Afghan Agricultural Sciences Journal
2026, vol. 1(1):49-60
DOI:10 xxxxxxx/xxxx

Formulating development strategies for the agriculture sector in Farah, Afghanistan

Mehrabuddin Rashed [1]*, Mehrabuddin Asif Walizadah [2], Amir Mohammad Erfani [1]
[1]Department of Agronomy, Faculty of Agriculture, Farah University
[2]Department of Agronomy, Faculty of Agriculture, Nimroz University

A B S T R A C T

Agriculture is considered the backbone of Afghanistan's economy, as the country possesses vast potential in natural resources, horticulture, livestock, and seasonal production. A large proportion of Afghanistan's population is engaged in agriculture, and the agricultural sector plays a key role in household income generation, food security, export development, and regional economic stability. Agriculture is a key pillar of the national economy, and Farah Province, due to its fertile lands, suitable climate, and experienced farmers, has significant growth potential. The aim of this study is to assess the current status of the agricultural sector in Farah Province and to formulate effective development strategies using SWOT analysis. The method of this research is quantitative in terms of data collection and applied in terms of purpose, using SWOT analysis, data were collected through Likert-scale questionnaires from 54 participants including farmers, agricultural specialists, and agriculture related staff. The results show several challenges. These include weak infrastructure, poor water resource management, limited market access, and climate change. These challenges causes' high production costs, low incomes, losses of post-harvest, and unsuitable market conditions, placing farmer in Farah province under considerable economic pressure. Therefore, an accurate evaluation of the present status of the sector, know existing challenges and potentials, and appropriate strategies formulation are importance for Farah province sustainable development. In this regard, SWOT analysis is employed as an effective, practical, and scientific method to provide a clear picture of the sector's strengths, weaknesses, opportunities, and threats.

Keywords: agricultural development, Farah agriculture, EFEM, IFEM, SWOT analysis, strategic planning

Article Type: Research
Received Date: 19 April 2026
Accepted Date: 20 June 2026
Corresponding Author Email: mhrabaldynrashd@gmail.com
ISSN: xxxx-xxxx

1. INTRODUCTION

Agriculture is very important in Afghanistan. Many people depend on it for jobs, food, and income. It also supports the country's economy. Because of this, it is important for both families and economic stability (FAO, 2020).

Farah Province has good potential for agriculture. It has fertile soil and a suitable climate. Farmers in this area also have good experience. There is also crop diversity. In rural areas, agriculture helps reduce poverty. It also supports social stability where other jobs are limited.

Many studies show that agriculture is linked to economic growth. It also helps reduce poverty and supports rural development. Countries that focus on agriculture often have better productivity and stronger communities (Gürel & Tat, 2017).

However, the situation in Farah is not simple. The sector faces many problems. There is water scarcity and climate change. Farmers have limited access to modern technology. There are not enough storage and processing facilities. Market systems are weak, and transportation is poor. These problems reduce production and affect farmers' income (Batool & Nazir, 2024).

There are inadequate studies about agriculture in Afghanistan, spatially research focused on Farah Province. There is also limited use of SWOT analysis in this area. SWOT helps to study both internal and external factors. This gap makes it harder to develop practical strategies.

This study aims to examine agriculture in Farah Province. It also aims to develop useful strategies using SWOT analysis. The results can help policymakers and organizations make better decisions. In the future, this can improve production, increase farmers' income, and support the local economy (Perkins & Estrada, 2019). This research gives answers to believe questions.

1. What are the main strengths and weakness of the agricultural sector in Farah province?
2. What are the major opportunities and threats affecting the agricultural sector in Farah province?
3. How can SWAT analysis be used to formulate effective strategies for the development of the agricultural sector in Farah province?
4. What strategic actions are required to achieve sustainable agricultural development in Farah province?

2. MATERIALS AND METHODS

This study was conducted in Farah Province, Afghanistan, and employed a quantitative research approach in terms of data collection and an applied approach in terms of purpose. The study focused on evaluating the agricultural sector using a strategic analytical framework. A structured Likert-scale questionnaire was used as the primary data collection instrument. The questionnaire was developed based on a comprehensive review of relevant literature and consultations with agricultural experts.
The study population consisted of farmers, agricultural specialists, and agriculture-related staff, from which a total of 54 respondents were purposively selected. The selection criteria included professional experience, involvement in agricultural activities, and technical expertise. Prior to data collection, informed consent was obtained from all participants to ensure ethical compliance.
The questionnaire was organized into four sections corresponding to the components of SWOT analysis: strengths, weaknesses, opportunities, and threats. To ensure content validity, the instrument was reviewed and validated by two academic experts from the Faculties of Agriculture at Farah University and Nimroz University. After validation, the questionnaires were distributed and completed by the selected respondents.

