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STORAGE PERCEPTIONS AND IMMEDIATE SELLING PROBLEMS OF ONIONS BY FARMERS IN KHOST PROVINCE, AFGHANISTAN

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Abstract: Afghanistan's hope that market-driven agriculture will ensure its economic transformation demonstrates a wilful disregard of the links between the economic and political marketplaces in the country. The current study conducted on onion cultivation, selling, and market challenges faced by farmer's reveals that onion cultivation is primarily for family consumption 60.80 percent, with a significant belief in its income-generation potential 86.70 percent. The study also showed farmers sell onions to meet household expenses 57.50 percent, purchase inputs 71.70 percent, repay loans 68.30 percent, and due to storage limitations 85.00 percent, indicating the financial pressures and practical challenges they face. The study indicates that in Khost province farmers delaying onion sales after harvest was not a common practice among farmers, as the majority do not preserve onions for home consumption 4.20 percent or anticipate better future prices. The challenges faced by farmers when selling surplus onions, including the distance to markets, price fluctuations, and high transportation costs. Farmers challenges encountered by farmers when buying agricultural inputs, as the non-availability of certified inputs, distance to markets, lack of transportation facilities, and high input costs. The study explored the sources of information used by farmers for selling onions, with wholesalers and retailers being the primary sources, while friends, neighbours, and relatives are used less frequently. The study collectively provide insights into the factors influencing onion cultivation, selling decisions, and the challenges faced by farmers that highlight the need for interventions and support systems to address specific needs and improve the livelihoods of onion farmers.

Keywords: Onion, Selling, market challenges, farmers, Storage.

INTRODUCTION

The agriculture sector plays a crucial role in the Afghan economy, serving as its backbone (Bolton, 2019). It contributes approximately one-third of the country's Gross Domestic Product (Bolton, 2019) and serves as a source of employment for nearly 60 percent of the Afghan population (Muradi & Rahmani, 2020). This sector is particularly vital in rural areas, where it serves as a significant source of employment (Siddayya et al., 2016). Onion (Allium cepa) is a major global crop and ranks among the top three highly valued fresh vegetable crops worldwide (World Bank, 2014). Its cultivation holds several reasons for attention. Firstly, onions are a cash crop with expanding production, traded as an export commodity (World Bank, 2014). Secondly, onions have been considered a viable alternative to opium poppy, offering comparable returns and serving as an alternative source of income (World

Bank, 2014). Thirdly, high-value vegetable crops like onions, which grow in well-resourced areas with good market access, have the potential to drive agricultural growth (World Bank, 2014). In terms of horticulture, onions are the second most important crop globally after tomatoes, with an annual world production of around 97 million tonnes in 2017 (FAOSTAT, 2019). However, low-income and resource-poor farmers often face challenges accessing credit from the formal financial sector due to inadequate collateral (ILO, 2008; Fasoranti, 2010; Aigbokhan & Asemota, 2011). It is important to note that small-scale and resource-poor individuals, particularly women, dominate the economies of many developing countries (ILO, 2008). Therefore, poverty alleviation strategies in these countries should focus on empowering the poor and creating employment opportunities (Fasoranti, 2010). Despite overall low agricultural productivity, significant post-harvest losses of food are observed (World Bank et al., 2011). Afghanistan, a developing country, faces a poverty rate of over 54.5 percent (World Bank, 2020). The Covid-19 pandemic caused a decline in Afghanistan's economic growth from 7.4 percent to 5.7 percent in 2020, leading to increased poverty (World Bank, 2020). The severe drought experienced in the past decade, particularly in 2018, had a devastating impact on the country, destroying more than two-thirds of the land and the agricultural economy (FAO, 2017). This decline in food and livelihood security persisted until 2019. The drought resulted in reduced food production, significant harm to farmers and herders, a 50 percent reduction in people's income, and adverse health conditions (FAO, 2017). Afghans resorted to negative coping strategies such as begging, debt, asset sales, and selling livestock (FAO, 2017). Crop cultivation and cattle serve as the primary sources of income for 26.7 million Afghans, with 14.3 million living in severe poverty.

