be an important reference both on national and in the regional level.

There are certain **limitations** of this study. The fieldwork took an indicative sample and not a representative sample of respondents, so a margin of error must therefore be recognized on data and opinions presented in this report. Therefore, the report also includes, where applicable, references to other sources and studies, in order to ensure increased validation and objectivity and draw relevant conclusions and recommendations.

III. Methodology

Value chain focus

To enhance the position of farmers within the value chains in Kosovo, improving market access remains a key priority. Farmers must have efficient and fair opportunities to sell their products at competitive prices. Achieving this requires support in areas such as improving product quality and productivity, as well as ensuring access to financial services that enable investments in farm infrastructure and innovation. Promoting fair, transparent, and equitable relationships among farmers and other actors in the value chain is essential for ensuring mutual benefits, increased trust, and long-term sustainability.

In accordance with Kosovo's national context and challenges, the Network of Organizations for Rural Development of Kosovo (NORDK) developed a set of preferential selection criteria for the participation of farmers and other relevant stakeholders in the targeted value chain analysis. As a first step, NORDK engaged its network members to raise awareness about the purpose and scope of the initiative. Simultaneously, it conducted a review of the current state of the agricultural sector, with a focus on prevailing types of production and the most active value chains.

Five (5) five consultation workshops were organized to facilitate a participatory and consultative process, bringing together typical smallholder farmers and key stakeholders from across the chains—including representatives of farmers' associations, civil society organizations (CSOs), Local Action Groups (LAGs), and local government institutions. Based on this process—drawing from national sectoral assessments, NORDK's members input, and the selection of workshop participants—the analysis focused on two primary value chains: **dairy and vegetables.**

These value chains / sectors were identified due to their prevalence in Kosovo's rural economy and the interest expressed by both grassroots and institutional actors. While the focus was on dairy and vegetables, representatives from other sectors—such as tobacco and sheep farming—also participated in the process. Their contributions helped identify common cross-sectoral challenges, enriching the broader understanding of constraints and opportunities in Kosovo's agricultural value chains.

Data sources

The report relies on both secondary and primary data sources. This combination of data sources provided a comprehensive understanding of the challenges and opportunities facing farmers in Kosovo's agricultural value chains.

Secondary data was gathered through desk research. This involved reviewing existing information from various sources, such as government reports, academic papers, industry publications, and online databases. The main sources of statistical data came from the Kosovo Agency of Statistics (KAS) and the Ministry of Agriculture, Forestry and Rural Development (MAFRD). Documents from MAFRD were used to account for the strategic framework of the agricultural sector and rural development policies. Information about government payments and subsidies was collected from the Agency for Agricultural Development (AAD). Relevant scientific papers, donor-funded studies, and technical reports were also consulted where applicable. The main findings supported the selection of the specific value chains and also served as reference points for the discussion. The primary data was collected through 5 consultative workshops with farmers and relevant stakeholders in the period November 2024 – March 2025.

These workshops brought together farmers and other stakeholders to discuss challenges, opportunities, and potential solutions. The workshops' methodological approach and structure are presented in more detail further below.

Background data and rationale for selecting the value chains

The **Dairy sector** in Kosovo represents an important and strategic branch of agriculture, both in terms of contribution to gross agricultural output and rural livelihoods. According to the Kosovo Agency of Statistics (KAS, 2024), milk and dairy products accounted for around 15–18% of the total agricultural production, with a gross production value of approximately €130 million in 2022. The sector plays a vital role in ensuring food security and rural income, as dairy farming is one of the most widespread agricultural activities in the country. Kosovo's dairy sector is dominated by smallholder family farms. It is estimated that around 40,000 households are directly engaged in milk production, with average herd sizes ranging between 3 and 7 cows. Only a smaller number of medium and commercial farms (with herds above 20 cows) are present, but their role is gradually increasing. Despite its importance, productivity levels remain significantly below EU averages. The average milk yield in Kosovo is estimated at around 3,000–3,500 liters per cow per year, compared to 6,500–7,000 liters in the EU (EUROSTAT, 2023). This productivity gap illustrates the structural challenges in animal genetics, feed management, and veterinary services.