Data analysis was conducted using the SWOT analytical framework, a widely recognized strategic tool for evaluating internal and external factors and supporting decision-making processes (Gürel & Tat, 2017; David & David, 2017). To improve analytical accuracy, the Internal Factors Evaluation

Matrix (IFEM) and External Factors Evaluation Matrix (EFEM) were constructed. In these matrices, each factor was assigned a weight and rating, and weighted scores were calculated to quantify their relative importance.
Based on the IFEM and EFEM results, four strategic positions were analyzed to determine appropriate development strategies for the agricultural sector in Farah Province. Data were processed and analyzed using Microsoft Excel software.

1. Aggressive Strategy (SO)

In this position, efforts focus on maximizing external opportunities by leveraging internal strengths. This strategy is appropriate when both strengths and opportunities are high.

2. Conservative Strategy (WO)

The objective of this strategy is to utilize external opportunities while simultaneously addressing and improving internal weaknesses. This position is applied when opportunities exist but internal weaknesses constrain development.

3. Competitive Strategy (ST)

In this strategy, existing strengths are used to reduce or counter external threats. This position is suitable when strengths are strong but significant threats are present.

4. Defensive Strategy (WT)

In the defensive strategy, a protective approach is adopted to minimize internal weaknesses and prevent or reduce external threats. This position is relevant when both weaknesses and threats are high and risk reduction is essential for survival.

3. RESULTS

The results presented in Table 1. show that the majority of respondents (51.9%) were between 31 and 40 years of age, indicating that most participants were within an economically active and experienced age group. In terms of education, a large proportion (81.5%) held a bachelor's degree or higher, reflecting a high level of academic background among respondents. Regarding occupation, agriculture lecturers/students and individuals from other related sectors each constituted 40.7% of the sample, while a smaller proportion were directly engaged in farming (11.1%) or employed as agricultural officers (7.4%).

These characteristics indicate that the study benefited from informed participants with substantial academic and professional exposure to the agricultural sector, enhancing the reliability of the findings.

Table 1 Demographic Characteristics and Number of Farmers and Related Participants in the Study

Variable	Category	Frequency	Percentage (%)
Age	22–30 years	22	40.7
	31–40 years	28	51.9
	Above 41 years	4	7.4
	Total	54	100
Education Level	Illiterate	2	3.7
	High school graduate (12th grade)	8	14.8
	Bachelor's degree or higher	44	81.5
	Total	54	100

Occupation	Engaged in farming	6	11.1
	Agricultural officer	4	7.4
	Agriculture lecturer or student	22	40.7
	Other	22	40.7
	Total	54	100

Analysis of Internal Factors

Table 2. presents the evaluation of internal factors (strengths and weaknesses) of the agricultural sector based on the SWOT analysis framework. The analysis was conducted as follows:

1. The first column describes the internal factors, including strengths and weaknesses.
2. The second column represents the weight coefficient, indicating the relative importance of each factor. The value ranges from 0 to 1, and the sum of all weights must not exceed1.
3. The third column shows the rating, which reflects the sector's response to each factor, strengths are assigned ratings of 3 or 4, while weaknesses are assigned ratings of 1 or 2.
4. The fourth column presents the weighted score, calculated by multiplying the weight coefficient by the rating, indicating the overall impact of each factor.
5. Finally, if the total weighted score exceeds 2.5, strengths dominate weaknesses, if it is below 2.5, weaknesses outweigh strengths. For the agricultural sector of Farah Province, the total score is 2.231, indicating that weaknesses outweigh strengths.

The evaluation of internal factors of Farah Province's agricultural sector using the Internal Factors Evaluation (IFE) Matrix shows a total score of 2.231, which indicates that weaknesses currently prevail over strengths. Based on this score, the sector possesses notable strengths while simultaneously facing serious internal weaknesses.

Among the strengths, the most significant factor is the availability of large and flat agricultural lands, with the highest weighted score (0.232), plays a fundamental role in increasing production capacity. In addition, the relative availability of modern agricultural machinery, the use of drip irrigation systems, the presence of university graduates, the distribution of quality seeds and fertilizers, and the availability of young specialists are considered major assets of the agricultural sector. Each of these factors positively contributes to production quality, management efficiency, and the adoption of modern technologies. Furthermore, farmers' experience and traditional skills are regarded as important strengths, as they enhance understanding of local conditions and support the effective organization of agricultural activities.