Methodology

3.1Population and Sample

This research utilized a primary data collection approach involving a sample of 120 farmers. The sample farmers were selected using a random sampling technique, with 40 farmers, 40 wholesalers, and 40 retailers chosen from each of the three districts: Yaqubi and Sabari, Mando-Zayi, and Bak district in Khost province, Afghanistan. Suitable Questionnaire was constructed and per Pilot surveyed and interview with participants face to face for data collection. The study conducted on key variables such as reason for selling onion, marketable surplus selling, Problems encountered for farmers and not storage of the onion. These percentage were performed to gain insights into the onion market dynamics within the selected region.

3.2 Data and Sources of Data

Primary data collected through interview with farmers. Using a structured questionnaire.

3.4Statistical tools and econometric models

This section elaborates the proper statistical/econometric/financial models which are being used to forward the study from data towards inferences. SPSS descriptive Statistics used (Frequency and percentage).

3.4.1 Descriptive Statistics

Descriptive Statics has been used to find the frequency and percentage

RESULTS AND DISCUSSION

Table 1. The reasons to cultivate onion (Percent (N= 120)

Sr. No	Particulars	SA	A	N	D	SDA
1	Family consumption only	0.80	7.50	60.80	25.00	5.80
2	Better source of income	2.50	86.70	10.80	0.00	0.00
3	Inheritance in nature	3.30	67.50	29.20	0.00	0.00
4	Easy storage and earn more income.	2.50	3.30	1.70	69.20	23.30
5	Suitable environmental condition	0.80	64.20	33.30	1.70	0.00
6	High demand in Off season	0.00	8.30	89.20	2.50	0.00

Source: field study (2023)

(**Note**: for all the table: SA-Strongly Agree; A-Agree; N-Neutral; da- Dis-Agree; SDA- Strongly Dis-Agree)

Table 1 presents the results of a survey on the reasons for cultivating onions. The data indicate that a majority of respondents cultivate onions for family consumption 60.80 percent, while a smaller proportion cultivates them for commercial purposes 25.00 percent. Furthermore, a significant number of respondents strongly agree that onion cultivation provides a better source of income 86.70 percent, highlighting its economic potential. The survey also reveals that a majority of respondents recognize the inheritance value of onion cultivation 67.50 percent, indicating its intergenerational practice. Additionally, respondents perceive onion cultivation to offer easy storage and increased income 69.20 percent, with a minority disagreeing with this notion 23.30 percent. In terms of suitable environmental conditions, most respondents agree that onions thrive in their local environment 64.20 percent, while a smaller proportion disagrees 1.70 percent. Finally, the survey findings indicate a high demand for onions in the off-season, with a large majority of respondents agreeing with this statement 89.20 percent.

Table 2. Reason for selling the Onion by farmers (Percent) (N= 120)

Sr. No	Particular	SA	A	N	D	SDA
1	To meet household expenditure	40.00	57.50	2.50	0.00	0.00
2	To Buy Agricultural Inputs for Next season	22.50	71.70	5.80	0.00	0.00
3	To Repay Loans	68.30	26.70	5.00	0.00	0.00
4	Inadequate storage facilities	85.00	13.30	1.70	0.00	0.00

Source: field study (2023)

Table 2 presents the reasons for selling onions as reported by farmers. The data indicate that a significant proportion of farmers sell onions to meet household expenditure 57.50 percent and to buy agricultural inputs for the next season 71.70 percent. Additionally, a large majority of farmers sell onions to repay loans 68.30 percent and due to inadequate storage facilities 85.00 percent. These findings highlight the financial pressures faced by farmers and the practical challenges they encounter, such as storage limitations. Understanding these reasons can help inform interventions and support systems to address the specific needs and challenges faced by onion farmers.