Kosovo's processing industry includes more than 300 registered milk collection points and around 30 active dairy processors. Processing companies range from small artisanal dairies to larger industrial-scale enterprises with national market coverage. Together, they employ approximately 2,500 full-time workers and a significant number of seasonal employees. The main products include pasteurized milk, yogurt, cream, fresh cheeses, semi-hard cheeses, and traditional products such as Sharri cheese and kajmak. However, due to limitations in processing capacity, outdated equipment, and high energy costs, the sector struggles with efficiency and competitiveness.

Trade data reflects Kosovo's structural dependence on imports. While Kosovo produces around 350,000–400,000 tons of raw milk annually, the country still imports a considerable number of dairy products, particularly milk powder, UHT milk, yogurt, and cheese. Imports account for 35–40% of total dairy consumption, with Serbia, North Macedonia, and EU member states as the main suppliers. In 2022, Kosovo imported dairy products worth approximately €70–75 million, while exports of cheese and other processed dairy products amounted to less than €5 million (KAS, 2023). This large trade deficit underscores the competitiveness challenges of the domestic sector.

Consumption levels are relatively high. Per capita consumption of milk and dairy products in Kosovo is estimated at around 220–240 kg per year, which is comparable to EU averages and reflects the central role of dairy in the Kosovar diet. Cheese and yogurt are particularly important, both in terms of household consumption and cultural identity. However, consumers are often price-sensitive, and cheaper imported dairy products remain highly competitive, even when local alternatives are available.

The dairy sector contributes substantially to employment and rural income. Beyond the 40,000 milk-producing households, the sector engages around 15 dairy cooperatives and producer associations that support input supply, veterinary services, milk collection, and bargaining with processors. Cooperatives vary in strength, but those that function effectively play a crucial role in reducing transaction costs and improving market access. Seasonal employment is also significant, particularly in larger farms and during peak production and processing seasons.

From a policy perspective, dairy is a recognized strategic value chain within the Ministry of Agriculture, Forestry and Rural Development (MAFRD) agricultural and rural development strategy (2021–2027).

Through the Agency for Agricultural Development (AAD), direct payments per liter of milk and investment grants for modernization of barns, milking systems, and processing facilities are provided. Donor-supported initiatives, such as those funded by USAID, GIZ, and the EU, have strengthened the sector by introducing milk quality–based payment systems, providing training in hygiene and feed management, and supporting certification processes such as HACCP and ISO standards in processing companies. These interventions have helped raise awareness on quality standards, but consistent enforcement and laboratory testing capacity remain challenges.
Despite progress, several structural constraints continue to limit the sector's growth. On the farm level, small herd sizes, low productivity, limited access to high-quality feed, and high input costs are key bottlenecks. On the processing side, many companies face outdated technology, insufficient product diversification, and difficulties in meeting EU sanitary and phytosanitary standards, which restricts export opportunities. The sector is also highly vulnerable to market fluctuations, particularly from imports that can outcompete domestic production on price. Nevertheless, the dairy sector is considered one of Kosovo's most strategic agricultural value chains due to its strong contribution to rural livelihoods, cultural significance, and potential for growth. Opportunities exist in improving productivity through better breeding and feeding systems, expanding value-added product lines such as specialty cheeses and organic dairy, and developing branding and certification schemes for traditional products like Sharri cheese. Strengthening cooperatives and farmer–processor linkages could also improve bargaining power and supply chain efficiency. In conclusion, the dairy value chain in Kosovo has significant potential but requires targeted interventions to close the productivity gap with EU averages, reduce dependency on imports, and improve competitiveness in both domestic and international markets.

Vegetable production is one of the most important branches of Kosovo's agricultural economy, both in terms of contribution to farm incomes and as a source of employment in rural areas. It is also vital for food security and nutrition, given that vegetables represent a key component of the domestic diet. According to the Kosovo Agency of Statistics (KAS, 2024), vegetables contribute around 20–25% of the total crop output, with a gross production value estimated at approximately €150–160 million in 2022. The sector is highly diverse, covering both open-field and greenhouse production, and has been identified as a priority within the Agricultural and Rural Development Program 2021–2027 (MAFRD, 2021).

Kosovo's agro-climatic conditions provide favorable opportunities for vegetable production, particularly in lowland areas such as Dukagjini plain (Peja, Gjakova, Deçan), Kosovo plain (Prishtina, Vushtrri, Podujeva), and parts of Anamorava (Gjilan, Kamenica). Production in hilly areas is more limited, but vegetables such as cabbage, beans, peppers, and potatoes remain common for household use and small-scale sale. Greenhouse production is concentrated around larger municipalities close to urban markets (Prishtina, Ferizaj, Mitrovica), where demand is highest.