Despite these strengths, the agricultural sector faces several critical weaknesses that significantly hinder development. Weak agricultural infrastructure, with a weighted score of 0.054, is identified as the most severe constraint, as post-harvest losses and delays in delivering products to markets substantially increase farmers' economic losses. Additionally, the lack of modern technology, absence of storage facilities, insufficient modern irrigation systems, water scarcity, weak marketing structures, and shortages of agricultural tools and machinery directly undermine production quality, farmers' income, and the overall economic stability of the sector.

In particular, water scarcity exacerbated by the climatic conditions of Farah Province is considered a primary cause of reduced agricultural production. Likewise, the absence of storage systems limits the expansion of exports. Overall, the internal factor analysis indicates that although the sector has strong internal potential for growth, urgent reforms are required in water management, marketing, storage, and infrastructure development to enable the sector to fully utilize its strengths and transform weaknesses into opportunities.

Table 2 Evaluation of Internal Factors (Strengths and Weaknesses)

No.	Internal Factors (Strengths and Weaknesses)	Weight	Rating	Weighted Score
1	Farmers' traditional skills are beneficial for agricultural development	0.047	3	0.141
2	Relative availability of modern agricultural machinery increases production	0.059	3	0.177
3	Farmers' experience helps in solving agricultural problems	0.055	3	0.165
4	Presence of young specialists supports the use of new technologies	0.059	3	0.177
5	Relative use of drip irrigation systems increases production	0.056	3	0.168
6	University graduates have the capacity to manage agricultural projects effectively	0.056	3	0.168
7	Availability of large and flat lands is a major strength of Farah's agricultural sector	0.058	4	0.232
8	Relative distribution of quality seeds and fertilizers supports sector development	0.057	3	0.171
9	Water scarcity reduces agricultural production	0.057	1	0.057
10	Lack of modern irrigation systems limits sector development	0.055	1	0.055
11	Absence of storage facilities leads to post-harvest losses of grains	0.055	1	0.055
12	Shortage of cold storage reduces fresh fruit export and preservation capacity	0.054	2	0.108
13	Weak domestic marketing networks reduce farmers' income	0.057	2	0.114
14	Limited export routes reduce global market access for agricultural products	0.054	2	0.108
15	Lack of new technology affects product quality	0.055	1	0.055
16	Weak agricultural infrastructure increases farmers' challenges	0.054	1	0.054
17	Lack of harvesting tools and insufficient agricultural machinery makes farming activities more difficult	0.057	2	0.114
18	Shortage of agricultural machinery lowers farmers' living standards	0.056	2	0.112
Tot		1.00		2.231

Evaluation of External Factors (Opportunities and Threats)

Table 3. presents the assessment of external factors (opportunities and threats) based on the SWOT analysis framework. The evaluation was conducted as follows:

1. The first column describes the external factors, including opportunities and threats.
2. The second column shows the weight coefficient, which reflects the relative importance of each factor. Values range from 0 to 1, and the sum of all weights does not exceed 1.
3. The third column presents the rating, indicating the sector's response to each factor, opportunities are rated 3 or 4, while threats are rated 1 or 2.
4. The fourth column contains the weighted score, calculated by multiplying the weight coefficient by the rating, indicating the overall impact of each factor.
5. Finally, if the total weighted score exceeds 2.5, opportunities dominate threats; if it is below 2.5, threats outweigh opportunities. For the agricultural sector of Farah Province, the total score is 2.342, indicating that threats outweigh opportunities.

The evaluation of external factors of Farah Province's agricultural sector using the External Factors Evaluation (EFE) Matrix resulted in a total score of 2.23, demonstrating that threats currently outweigh opportunities. This score indicates that while the sector possesses notable opportunities for development, it simultaneously faces serious external threats that constrain its overall potential.

Among the opportunity factors, several elements are particularly prominent. The adoption of new agricultural technologies, improved security conditions, construction of the Bakhshabad Dam, attraction of international assistance, and expansion of roads and bridges represent key opportunities that can significantly enhance production levels, water management, export capacity, and marketing efficiency. Notably, the use of new technologies, security stability, and construction of the Bakhshabad Dam each achieved the highest weighted score (0.228), making them the most influential external opportunities and critical drivers for long-term stability and growth of the agricultural sector.