Table 3 Reason for not selling onion immediately after the harvest by Farmers: (N=120)

Sr. No	Particulars	SA	A	N	D	SDA
1	Preserve for home consumptions	4.20	3.30	0.00	0.00	0.00
2	Better price in future	0.80	2.50	0.80	4.20	0.00
3	Low price to onion at harvest time in local market	0.00	4.20	0.00	0.00	0.00
4	High demand in Off season	0.00	4.20	0.00	0.00	0.00
5	Remunerative prices/ to get good income	0.00	3.30	0.80	0.00	0.00
6	Higher net profit to sell in the later time/ to avoid our transportation cost.	0.00	3.30	0.80	0.00	0.00

Source: field study (2023)

Table 3 presents the reasons reported by farmers for not selling onions immediately after harvest. The data show that only a small percentage of farmers preserve onions for home consumption 4.20 percent and believe in obtaining better prices in the future 0.80 percent strongly agree, 2.50 percent agree. The low price of onions at harvest time in the local market was not seen as a significant factor, as no respondents agreed with this reason. Similarly, high demand in the off-season was not reported as a reason for delaying onion sales. Concerns about remunerative prices or obtaining a good income were not widely expressed, with only a small proportion agreeing with this reason 3.30 percent. Additionally, a small percentage of farmers 3.30 percent agreed that delaying

sales could lead to higher net profits or help avoid transportation costs. Overall, the findings suggest that the majority of farmers do not delay onion sales after harvest for the reasons stated in the survey.

Table 4. Problems encountered by farmers in selling of Surplus Onion (Percent) (N=120)

Sr. No	Particulars	SA	A	N	D	SDA
1	Markets are far away.	35.80	51.70	12.50	0.00	0.00
2	Fluctuation in market price	47.50	46.70	5.80	0.00	0.00
3	High cost of Transportation	40.80	48.30	10.80	0.00	0.00

Source: field study (2023)

Table 4 reveals the challenges faced by farmers when selling surplus onions. The majority of farmers find the distance to markets problematic, with 51.70 percent agreeing and 35.80 percent strongly agreeing. This indicates the difficulties and costs associated with transporting onions to distant markets. Additionally, a significant number of farmers 47.50 percent strongly agree, 46.70 percent agree report that fluctuations in market prices pose a problem, highlighting the uncertainty and potential financial losses experienced due to price volatility. Furthermore, a substantial proportion 48.30 percent agree, 40.80 percent strongly agree of farmers identify the high cost of transportation as a challenge, implying that transportation expenses can adversely affect their profitability. These findings underscore the need for addressing these issues to support onion farmers in effectively reducing their surplus produce and improving their overall market experience.

Table 5. Problems encountered by farmers in buying of agricultural Inputs (N= 120)

Sr. No	Particulars	SA	A	N	D	SDA
1	None- Availability of required certified inputs.	57.50	40.80	1.70	0.00	0.00
2	Markets are far away.	20.80	63.30	15.80	0.00	0.00
3	No Proper transportation facilities	41.70	46.70	11.70	0.00	0.00
4	High cost of inputs	80.00	18.30	1.70	0.00	0.00

Source: field study (2023)

Table 5 provides insights into the challenges faced by farmers when buying agricultural inputs. The key findings are as follows: Non-availability of certified inputs: A majority of farmers 57.5 percent strongly agreed that the lack of certified inputs was a problem. Additionally, 40.8 percent agreed with this issue, emphasising the importance of ensuring access to certified inputs for farmers. Distance to markets: Farmers expressed concerns about the distance to markets. While a smaller percentage 20.80 percent strongly agreed with this problem, a majority 63.3 percent agreed that it was an issue. A notable proportion 15.80 percent neither agreed nor disagreed, indicating the need for better market accessibility. Lack of transportation facilities: Many farmers 41.70 percent strongly agreed that the absence of proper transportation facilities was problematic. Additionally, 46.70 percent agreed with this issue, highlighting the significance of improving transportation infrastructure for farmers. High cost of inputs: The majority of farmers 80 percent strongly agreed that the high cost of inputs was a problem. A smaller percentage 18.3 percent agreed, while only 1.7 percent neither agreed nor disagreed. This highlights the financial burden faced by farmers and the need for affordable input options.