The main vegetable crops in Kosovo include potatoes, peppers, tomatoes, cabbage, onions, beans, cucumbers, and spinach. Potatoes are the leading vegetable crop, with production volumes ranging from 150,000 to 200,000 tons annually, making Kosovo largely self-sufficient in this product. Tomatoes, peppers, and cucumbers dominate greenhouse and field production, supplying both fresh markets and processing industries. Beans and onions are also widely grown and are culturally significant crops for household consumption.

According to KAS data (2023), Kosovo has around 17,000–20,000 hectares under vegetable production, of which approximately 2,000 hectares are under greenhouse cultivation. The number of farms engaged in vegetable production exceeds 30,000, most of them family-owned smallholdings. Less than 5% of vegetable producers operate on a semi-commercial or fully commercial scale with more than 5 hectares under vegetables or over 0.2 hectares of greenhouses. This structure highlights the sector's fragmentation and the predominance of smallholder-based production.

Vegetable yields in Kosovo vary considerably depending on farm size, location, and access to irrigation. Average tomato yields are around 25–30 tons/ha, compared to 60–70 tons/ha in EU countries, while cucumber yields average 20–25 tons/ha compared to 50+ tons/ha in the EU (EUROSTAT, 2023). This productivity gap is mainly due to limited mechanization, poor access to quality seeds and seedlings, high input costs, and insufficient irrigation infrastructure.

The processing industry for vegetables is relatively underdeveloped but includes several medium-scale companies producing ajvar, pickled vegetables, tomato paste, and frozen products. Many of these processors rely heavily on imports of raw material, especially during off-season periods when local production cannot meet demand. This highlights a critical gap in integrating primary production with processing capacities.

Trade data underlines Kosovo's dependency on imports. In 2022, Kosovo imported more than €100 million worth of vegetables and processed vegetable products, mainly from North Macedonia, Albania, and EU countries (KAS, 2023). Exports, however, remain very limited, amounting to less than €10 million annually. Occasional surpluses of potatoes, peppers, and cabbage are exported to Albania, Montenegro, and North Macedonia, but Kosovo's exports are irregular and often uncompetitive due to quality standards, packaging, and price disadvantages. The trade deficit in vegetables has widened over the past decade, underlining the structural weaknesses of the sector.

Vegetable production also plays a key role in seasonal employment. Thousands of seasonal laborers are engaged in planting, harvesting, and post-harvest activities each year, particularly in the Dukagjini region. Women and youth constitute an important part of this labor force, although their role often remains informal and underpaid.

Farmer cooperatives and producer associations are emerging, but their coverage is still weak, with only a small share of vegetable farmers organized in collective structures.
In terms of policy support, vegetable producers benefit from direct payments and investment grants offered through the Agency for Agricultural Development (AAD). For open-field vegetables, subsidies are provided per hectare of cultivated land, while greenhouse vegetable production benefits from higher support rates due to its intensive nature and higher input costs. Farmers can also access co-financing for irrigation systems, plastic tunnels, and post-harvest equipment. Donor-funded programs, including USAID's agricultural competitiveness projects, EU IPARD-like measures, and GIZ initiatives, have supported the sector by improving access to modern production technologies, high-quality seeds, and better post-harvest handling practices.

The sector faces significant challenges. These include high input costs (fertilizers, pesticides, seeds), weak access to finance, limited irrigation infrastructure, and low levels of mechanization. Climate change has also increased production risks, with more frequent droughts, hailstorms, and flooding events affecting yields. Storage facilities and cold chains are insufficient, leading to high post-harvest losses estimated at 20–30% for perishable vegetables. At the market level, smallholder farmers often lack bargaining power and remain vulnerable to price fluctuations, while processors struggle to secure consistent and high-quality local supply.
Nevertheless, the vegetable sector holds significant potential for growth. Opportunities exist in increasing productivity through improved seeds, irrigation, and mechanization; expanding greenhouse production to extend the supply season; reducing post-harvest losses through better storage and cold chain systems; and promoting value-added processing. There is also scope for branding and certifying Kosovo's vegetables as safe, high-quality, and sustainable, particularly for crops like peppers, tomatoes, and potatoes, which already have a strong reputation in regional markets. Organic vegetable production, though still limited, is gaining interest and could provide export opportunities in niche markets.
The vegetable sector in Kosovo is considered one of the most strategic agricultural value chains, given its importance for food security, income generation, employment, and potential to reduce the country's heavy reliance on imports. Its development requires targeted interventions across the production, processing, and marketing stages, making it a key focus for further analysis within this study.