Additionally, expanded access to neighboring countries' markets, implementation of international standards, and development of agricultural projects are considered important opportunities for increasing farmers' income and improving the competitiveness of agricultural products.

On the other hand, the assessment of external threats facing Farah Province's agricultural sector identifies several factors as particularly severe and impactful. Based on weighted scores, global market instability (weighted score: 0.053) and drought (weighted score: 0.054) are classified as first-order threats, as they have direct and negative effects on economic stability and farmers' income. The high weighted scores of these threats indicate that if they are not effectively managed and controlled, they could pose serious risks to the development of the agricultural sector.

Overall, these first-order threats represent critical focal points for strategic decision-making and risk mitigation planning.

Table 3 Evaluation of External Factors (Opportunities and Threats)

No.	External Factors (Opportunities and Threats)	Weight	Rating	Weighted Score
1	Exporting products to neighboring countries promotes agricultural development	0.056	3	0.168
2	Attracting international assistance is beneficial for expanding agricultural projects	0.057	3	0.171
3	Construction of roads and bridges facilitates market access for products	0.056	3	0.168
4	Adoption of new technologies contributes to water conservation	0.057	4	0.228
5	Improved overall security provides opportunities for agricultural development	0.057	4	0.228
6	Construction of the Bakhshabad Dam increases production capacity	0.057	4	0.228
7	Access to international markets is an opportunity for agricultural growth	0.055	3	0.165
8	Expansion of agricultural projects increases employment opportunities for farmers	0.055	3	0.165
9	Implementation of international standards supports export development	0.056	3	0.168
10	Impacts of climate change reduce agricultural production	0.057	1	0.057
11	Drought reduces farmers' income	0.054	1	0.054
12	Reduced rainfall negatively affects product quality	0.055	1	0.055
13	Price volatility of agricultural products increases farmers' challenges	0.053	2	0.106
14	Limited access to agricultural credit hinders farmers' progress	0.055	1	0.055
15	Lack of financial resources limits expansion of agricultural projects	0.053	2	0.106
16	Instability of global markets affects export levels	0.053	1	0.053
17	Weak infrastructure intensifies the impact of threats	0.055	1	0.055
Total		**1.00**		**2.23**

Formulation of Strategies for Agricultural Sector Development

The evaluation of internal and external fundamental factors was conducted using the SWOT matrix in order to identify strategies that align with the objectives of this study and are consistent with existing internal and external conditions.

As indicated by the Internal and External Factor Evaluation Matrices, the total score for internal factors is **2.231**, while the total score for external factors is **2.23**. To determine the primary strategic orientation, these scores were plotted on a four-quadrant SWOT matrix. As shown in **Figure (1),** the main strategy identified for the development of agriculture in Farah Province is a **Defensive Strategy (WT),** marked by a star. This strategic position results from the combination of internal weaknesses and external threats.

