

**FARMERS' PERCEPTION ON SOCIAL MEDIA FOR FARMING AND
SUBSIDY SCHEME AT LELE VALLY OF GODAWARI MUNICIPALITY,
LALITPUR**

A Thesis

Submitted to

Faculty of Humanities and Social Sciences

The Central Department of Rural Development Tribhuvan University

in Partial Fulfillment of the Requirements for the Degree of the Master of Arts (M.A.)

in Rural Development

Submitted By

PRASHANT SHRESTHA

TU registration No.: 6-2-717-12-2017

Exam Roll No.: 2830013

Central Department of Rural Development

Tribhuvan University, Kritipur, Kathmandu

July 2025

DECLARATION

I hereby declare that this MA thesis entitled Farmers' Perception on Social Media for Farming and Subsidy Scheme at Lele Valley of Godawari Municipality, Lalitpur submitted to the Central Department of Rural Department of Tribhuvan University, is entirely my original work prepared under the guidance and supervisor of the thesis supervisor assigned by the department. I have made due acknowledgements to all ideas and information borrowed from different sources during the preparation of this thesis. The result of this research work has not been presented, published or submitted anywhere else for the award of any degree or for any purpose. I assure that not part of the content has been published in any form before, I shall be solely responsible if any evidences found against my thesis.

.....
Prashant Shrestha
Degree Candidate

Date: 2082/02/30
2025/06/13



TRIBHUVAN UNIVERSITY

त्रिभुवन विश्वविद्यालय

CENTRAL DEPARTMENT OF RURAL DEVELOPMENT

ग्रामीण विकास केन्द्रीय विभाग

विभागीय प्रमुखको कार्यालय
कीर्तिपुर, काठमाडौं, नेपाल।
Office of the Head of Department
Kirtipur, Kathmandu, Nepal.

Ref. No. :

Date मिति

RECOMMENDATION LETTER

The thesis Farmers' Perception on Social Media for Farming and Subsidy Scheme at Lele Valley of Godawari Municipality, Lalitpur has been prepared by Mr. Prashant Shrestha under my guidance and supervision. I hereby forward this thesis to the evaluation committee for the final evaluation and approval.

.....
Associate Prof. Bishnu Bahandur Khatri
Thesis Supervisor
Central Department of the Rural Development
Kirtipur, Kathmandu

Date: 2082/03/01

2025/06/15



TRIBHUVAN UNIVERSITY

त्रिभुवन विश्वविद्यालय

CENTRAL DEPARTMENT OF RURAL DEVELOPMENT

ग्रामीण विकास केन्द्रीय विभाग

विभागीय प्रमुखको कार्यालय
कीर्तिपुर, काठमाडौं, नेपाल।
Office of the Head of Department
Kirtipur, Kathmandu, Nepal.

Ref. No. :

APPROVAL LETTER

Date मिति

We certify that this thesis entitled Farmers' Perception on Social Media for Farming and Subsidy Scheme at Lele Vally of Godawari Municipality, Lalitpur submitted by Mr. Prashant Shrestha to the Central Department of Rural Development, Faculty of humanities and Social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the Degree of Master Arts in Rural Development has been found Satisfactory in Scope and Quality. Therefore we accept this thesis as a part of the said degree.

Evaluation Committee

.....
Associate Prof. Suman Kharel, PhD
Head of Department

.....
Associate Prof. Bishnu Bahadur Khatri
Thesis Supervisor

.....
Mr. Ramesh Neupane
External Examiner

Date: 2082/03/06

2025/06/20

ACKNOWLEDGEMENTS

First and foremost I would like to render my whole hearted gratitude to all those who have kindly given their valuable time and energy in making this study possible. I gratefully express my sense of deep indebtedness to my respected supervisor Associate Prof. Bishnu Bahadur Khatri for his inexhaustible support, valuable suggestions, encouragement and kind supervision in all stages of the study, from the field work to the final completion of my thesis. My further gratitude goes to all other teachers and staffs of the department.

My few words of appreciation should go to the people of the study area. Their willingness to share their experiences as well as to provide information required for the study was remarkable. Likewise I owe a great debt of gratitude to my colleagues Yedav Singh Dhama, Ayush Shrestha, Rahul Aryal and Sujana Chalise for providing constructive feedback and suggestion as well as moral support. I can't forget his kind guidance, supervision and inspiration during the preparing of this thesis report.