The evaluation of the selected value chains is elaborated in the table below.

Table 1. Criteria for prioritizing vegetable/diary value chains

Value Chain	Contribution	Competitive Landscape	Production and Processing Capacity	Cost Structure	Profit Potential	Sustainability	Institutional Support
Diary	High	Competitive	Sufficient	High	Medium	Medium	High
Vegetable	Emerging	Competitive	Potential for on-farm value added products	High	High	High	High

Consultation Workshops approach and methodology

A series of consultation workshops were held across various locations in Kosovo, following the common methodology developed within the Farm to Fork Academy project (GUIDELINE – Participatory CSOs and stakeholder consultation and dialogue toward strengthening the position of farmers in the value chain, 2024; Annex B). These workshops served as platforms for dialogue with stakeholders, aiming to enhance the role of farmers within agricultural value chains.

During the sessions, farmers outlined the main challenges they face in different stages of the value chain and worked collectively on identifying practical solutions. Discussions centered on ways to improve production processes, increase product value, secure fairer terms in negotiations, and gain better access to markets. Participants also exchanged experiences and good practices, highlighting opportunities to make their farming activities more competitive, efficient, and sustainable.

Table 2. Participants by workshops

Workshop	*Date*	*Value Chain*	*Venue*	*No. of participants*
First (1)	11.12.2024	Dairy	Prizren	15
Second (2)	12.12.2024	Vegetables	Peja	15
Third (3)	30.01.2025	Vegetables	Anadrinia, (Prizren)	15
Fourth (4)	07.03.2025	Vegetables	Mamusha	18
Fifth (5)	10.03.2025	Vegetables	Neperbisht (Suhareka)	13
TOTAL (5 Consultations)				76

Data processing

At the beginning of each consultative workshop, participants completed a short, a participant sheet to collect basic information such as age, gender, and municipality. For farmers, additional details were recorded, including farm size, main farm enterprises, position in the value chain—whether as a farmer, processor, or other—and type of production, whether conventional or organic. This information provided essential context for the analysis of discussions and helped differentiate perspectives across farm types and sectors.

The written transcripts of the discussions were carefully reviewed to identify key points, recurring themes, and patterns relevant to the dairy and vegetable sectors. Statements were coded and grouped using specific categories or keywords, enabling systematic analysis and comparison across different workshops. This process ensured a clear and concise overview of the main findings while capturing sector-specific insights.

Based on the qualitative information gathered, draft value chain maps were developed for both the dairy and vegetable sectors. These maps illustrate the flow of products from production to end consumers, identifying all actors involved, including farmers, processors, traders, and retailers. The mapping exercise highlighted how value is added along the chain and identified points where farmers have influence or face challenges.

A SWOT analysis was conducted for farmers' positions within each value chain to identify strengths, weaknesses, opportunities, and threats. This analysis provided a structured assessment of areas where farmers could enhance competitiveness, improve product quality, and strengthen their bargaining position within the value chain.

The results of the workshops are presented according to the main question groups, with observations specific to dairy and vegetable value chains highlighted where relevant. The coding and thematic grouping of statements from the discussions allowed for a structured and concise summary of key insights, facilitating comparisons and the identification of actionable recommendations for improving the value chains.

IV. Results & Discussion

Core issues on value chains

The main part of the consultative workshops revolved around five central questions, with additional follow-up questions used to clarify and summarize insights. The outcomes are organized according to these question groups, highlighting comments and observations specific to the grape/wine and beekeeping value chains where relevant. Statements shared during the discussions were categorized and grouped by common themes to provide a structured and concise overview of the key findings.

1. What are the main challenges faced by farmers in their value chain(s)?

1.1 Diary

Production:

- Small-scale and fragmented farms, limiting economies of scale.
- High input costs (especially imported feed and veterinary medicines).
- Lack of training in modern farm management practices.

Post-Harvest & Processing:

- Limited milk collection points.
- Insufficient processing capacity and outdated processing technology based on the needs;
- Lack of investment in product diversification (e.g., cheese varieties, yogurt, value-added dairy).