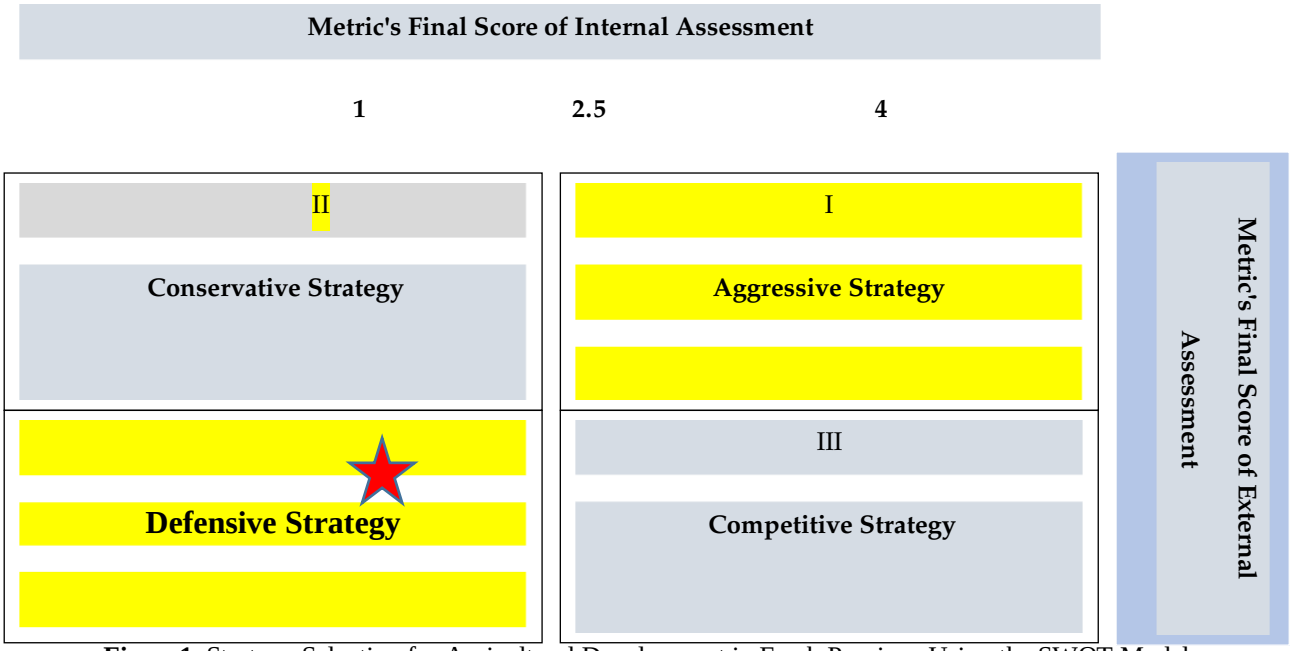


Figure1. Strategy Selection for Agricultural Development in Farah Province Using the SWOT Model

Table 4 Strategies proposed for achieving agricultural development in Farah Province based on the SWOT matrix analysis

• Weaknesses 1. Water resource scarcity reduces agricultural production. 2. Lack of storage facilities causes post-harvest losses of crops. 3. Shortage of cold storage reduces fresh fruit preservation and export capacity. 4. Weak domestic marketing networks reduce farmers' income. 5. Limited export routes restrict global market access. 6. Lack of modern irrigation systems constrains sector development. 7. Insufficient agricultural machinery lowers production levels. 8. Lack of new technology negatively affects product quality. 9. Weak agricultural infrastructure increases farmers' challenges. 10. Lack of harvesting tools increases labor difficulty for farmers.	• Strengths 1. Farmers' traditional skills are beneficial for agricultural development. 2. Relative availability of modern agricultural machinery increases production levels. 3. Farmers' experience contributes to solving agricultural problems. 4. Presence of young specialists facilitates the adoption of new technologies. 5. Relative use of drip irrigation systems increases production efficiency. 6. University graduates have the capacity to effectively manage agricultural projects. 7. Availability of large and flat agricultural lands is a major strength of Farah Province. 8. Relative distribution of quality seeds and fertilizers supports sectoral development.	Internal Factors
. Competitive Strategy (ST): Using strengths to mitigate threats ✓ Increase production using modern machinery (S2) to reduce price volatility and export risks (T4, T7). ✓ Utilize farmers' skills, experience, and the presence of young specialists and graduates (S1, S3, S4, S6) to counter limitations in credit, financial resources, and infrastructure (T5, T6, T8). ✓ Apply drip irrigation systems and quality seeds and fertilizers (S5, S8) to mitigate threats of climate change, drought, and reduced rainfall (T1, T2, T3). ✓ Utilize large and flat agricultural lands (S7) to increase farmers' income and reduce the impacts of drought (T2).	Aggressive Strategy (SO): Using strengths to maximize opportunities 1. Increase production through relative availability of modern machinery (S2) and expand exports to neighboring and international markets (O1, O7). 2. Strengthen agricultural projects, adoption of international standards, and attraction of international assistance by utilizing farmers' traditional skills, experience, and the presence of young specialists and graduates (S1, S3, S4, S6) (O2, O8, O9).	External Factors
		• **Opportunities** 1. Exporting products to neighboring countries promotes agricultural development. 2. Attraction of international assistance supports expansion of agricultural projects. 3. Construction of roads and bridges facilitates market access. 4. Adoption of new technologies supports water conservation. 5. Improved overall security provides opportunities for sectorial growth. 6. Construction of the Bakhshabad Dam increases production capacity. 7. Access to international markets supports agricultural development. 8. Expansion of agricultural projects increases employment opportunities. 9. Implementation of international standards enhances export potential.