Table 6. Source of information used by farmers for selling the onion. (Percent) (N= 120)

Sr. No	Particulars	SA	A	N	D	SDA
1	Friends	0.00	9.20	78.30	12.50	0.00
2	Neighbors	0.00	10.00	69.20	20.80	0.00
3	Wholesaler	20.00	75.00	3.30	1.700	0.00
4	Retailers	24.20	74.20	1.70	0.00	0.00

5	Relatives	0.80	19.20	25.00	51.70	3.30
6	Radio	0.00	0.00	5.80	64.20	30.00
7	Television	0.00	0.00	1.70	30.00	68.30
8	News Paper	0.00	0.00	1.70	25.00	73.30
9	Social Media (Facebook	0.00	0.80	1.70	24.20	73.30

Source: field study (2023)

Table 6 provides insights into the sources of information used by farmers for selling onions. The key findings are as follows: Friends: None of the farmers strongly agreed or agreed that they relied on information from friends. The majority 78.3 percent neither agreed nor disagreed, while 12.5 percent disagreed with this source. Neighbours: Similar to friends, none of the farmers strongly agreed or agreed that they used information from neighbours. A significant proportion 69.20 percent neither agreed nor disagreed, while 20.8 percent disagreed with this source. Wholesaler: A notable percentage 20 percent of farmers strongly agreed that they used information from wholesalers. Additionally, 75 percent agreed with this source, while only 3.3 percent neither agreed nor disagreed. A small proportion 1.7 percent disagreed. Retailers: A considerable percentage 24.2 percent of farmers strongly agreed that they used information from retailers. Furthermore, 74.2 percent agreed with this source, while 1.7 percent neither agreed nor disagreed. No farmers disagreed. Relatives: Only a small percentage 0.8percent of farmers strongly agreed that they used information from relatives. Additionally, 19.2percent agreed, while 25 percent neither agreed nor disagreed. The majority 51.7 percent disagreed, and 3.3 percent strongly disagreed with this source. Radio: None of the farmers reported using information from the radio. Television: None of the farmers reported using information from television. Newspaper: None of the farmers reported using information from newspapers. Social Media (Facebook): None of the farmers strongly agreed that they used information from social media platforms like Facebook. Only 0.8 percent agreed, while 1.7 percent neither agreed nor disagreed. The majority 73.3 percent strongly disagreed, and 24.2 percent disagreed with this source.

Conclusion

In conclusion, the provided tables offer valuable insights into various aspects of onion cultivation, selling, and market challenges faced by farmers. Table 1 highlights that onion cultivation is predominantly carried out for family consumption, with a significant belief in its income-generation potential. Table 2 emphasizes that farmers sell onions primarily to meet household expenses, purchase inputs for the next season, repay loans, and due to storage limitations. Table 3 reveals that the majority of farmers do not delay onion sales after harvest for reasons mentioned in the survey. Table 4 sheds light on the challenges faced by farmers when selling surplus onions, including distance to markets, price fluctuations, and high transportation costs. Lastly, Table 5 indicates the issues faced by farmers when buying agricultural inputs, such as the non-availability of certified inputs, distance to markets, lack of transportation facilities, and high input costs. Table 6 provides insights into the sources of information used by farmers for selling onions, with wholesalers and retailers being the primary sources, while friends, neighbours, and relatives were less frequently utilized. These findings collectively highlight the factors influencing onion cultivation, selling decisions, and the challenges faced by farmers in the onion market, which can inform interventions and support systems to improve the livelihoods of onion farmers.