Market & Distribution

- Low farm-gate milk prices, often below production cost.
- Very Strong competition from imported and often subsidized dairy products.
- Price volatility due to weak market regulation and seasonal demand fluctuations.
- Limited cooperative action and bargaining power.

Enabling Environment

- Limited financial support and credit access for small dairy farmers.
- Weak extension services for knowledge transfer and capacity building.
- Insufficient government subsidies and inconsistent agricultural policy support.

1.2 Vegetables:

Production

- Fragmented land holdings restricting mechanization and large-scale production.
- Limited access to quality seeds, seedlings, fertilizers, and crop protection inputs.
- Insufficient irrigation systems and dependence on rainfed agriculture.
- Climate change impacts (heat waves, droughts, floods).
- Lack of modern greenhouse technology and off-season production systems.
- Limited technical knowledge on integrated pest management and advanced horticulture.

Post-Harvest & Processing

- Poor storage and cold-chain infrastructure, causing high post-harvest losses (30–40%).
- Minimal grading, sorting, and packaging capacity, reducing competitiveness.
- Underdeveloped processing sector for pickled, frozen, or dried vegetables.
- Lack of certification (GlobalG.A.P., HACCP) needed for regional/EU market access.

Market & Distribution

- Oversupply during peak season (tomatoes, peppers, cucumbers), leading to price collapses.
- High dependence on imports in off-season, weakening local farmer competitiveness.
- Poor market information systems — farmers lack data on prices and demand.
- Informal market dominance (green markets), weak integration into supermarket chains.
- Limited collective marketing through cooperatives or producer organizations.
- Weak export orientation, with only small volumes reaching regional markets.

Enabling Environment

- Difficult access to affordable finance for technology and infrastructure investment.
- Limited government support for modern irrigation, storage, and processing.
- Weak agricultural extension and advisory services.
- Lack of insurance schemes against crop loss (climate risks).
- Policy inconsistency and limited implementation of agricultural development strategies.

2. How can farmers position themselves in the value chain(s) to add value to their product(s)?

Enhance Branding

- Farmers emphasized the importance of creating recognizable and trusted brands for local dairy and vegetable products.
- For dairy: Branded cheese, yogurt, or traditional dairy products (kaymak, fresh cheese) can highlight quality, tradition, and origin, helping differentiate them from imported products.
- For vegetables: Packaging, labeling, and promoting "locally grown" or seasonal vegetables can attract consumers willing to pay a premium for freshness and authenticity.

Certifications & Quality Standards

- Organic or certified production was recognized as a valuable strategy to improve positioning in both dairy and vegetable markets.
- For dairy: Adopting good hygienic practices, pasteurization standards, and possibly PDO/PGI (Protected Designation of Origin/Geographical Indications) for traditional cheeses can increase product value.
- For vegetables: Implementing GlobalG.A.P. standards or other quality certifications can help access supermarket chains and export markets, signaling safety and consistent quality.

Product Diversification

- Diversification allows farmers to generate multiple revenue streams and reduce market risk.
- For dairy: Farmers can produce cheese varieties, yogurt, cream, butter, or traditional fermented products; small-scale experimentation with flavored or packaged products can attract niche consumers.
- For vegetables: Farmers can explore pre-packaged fresh salads, pickled vegetables, dried herbs, or frozen vegetables for local and regional markets. Crop rotation and complementary planting of high-value vegetables can also increase total income.

Create Partnerships & Collective Action

- Collaboration through associations, cooperatives, or informal farmer networks helps farmers:
  - Access new markets and buyers more efficiently.
  - Share processing or storage infrastructure (cold storage, dairy equipment).
  - Negotiate better prices and reduce input costs collectively.

- While partnerships in Kosovo remain challenging and slow to establish, experiences from small cooperatives show that joint marketing and shared processing resources can significantly enhance market positioning.

3. What are the key factors that determine a farmer's income in the value chain(s)?

Production Volume and Efficiency

- **Dairy:** Income strongly depends on milk yield per cow, herd size, and feed efficiency. Farms with low productivity or small herds often struggle to cover costs. Efficient management of feed, veterinary care, and milking practices directly impacts revenue.
- **Vegetables:** Income depends on total cultivated area, crop yield per hectare, and crop selection. Use of high-value vegetables and intensive cultivation techniques can increase revenue.