	3. Enhance drip irrigation systems and the use of quality seeds and fertilizers (S5, S8) through new technologies and improved road infrastructure (O4, O3). 4. Expand cultivation on large and flat lands (S7) by utilizing water from the Bakhshabad Dam and improved security conditions (O5, O6).	
Defensive Strategy (WT): Minimizing weaknesses and avoiding threats 1. Efficient use of available water resources (W1) to better manage climate change and reduced rainfall threats (T1, T3). 2. Utilize existing storage facilities and cold rooms (W2, W3) to reduce price volatility and export risks (T4, T7). 3. Rely on existing domestic marketing networks and export routes (W4, W5), and existing irrigation systems (W6) to manage price instability, export risks, drought, and reduced rainfall (T2, T3, T4, T7). 4. Optimize use of existing agricultural machinery and technologies (W7, W8, W10) to control threats related to limited credit and machinery shortages (T5, T9). 5. Improve management of existing agricultural infrastructure (W9) to mitigate infrastructure-related threats (T8).	Conservative Strategy (WO): Using opportunities to reduce weaknesses 1. Reduce weaknesses in marketing networks and limited export routes (W4, W5) by exporting to neighboring countries, accessing international markets, and applying international standards (O1, O7, O9). 2. Address weak infrastructure and lack of new technology (W8, W9) through adoption of new technologies, road construction, and improved security (O3, O4, O5). 3. Reduce water scarcity and lack of modern irrigation systems (W1, W6) through the Bakhshabad Dam and attraction of international assistance (O2, O6).	• **Threats** 1. Climate change impacts reduce agricultural production. 2. Drought decreases farmers' income. 3. Reduced rainfall affects crop quality. 4. Price volatility of agricultural products increases farmers' challenges. 5. Limited access to agricultural credit restricts farmers' progress. 6. Lack of financial resources limits project expansion. 7. Instability of global markets affects export levels. 8. Weak infrastructure intensifies threat impacts. 9. Shortage of agricultural machinery lowers farmers' living standards.

5. Discussion

The results of this study show that agriculture in Farah Province has strong natural potential due to its extensive agricultural land resources, favorable agroecological conditions, and existing farming experience. However, this potential is significantly constrained by structural, environmental, and institutional challenges that limit productivity and long-term sustainability. The findings are consistent with earlier studies that identify water scarcity and climate change as the most serious threats to agricultural development in arid and semi-arid regions. FAO (2023) and ICRC (2024) report that drought and irregular rainfall are major constraints on agricultural livelihoods in Afghanistan. Similarly, UNDP (2021) and World Bank (2022) emphasize that climate change is increasing agricultural risk through higher temperatures, reduced precipitation, and increased evapotranspiration.

A key issue identified in this study is the continued use of traditional irrigation systems, which are inefficient and highly vulnerable to climate variability. FAO (2022) explains that surface irrigation

leads to substantial water losses through seepage, runoff, and evaporation, reducing overall efficiency. Jensen (2007) and Burt et al. (2010) also show that poor irrigation management can reduce water-use efficiency by up to 50 percent in similar agroecological contexts. As a result, farmers face increased vulnerability during drought periods and declining agricultural output. To address this, FAO (2022) recommend modern irrigation technologies such as drip and sprinkler systems, which significantly improve water efficiency and resilience. In addition, Ostrom (1990) highlights that effective local water governance and collective action are essential for sustainable irrigation management, particularly in resource-scarce environments.
Infrastructure limitations represent another major constraint on agricultural development in Farah Province. The study found that weak transportation systems, limited storage facilities, and poor market access significantly reduce agricultural profitability. These challenges increase post-harvest losses and reduce farmers' bargaining power. Similar findings are reported by World Bank (2021) and FAO (2020), which show that inadequate rural infrastructure is a key barrier to agricultural commercialization in developing countries. Barrett (2008) further explains that weak value chain integration prevents smallholder farmers from transitioning from subsistence to market-oriented production systems. Reardon et al. (2019) also emphasize that investments in rural infrastructure and agro-logistics are essential for improving market access and supporting rural transformation.

Institutional and financial constraints further intensify these challenges. Limited access to credit, weak extension services, and insufficient institutional support reduce farmers' ability to adopt improved agricultural technologies. Anderson and Feder (2007) highlight that agricultural extension systems are critical for knowledge transfer and productivity enhancement, while Davis et al. (2012) show that advisory services significantly improve farm decision-making and farm performance. Financial constraints are also significant. Feder et al. (1985) identify credit constraints and risk aversion as major barriers to agricultural modernization, particularly among smallholder farmers. FAO (2020) emphasize that access to rural finance is essential for investment in improved seeds, fertilizers, and irrigation technologies. The World Bank (2021) further stresses that strengthening rural financial systems is crucial for agricultural transformation in low-income contexts.