I am very thankful to the research participants, local respondents of Godawari municipality ward number five and six located in Lele Valley for their valuable time, response, suggestion and co-operation. I am indebted to my loving parents and other family members and relatives who directly contribute much to take me in the present state.

Prashant Shrestha

Degree Candidate

ABSTRACT

This study looks at farmers' attitudes and use of social media to get agricultural information and government subsidy schemes in Lele Valley, Godawari Municipality, Lalitpur. With the increased use of digital technology in rural Nepal, social media platforms have arisen as promising instruments for agricultural extension and subsidy distribution. However, there is scant information on how commercial farmers in peri-urban areas use these platforms. The study takes a mixed-methods approach, combining descriptive and causal-comparative methodologies, with data obtained via structured surveys and semi-structured interviews from 112 commercial farmers who actively use social media for farming.

Key findings reveal a transitional phase in information-seeking behavior, where traditional media (radio 82.1%, newspapers 70.5%) remain dominant, but digital platforms like YouTube (69.6%) and Facebook (66.1%) are gaining traction, particularly for agricultural content (52.7%). The farming community is predominantly middle-aged (mean age 44.96) with balanced gender distribution (51.8% male) and varied educational backgrounds (33% higher education, 9.8% illiterate). While 62.5% of respondents receive support from local institutions, nearly 30% report no institutional assistance, highlighting gaps in subsidy distribution. Subsidies primarily consist of tools (64.3%), but bureaucratic inefficiencies lead to dissatisfaction, with most farmers receiving support only once (45.5%). Statistical analyses show significant correlations between digital platform usage and subsidy access, with messaging apps like WhatsApp playing a pivotal role. Regression models identify gender, location, and family structure as key predictors of agricultural income (29%) and farming experience (45%) variance explained. These findings contribute to ongoing discussions about digital agriculture in Nepal and provide evidence-based insights for policymakers aiming to bridge the digital divide in rural farming communities.

The study concludes that social media presents valuable opportunities for agricultural communication and subsidy access. Its effectiveness is constrained by infrastructure limitations, varying digital literacy levels, and institutional inefficiencies. Hence, local government must enhance digital literacy programs, streamline subsidy delivery mechanisms, and integrate social media with government extension services. Farmers are encouraged to perform social networking for sharing collective knowledge and subsidy related information.

TABLE OF CONTENTS

DECLARATION	i
RECOMMENDATION LETTER	ii
APPROVAL LETTER.....	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT.....	v
TABLES OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS	xi
CHAPTER I.....	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Problem Statement	3
1.3 Objectives of the Study	5
1.4 Significance of the Study	5
1.5 Delimitation of the Study	6
1.6 Organization of the Study	6
CHAPTER II.....	8
LITERATURE REVIEW	8
2.1.1 Conceptual Review: Social Media.....	8
2.1.2 Social Media Preference in Agriculture: Trends and Implications	8
1.1.3 Agricultural Subsidy for Smallholder Farmers	9
2.2 Theoretical Review	11
2.2.1 Transformation of Traditional Agriculture	11
2.2.2 Technology Acceptance Model.....	11
2.2.3 Actor-Network Theory	12
2.3 Policy Review	12
2.4 Empirical Review.....	15
2.5 Conceptual Framework	18

CHAPTER III	19
RESEARCH METHODOLOGY.....	19
3.1 Research Design.....	19
3.2 Study Area and Its Justification	19
3.3 Nature and Sources of Data.....	20
3.4 Universe, Sampling and Sampling Procedure.....	20
3.5 Techniques and Tools of Data Collection	21
3.5.1 Household Survey	21
3.6 Method of Data Analysis	22
3.7 Ethical Consideration	22
CHAPTER IV	23
DATA ANALYSIS AND INTREPRETATON	23
4.1 Characteristics of the Respondents	23
4.1.1 Ward Location, Age Group and Educational Attainment.....	23
4.1.2 Gender, Marital Status, Religion and Family System.....	24
4.1.3 Total Family Members of the Respondents	25
4.2 Agriculture related Information	27
4.2.1 Geographic Distribution, Farming, and Labor Structure of Respondents.....	28
4.2.2 Agricultural Production Diversity and Seed Selection Trends	29
4.2.3 Land Holding Status.....	30
4.2.4 Market Value of Production.....	32
4.2.5 Prevalence of Cattle, Buffalo, Goats, and Ducks in Farming Communities.....	32
4.2.6 Descriptions of Land Holding and Animal Husbandry.....	33
4.2.7 Annual Family Income of the Respondents	34
4.3 Use of Social Media	36
4.3.1 Types of Mobile Use.....	36
4.3.2 Sources for Receiving Agriculture related Information	37
4.3.3 Sources for Receiving Technical Information related to Agriculture	38
4.3.4 Internet Facilities related Information.....	39
4.3.5 Types of Information Received from Social Media.....	40
4.3.6 Using Different Types of Social Media for Receiving Technical Information....	41
4.4 Agricultural Grant and Subsidy.....	41