Product Quality and Safety

- **Dairy:** High-quality milk and dairy products (hygienically processed cheese, yogurt, cream) can command higher prices, especially if certified or branded. Poor quality reduces market access and income.
- **Vegetables:** Freshness, appearance, and adherence to food safety standards determine the price farmers can achieve, particularly for supermarket chains or export markets.

Access to Markets

- Direct sales: Farmers selling directly to consumers (farmers' markets, farm shops) often earn more than those selling to intermediaries.
- Wholesale & retail networks: Establishing links with processors, supermarkets, or regional markets influences the price received. Limited access keeps many farmers dependent on low-paying local markets.

Price Volatility

- Seasonal fluctuations, oversupply, and competition from imports significantly affect income.
- **Dairy:** Prices often fluctuate due to changes in domestic demand or imported milk products.
- **Vegetables:** Prices drop during peak harvest season; lack of storage infrastructure exacerbates losses.

Input Costs

- Feed, seeds, fertilizers, pesticides, labor, and equipment costs directly affect net income. High input costs with low productivity reduce profitability.
- Access to affordable inputs or cooperative purchasing can improve margins.

Farm Diversification and Value Addition

- Producing a variety of products or value-added products (cheese varieties, yogurt, packaged vegetables, pickles) increases income potential.
- Branding, packaging, and certification also allow farmers to charge premium prices.

Farmer Organization & bargaining power

- Farmers in cooperatives or associations can negotiate better prices for inputs and products.
- Individual farmers selling small quantities often accept lower prices due to weak bargaining power.

External Factors

- Policy & subsidies: Timely agricultural subsidies and support programs can boost income.
- Climate & environment: Droughts, floods, or pests can dramatically reduce yields.
- Access to credit & investment: Ability to invest in equipment, irrigation, or processing facilities affects production capacity and income potential.

4. Is it realistic for farmers to impact value chain(s) decision making regarding product value?

Farmers recognize that individual influence on overall value chain decisions is limited. Market dynamics, intermediaries, and processors often dictate prices and product standards, making it difficult for single farmers to shape outcomes.

However, they also highlighted that collective action significantly increases their influence:

- Cooperatives and producer organizations allow farmers to consolidate production, align on quality standards, and coordinate sales.
- By working together, farmers can negotiate better terms with buyers, promote and brand their products, and advocate for policies or support programs that benefit their sector.
- Participation in such organizations also strengthens farmers' visibility and credibility, giving them a more meaningful role in discussions about product value, pricing, and market access.

While individual farmers have limited power, organized collaboration is a realistic path for impacting value chain decisions and increasing the value of their products.

5. Is it possible for farmers to negotiate better terms of price and production conditions with other stakeholders in the value chain(s)?

Farmers and stakeholders outlined that negotiating improved prices and production conditions with buyers or other actors in the value chain is possible but requires a strong bargaining position.

The following factors were outlined as key enablers:

Product Quality

- Offering high-quality and hygienically produced dairy products (milk, cheese, yogurt) or fresh, well-presented vegetables increases farmers' leverage in negotiations.
- Traditional or locally branded products that meet or exceed market standards are especially valuable for differentiation and can help justify higher prices.

Market Knowledge

- Understanding market dynamics, supply-demand fluctuations, and competitor pricing is critical.
- Currently, many farmers rely on informal sources such as social networks, local contacts, or internet searches, which limits effective market decision-making. Improving access to reliable market information can strengthen negotiating positions.

Collective Action

- Joining or forming cooperatives, associations, or informal farmer groups can consolidate production volumes and create a stronger voice in negotiations.
- Collective bargaining helps reduce dependence on intermediaries, secure better prices, and share costs for inputs, storage, or processing.

Certifications and Standards

- Obtaining certifications such as organic, GlobalGAP, or PDO/PGI for traditional products can differentiate products in the marketplace.
- While the domestic market in Kosovo currently does not fully reward organic premiums, certifications can open regional export markets and improve credibility with buyers.

Advisory Services, Education, and Training

- Guidance and training in farm management, pest and disease control, plant and animal nutrition, and climate-smart practices are crucial.
- Improved advisory services help farmers implement best practices, enhance productivity and quality, and increase confidence during negotiations.