Despite these constraints, the study identifies several opportunities for agricultural development. The proposed Bakhshabad Dam is considered a major opportunity due to its potential to increase water availability, expand irrigation coverage, and stabilize agricultural production. Large-scale irrigation infrastructure has been widely recognized as a driver of agricultural intensification and rural development World Bank (2022). In addition, opportunities such as agricultural mechanization, improved seed varieties, and climate-smart agriculture offer important pathways for increasing productivity and resilience. FAO (2020) defines climate-smart agriculture as an approach that increases productivity, strengthens resilience, and reduces emissions where possible. Evidence from Lobell et al. (2011) and Stevenson et al. (2013) shows that improved agricultural technologies can reduce yield variability under climate stress conditions. In Afghanistan, Kakar and Rahimi (2020) further confirm that mechanization and technology adoption significantly improve agricultural output, income diversification, and rural livelihoods.

An important contribution of this study is the integration of SWOT analysis with IFEM and EFEM frameworks. This combined approach provides a more systematic and evidence-based understanding of internal strengths and weaknesses as well as external opportunities and threats. According to David (2017), integrating qualitative and quantitative strategic tools improves the quality of decision-making and policy formulation. In this study, this approach also demonstrates how internal strengths, such as land availability and human capacity, can be leveraged to address external challenges more effectively. Overall, this study highlights the urgent need for integrated agricultural development planning in Farah Province. Coordinated investment in water resource management, infrastructure development, institutional strengthening, and market systems is essential for sustainable agricultural growth. By addressing existing constraints and effectively utilizing available opportunities,

agriculture in Farah Province can significantly improve productivity, increase rural incomes, and contribute to long-term economic stability and food security.

6. CONCLUSION

The findings of this study reveal that the agricultural sector in Farah Province possesses several significant strengths, including the availability of suitable agricultural land, adequate human resources, and access to basic agricultural inputs. However, despite these advantages, the sector continues to face considerable structural weaknesses and external challenges that limit its productivity and long-term sustainability. The analysis indicates that persistent issues such as water scarcity, climate variability, inadequate infrastructure, underdeveloped market systems, and limited adoption of modern agricultural technologies remain major constraints to agricultural development in the province.

The application of the SWOT analytical framework, supported by the Internal Factor Evaluation Matrix (IFEM) and External Factor Evaluation Matrix (EFEM), provided a systematic and comprehensive assessment of the agricultural sector. The study clearly illustrates the extent to which internal weaknesses and external threats adversely affect agricultural performance, while also identifying strategic opportunities and practical solutions for sectoral improvement. The results of the study suggest several strategic priorities for achieving sustainable agricultural growth in the province. These include improving water resource management, developing agricultural and rural infrastructure, promoting the adoption of modern technologies, expanding market access, and strengthening the technical and managerial capacities of farmers. In addition, the study highlights important development opportunities through increased investment in irrigation systems, transportation infrastructure, and agricultural markets. Infrastructure projects such as water storage facilities and dam construction are also identified as essential measures for enhancing agricultural resilience and productivity

Author Contributions

Mehrabuddin Rashed conceived the study, collected the data, performed the data analysis, and drafted the manuscript. Mehrabuddin Asif Walizadah contributed to the conceptualization of the study and the development of the methodology. Amir Mohammad Erfani critically reviewed and edited the manuscript. All authors contributed to the writing of the manuscript, reviewed the final version, and approved the submitted manuscript.

Funding
This research received no external funding.

Acknowledgments
The authors gratefully acknowledge the Faculty of Agriculture, Farah University, for providing academic support and research facilities throughout this study. The authors also sincerely thank the farmers, agricultural specialists, and agriculture-related staff of Farah Province for their valuable cooperation and assistance during data collection. Their contributions were essential to the successful completion of this research.

Data Availability Statement
The data supporting the findings of this study are available from the corresponding author upon reasonable request. The dataset is not publicly available due to privacy and confidentiality considerations related to the participants.

Conflict of Interest
The authors declare no conflict of interest

Artificial Intelligence (AI) Use Statement
The authors declare that no generative artificial intelligence tools were used in the preparation of this manuscript.

REFERENCES

Agha, M. (2021). *Challenges and opportunities in Afghanistan's agricultural development*. Kabul: Afghanistan Agricultural Research Institute.