4.4.1 Institutional Access for Receiving Information	42
4.4.2 Sources for Receiving Subsidy related Notice	43
4.4.3 Grant and Subsidy Related Information.....	43
4.4.4 Perceived Suggestions for Improving Subsidy Procedures.....	45
4.5 Social Media Use and Its Correlation with Subsidies, Farm Productivity, and Market Access	45
4.5.1 Pearson Correlation Analysis of Key Agricultural Variables	46
4.5.2 Spearman Ranked Correlation	47
4.5.3 Chi-Square Test Results for Relationships between Key Variables	48
4.5.4 Linearity Test	49
4.5.4.1 Influence of family Type, Gender, and Location on Agricultural Income	49
4.5.4.2 Influence of family Type, Gender, and Location on Years of Farming Experience.....	50
4.6 Discussion of Findings	52
 CHAPTER V	 56
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION	56
5.1 Summary of Findings	56
5.2 Conclusions	58
5.3 Recommendations	59
 REFERENCES	 61
ANNEXES	67
Annex A: Household Survey Questionnaires.....	67
Annex B: Glimpses of the Field Study	72

LIST OF TABLES

Table 3.1: Sampling Determinations	20
Table 4.1: Ward Location, Age Group and Educational Attainment	24
Table 4.2: Gender, Marital Status, Religion and Family System	25
Table 4.3: Total Family Members of the Respondents.....	26
Table 4.4: Geographic Distribution, Farming Background, and Labor Structures.....	28
Table 4.5: Agricultural Production Diversity and Seed Selection Trends.....	29
Table 4.6: Land Holding Status	30
Table 4.7: Market Value of Production	32
Table 4.8: Prevalence of Cattle, Buffalo, Goats, and Ducks in Farming Communities	33
Table 4.9: Land Holding and Animal Husbandry.....	34
Table 4.10: Annual Family Income of the Respondents.....	35
Table 4.11: Descriptive Statistics of Family Income.....	35
Table 4.12: Types of Mobile Use	36
Table 4.13: Sources for Receiving Agriculture Related Information	37
Table 4.14: Sources for Receiving Technical Information Related to Agriculture	38
Table 4.15: Internet Facilities Related Information.....	39
Table 4.16: Types of Information Received from Social Media	40
Table 4.17: Using Social Media for Receiving Technical Information.....	41
Table 4.18: Institutional Access for Receiving Information.....	42
Table 4.19: Sources for Receiving Subsidy Related Notice	43
Table 4.20: Grant and Subsidy Related information	44
Table 4.21: Perceived Suggestions for Improving Subsidy Procedures	45
Table 4.22: Pearson Correlation Analysis of Key Agricultural Variables.....	46
Table 4.23: Ranked Correlation Analysis of Key Agricultural Subsidy Variables	47
Table 4.24: Chi-Square Test Results for Relationships Between Key Variables	48
Table 4.25: Model Summary 1.....	49
Table 4.26: Model Summary 2.....	51

LIST OF FIGURES

Figure 2.1. Conceptual Framework of the Study.....	18
Figure 4.1 Normality of Family members	27
Figure 4.2. Normality of Land Holding and Leasehold Land.....	31
Figure 4.3. Normality of Regression Model 1	50
Figure 4.4. Normality of Regression Model 2	52