SWOT analysis

The SWOT analysis, carried out across five consultative workshops, identified key strengths, weaknesses, opportunities, and threats affecting farmers in Kosovo's agricultural value chains, with particular focus on the vegetable and dairy sectors. While many points apply broadly across both value chains, specific observations relevant to a particular sector are noted accordingly (VEG – vegetable value chain, DAIRY – dairy value chain). This analysis reflects the practical perspectives, challenges, and constraints faced by farmers in Kosovo, highlighting actionable insights to strengthen their position and enhance competitiveness within these value chains.

Table 3: Summary of SWOT Analysis carried out across five consultative workshops

V. Consultative Workshops: Conclusions and Recommendations based on the SWOT

The vegetable value chain in Kosovo demonstrates a number of clear strengths that provide a solid basis for growth and competitiveness. Farmers benefit from a high diversity of vegetable crops that are well adapted to local climatic and soil conditions, while strong traditional knowledge in crop cultivation continues to be passed down through generations. Proximity to urban markets enables many farmers to sell directly to consumers, ensuring steady demand and higher returns. At the same time, there is a strong base of motivated smallholder farmers who are open to innovation and willing to invest in improving their practices. However, the sector continues to face significant weaknesses. Farm plots remain fragmented and small, which reduces opportunities for mechanization and efficiency. Post-harvest infrastructure is particularly poor, with limited storage, cooling, and transport facilities leading to high losses and reduced quality. Many farmers lack up-to-date technical knowledge in modern production methods, pest management, and crop nutrition, while weak organization and low participation in cooperatives further limit their collective bargaining power. In addition, inconsistent quality standards and the absence of certification reduce competitiveness, particularly when attempting to access higher-value markets.

Despite these challenges, the vegetable sector has several promising opportunities. Domestic demand for local and fresh vegetables continues to grow, providing farmers with a reliable outlet for their produce. The potential for value-added products, such as pre-packaged, processed, or preserved vegetables, offers avenues to increase profitability and expand into new market segments. Access to EU and regional markets becomes feasible with the adoption of recognized quality certification schemes such as GlobalG.A.P., while the development of cooperative structures could significantly improve market access, input supply, and service sharing. Furthermore, the adoption of climate-smart and sustainable production techniques presents an opportunity to build long-term resilience in the sector. Nevertheless, the vegetable value chain is also exposed to several threats. Heavy reliance on imports during the off-season creates intense competition and contributes to price volatility, while climate change introduces new risks such as droughts, floods, and irregular rainfall that disrupt production cycles. Periods of oversupply in peak season often cause sharp drops in prices, directly impacting farmer income. Limited government support and delays in subsidy payments remain a persistent problem, while market intermediaries continue to dominate trade channels, leaving farmers with little bargaining power.

The dairy value chain in Kosovo is likewise rooted in long-standing traditions and carries significant potential for further development. Farmers possess strong knowledge of dairy farming and artisanal product preparation, which contributes to the authenticity and diversity of products. In certain regions, local milk collection networks provide a basic infrastructure for processing and distribution, while the

sector as a whole offers a diverse product portfolio ranging from milk and cheese to yogurt and fermented dairy products. Many dairy farmers remain motivated to enhance production and quality, which serves as a strong foundation for sector-wide modernization. Still, weaknesses persist across the value chain. Dairy farming is characterized by small herd sizes and low milk productivity per cow, while poor farm hygiene and insufficient access to veterinary services continue to undermine quality. Processing infrastructure in many dairies is outdated, and limited adoption of modern technologies hinders efficiency. As in the vegetable sector, weak farmer organization reduces bargaining power and restricts collective marketing opportunities. Compliance with food safety and quality standards is often low, posing barriers to accessing higher-value markets and undermining consumer trust.

Opportunities for the dairy sector are nonetheless considerable. Demand for locally produced and branded dairy products is on the rise, reflecting consumer interest in authentic and fresh products. Farmers and processors alike could benefit from adding value through artisanal cheese, yogurt, and other packaged dairy goods. Certification and the adoption of standards such as organic or PDO/PGI could allow entry into premium markets, both domestically and abroad. Strengthening cooperatives and producer organizations would not only improve market positioning but also provide better access to processing facilities and shared services. Government and donor programs supporting farm modernization, training, and equipment investment represent further opportunities to raise competitiveness and align production with market needs. Yet, as in the vegetable sector, several threats challenge the stability of dairy farming. Imported dairy products, often subsidized, exert strong competitive pressure on local producers. Price volatility and persistently low farm-gate prices undermine profitability, while delayed or insufficient agricultural subsidies complicate farm planning. External risks, particularly those linked to climate change and feed supply fluctuations, pose additional challenges to sustaining milk production. Finally, weak enforcement of food safety regulations reduces consumer confidence and restricts the potential of local products to gain a stronger market share.