Anderson, J. R., & Feder, G. (2007). Agricultural extension. In R. E. Evenson & P. Pingali (Eds.), *Handbook of agricultural economics* (Vol. 3, pp. 2343–2378).

Barrett, C. B. (2008). Smallholder market participation: Concepts and evidence from eastern and southern Africa. *Food Policy, 33*(4), 299–317.

Batool, S., & Nazir, A. (2024). Agricultural productivity and climate change: Impacts on rural livelihoods in South Asia. *Journal of Environmental Management*, 320, 116143. https://doi.org/10.1016/j.jenvman.2023.116143

Burt, C. M., Clemmens, A. J., Strelkoff, T. S., Solomon, K. H., Bliesner, R. D., Hardy, L. A., Howell, T. A., & Eisenhauer, D. E. (2010). Irrigation performance measures: Efficiency and uniformity. *Journal of Irrigation and Drainage Engineering, 123*(6), 423–442.

Chatterjee, P. (2016). *Strategic management using SWOT analysis*. New Delhi: Sage Publications.

David, F. R., & David, F. R. (2017). *Strategic management: A competitive advantage approach* (16th ed.). Pearson.

Davis, K., Swanson, B., Amudavi, D., Mekonnen, D. A., Flohrs, A., Riese, J., Lamb, C., & Zerfu, E. (2012). *In-depth assessment of the public agricultural extension system of Ethiopia and recommendations for improvement*. IFPRI.

FAO. (2020). *Afghanistan: Food and agriculture challenges and opportunities*. Food and Agriculture Organization of the United Nations.

FAO. (2022). *Irrigation and mechanization in developing countries: Case studies from Asia*. Food and Agriculture Organization of the United Nations.

FAO. (2022). *The state of land and water resources for food and agriculture*. Food and Agriculture Organization.

FAO. (2023). *Afghanistan agricultural livelihoods and food security report*. Food and Agriculture Organization

FAO. (2023). *Climate change impacts on agriculture in Afghanistan*. Food and Agriculture Organization of the United Nations.

Feder, G., Just, R. E., & Zilberman, D. (1985). Adoption of agricultural innovations in developing countries: A survey. *Economic Development and Cultural Change, 33*(2), 255–298.

Gürel, E., & Tat, M. (2017). SWOT analysis: A theoretical review. *Journal of International Social Research*, 10(51), 994–1006.

International Committee of the Red Cross. (2024). *Water scarcity and drought impacts in Afghanistan*. ICRC.

Jensen, M. E. (2007). Beyond irrigation efficiency. *Irrigation Science, 25*(3), 233–245.

Kakar, H., & Rahimi, F. (2020). Agricultural infrastructure development and productivity improvement in Afghanistan. *Asian Journal of Agricultural Research*, 14(3), 45-57.

Lobell, D. B., Schlenker, W., & Costa-Roberts, J. (2011). Climate trends and global crop production since 1980. *Science, 333*(6042), 616–620.

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press.

Perkins, R., & Estrada, L. (2019). Strategic planning for sustainable agricultural development. *International Journal of Agricultural Sustainability*, 17(4), 321-335.

Reardon, T., Echeverria, R., Berdegué, J. A., Minten, B., Liverpool-Tasie, S. L. O., Tschirley, D., & Zilberman, D. (2019). Rapid transformation of food systems in developing regions: Highlighting the role of agricultural value chains. *Agricultural Economics, 50*(S1), 13–24.

Sabillah, F., Hartono, B., & Syah, R. (2024). Application of SWOT analysis in agricultural strategy formulation. *Journal of Strategic Agriculture*, 5(1), 15-28.

Smith, J., & Miller, T. (2019). Human capital and agricultural development: Evidence from rural Asia. *Journal of Rural Studies*, 68, 112-123.

Stevenson, J. R., Villoria, N., Byerlee, D., Kelley, T., & Maredia, M. (2013). Green revolution research saved an estimated 18 to 27 million hectares from being brought into agricultural production. *Proceedings of the National Academy of Sciences, 110*(21), 8363–8368.

UNDP. (2021). *Climate change and agriculture: Impacts on food security*. United Nations Development Program.

UNDP. (2022). *Strategic planning for agricultural resilience in developing countries*. United Nations Development Program.

World Bank. (2021). *Agricultural value chains and market access in Afghanistan*. World Bank Publications.

World Bank. (2022). *Climate change impacts on agriculture and rural livelihoods in Afghanistan*. World Bank Publications.

World Bank. (2022). *Climate risk and agriculture in Afghanistan*. World Bank Publications.