Suggestions

- Availability of Certified Inputs: Efforts should be made to ensure a consistent and accessible supply of certified inputs for onion cultivation. This can be achieved through collaborations with agricultural agencies, providing training on quality seed production, and establishing local certification programs.
- Market Access and Transportation: Improving market accessibility and transportation facilities can significantly benefit farmers. This can involve the development of infrastructure, such as better road networks and storage facilities, to reduce the distance to markets and enable efficient transportation of onions to buyers.
- Input Affordability: Measures should be taken to address the issue of high input costs. This can include promoting group purchasing initiatives, negotiating bulk discounts, providing subsidies or financial assistance, and supporting farmers in adopting cost-effective farming practices.

- Knowledge Sharing and Information Channels: While wholesalers and retailers serve as important sources of information for farmers, efforts can be made to enhance information dissemination through farmer cooperatives, extension services, and digital platforms. Utilising social media platforms, radio, and television can help disseminate important market information and best practices to a wider farming community.
- Training and Capacity Building: Providing training programs on market trends, pricing mechanisms, post-harvest handling, and value-added processing can equip farmers with the necessary skills and knowledge to make informed decisions, enhance product quality, and explore alternative marketing strategies.
- Financial Support and Credit Facilities: Addressing financial challenges can be achieved by facilitating access to credit facilities, promoting micro-finance options, and developing programs that help farmers manage their income and expenses effectively.
- Market Stabilisation: Initiatives can be undertaken to mitigate price fluctuations in the onion market. This may involve promoting market linkages, establishing market information systems, and encouraging the formation of farmer collectives to collectively negotiate prices and reduce dependency on middlemen.

References

- Bolton, L. (2019). Agriculture in Afghanistan: economic sustainability and sub-sector viability. Retrieved from https://assets.publishing.service.gov.uk/media/5d10b7fbe5274a0694afe5f5/574 576 Agriculture in Afghanistan.pdf
- Chakrabarti, R. (2011). The Indian Microfinance Experience - Accomplishments and Challenges. SSRN. Retrieved February 24, 2011, from http://ssrn.com/abstract=649854
- FAOSTAT. (2019). Food and Agriculture Organization of the United Nations, FAOSTAT database.
- Fasoranti, M. M. (2010). The influence of micro-credit on poverty alleviation among rural dwellers: A case study of Akoko North West Local Government Area of Ondo State. African Journal of Business Management, 4(8), 1438-1446. Retrieved from http://www.academicjournals.org/AJBM
- Food and Agriculture Organization. (2017). Seasonal food security assessment in Afghanistan (SFSA).
- International Labour Organisation. (2008, March 26). Small Change, Big Changes: Women and Microfinance. Retrieved June 19, 2011, from http://www.ilo.org/gender/Events/lang--en/doc_Name-WCMS091581/index.htm
- Muradi, A. J., & Rahmani, Z. (2020). Marketing channel efficiency of almond products: evidence from Samangan and Balkh, Afghanistan. Asian Journal of Agricultural Extension, Economics & Sociology, 38(1), 169-179. https://doi.org/10.9734/ajaees/2020/v38i1130465
- Siddayya, Patil, C., Kishore, M. S., & Srikanth, H. S. (2016). The effect of climate change on food security in India. Indian Journal of Economics and Development, 12(4), 653-662.
- World Bank, FAO, NRI. (2011). Missing Food: the Case of Post-harvest Grain Losses in Sub-Saharan Africa (Economic Sector Work Report No. 60371-AFR). Washington, DC: World Bank.
- World Bank. (2014). Islamic State of Afghanistan Agricultural Sector Review: Revitalizing Agriculture for Economic Growth, Job Creation and Food Security. SASDA, Washington DC: World Bank.
- World Bank. (2020). Afghanistan. Retrieved from https://www.worldbank.org/en/country/afghanistan