Recommendations: Vegetable

The vegetable sector in Kosovo requires a combination of structural improvements, technical support, and market development to strengthen its competitiveness. A first priority is to tackle the fragmentation of farm plots, which limits efficiency and mechanization. Farmers should be encouraged to form cooperatives and producer organizations, enabling them to pool resources, jointly invest in modern equipment, and gain stronger bargaining power in the marketplace. Such collective structures would also facilitate better access to finance, inputs, advisory services, and innovation. Improving post-harvest infrastructure is equally important. Investments in cold storage, sorting, packaging, and transportation facilities would help reduce post-harvest losses and extend the marketing period of vegetables, thus stabilizing prices and improving farmer incomes.

Capacity building should be emphasized through targeted training programs on modern cultivation methods, integrated pest management, and soil and crop nutrition. These should be complemented by

advisory support to help farmers meet certification requirements such as GlobalG.A.P., which would open opportunities for entry into regional and EU markets. Efforts should also be made to strengthen quality standards and ensure consistency in production, enhancing consumer trust in local produce.

Market development should focus on diversifying products and adding value. Initiatives to promote pre-packaged vegetables, processed goods such as sauces and pickles, or preserved products can help farmers capture higher prices and reduce reliance on fresh market sales during peak harvests. At the same time, branding and promotional campaigns that highlight freshness, locality, and tradition could boost consumer awareness and loyalty, while stronger linkages with supermarkets and regional distributors would expand access to stable markets.

Given the growing risks associated with climate change, resilience-building measures are essential. Farmers should be supported in adopting climate-smart practices such as efficient irrigation, water harvesting, and the use of drought-resistant varieties. Government programs and donor interventions should provide timely subsidies, extension support, and reliable financial schemes to ensure sustainability and reduce dependence on imports during off-seasons. Addressing the dominance of intermediaries through transparent market systems and direct marketing channels would further help to balance market relations and improve farmer returns.

Recommendations: Dairy

The dairy sector in Kosovo holds strong potential for growth, but it requires significant modernization and structural strengthening. Small herd sizes and low productivity levels can be addressed by encouraging farmers to organize into cooperatives or clusters that facilitate joint investments in genetics, feed production, and farm equipment. Such collaboration would also enhance bargaining power, making it easier to negotiate better terms with processors and input suppliers. Improving farm hygiene and expanding access to veterinary services should be a central focus, as this directly impacts both productivity and product quality. At the same time, investments are needed to modernize milk collection networks and upgrade processing plants, introducing new technologies that improve efficiency and ensure compliance with food safety standards.

Capacity building programs should provide farmers with technical knowledge in animal husbandry, feeding practices, and milk hygiene. Awareness and training on quality certification, including organic production or protected designation standards such as PDO/PGI, could enable producers to access premium domestic and regional markets. Farmers and processors should also be supported in product diversification, with particular emphasis on artisanal cheeses, yogurts, and other high-value dairy products that appeal to consumer preferences for tradition and authenticity. Branding strategies and promotional campaigns could further enhance the image of local dairy products, creating a stronger identity that differentiates them from imports.

Policy and institutional support are critical for overcoming external threats. Farmers need timely and predictable subsidies to stabilize farm planning and encourage investment. Measures to regulate imports and ensure fair competition are essential, particularly given the heavy presence of subsidized foreign products in the market. Strengthening food safety enforcement is another key step, as it would build consumer confidence in domestic products and expand their market potential.

To address the risks posed by climate change and fluctuating feed availability, farmers should be encouraged to adopt climate-resilient practices, including improved fodder production, feed storage, and efficient farm management techniques. Government and donor programs could play a vital role in providing financial support, training, and research linkages to ensure innovation reaches the farm level. By aligning the efforts of farmers, processors, policymakers, and development actors, the dairy value chain can evolve into a more productive, resilient, and competitive sector that secures better livelihoods for rural households and delivers safe, high-quality products to consumers.

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