ABBREVIATIONS AND ACRONYMS

ADS	:	Agricultural Development Strategy
ANT	:	Actor-Network Theory
CDRD	:	Central Department of Rural Development
FB	:	Facebook
ICT	:	Information Communication and Technology
INGO	:	International Non-Government Organization
LT	:	Linearity Test
MA	:	Master's Degree
MoALD	:	Ministry of Agriculture and Livestock Development
NGO	:	Non-Government Organization
SPSS	:	Statistical Package for Social Sciences
TAM	:	Technology Acceptance Model
TU	:	Tribhuvan University
TV	:	Televisions
VIF	:	Variance Inflation Factor
WB	:	World Bank

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Social media platforms has transformed communication, networking and information dissemination around the world. The integration of social media into the rural landscape, especially in agricultural communities, has become increasingly apparent (Barber et al., 2019). This shift in communication technology provides a unique opportunity to study its impact on traditional agricultural practices. Farmers are using social media to interact with other farmers and agricultural professionals, discuss best practices, and obtaining market information (Gupta & Jain, 2018; Khan et al., 2019).

In this digital age, social media has emerged as a transformative tool in agriculture, offering farmers new avenues for information exchange, problem-solving, and access to government subsidies (FAO, 2022). Among the various platforms available, Facebook stands out as the most widely used by farmers in Lele Village (Khanal et al., 2023), followed by YouTube and TikTok, while Whats App plays a significant role in communication (Gartaula et al., 2021). However, platforms like Twitter and LinkedIn see minimal engagement, reflecting differences in accessibility, ease of use, and relevance to farming communities (Dhital & Rana, 2022). Understanding farmers' priorities—such as information seeking, knowledge sharing, and solution-based interactions—can provide valuable insights into how social media can be optimized to support agricultural development (WB, 2023).

Social media has the ability to revolutionize the agricultural industry by facilitating market access, knowledge distribution, and community participation (Gupta & Jain, 2018; Khan et al., 2019). However, farmers are also facing obstacles such as limited internet connection, issues with digital literacy, and worries regarding the veracity of information while adopting social media (Acheampong & Kofi, 2019; Van Rooyen et al., 2021).

Social media has become an increasingly important tool for agricultural communication in Nepal, particularly for disseminating information about modern farming techniques, market prices, and government subsidy programs. The usage

patterns of these digital platforms vary significantly across the country's diverse geographic regions and between rural and urban areas. This review examines empirical studies conducted between 2020 and 2024 to understand how Nepalese farmers perceive and utilize social media for agricultural purposes, with particular attention to regional disparities.

In Nepal's mountainous regions, particularly in Karnali and Gandaki Provinces, farmers face significant challenges in adopting social media due to poor internet connectivity and limited digital literacy. Research by Dhakal and colleagues (2021) found that while some farmers use mobile platforms like Facebook and WhatsApp for weather updates and subsidy alerts, traditional communication methods including radio and local intermediaries remain dominant because of infrastructure limitations. The hill regions, encompassing Bagmati and Sudurpaschim Provinces, demonstrate moderate social media engagement among farmers. Studies by Giri and others (2020) revealed that WhatsApp groups and Facebook pages managed by agricultural cooperatives are commonly used to share training videos, government subsidy details, and market price information.

Therefore, even in Nepal, Farmers' perceptions of social media's effectiveness in agriculture remain divided—while many recognize its benefits in knowledge-sharing and subsidy awareness (Acharya et al., 2023), others remain skeptical due to factors like digital literacy gaps, unreliable information, and trust issues (MoALD, 2021). Additionally, a notable portion of farmers remain uncertain or indifferent, underscoring the challenges in fully integrating digital tools into agricultural practices (Poudel et al., 2022). Therefore, it is necessary to explore these dynamics, shedding light on the opportunities and barriers in the adoption of digital platforms within Nepal's farming communities. Using digital technologies equally benefits to improve agricultural productivity and receiving subsidy schemes related information.

Agriculture remains a vital sector in Nepal, contributing significantly to livelihoods and economic stability, particularly in rural areas like the Kathmandu Valley. The Lele Valley in Godawari Municipality, Lalitpur, represents a critical agricultural zone where farmers engage in mixed vegetable farming, livestock rearing, and cash crop production (Ghimire, 2023). However, farmers face challenges such as limited access to modern farming techniques, subsidies, and market linkages. Recent studies

highlight the growing role of digital platforms, including social media, in disseminating agricultural information and facilitating subsidy access (Shrestha & Singh, 2019). The Government of Nepal and local municipalities, including Godawari, have introduced various agricultural support programs, yet their reach remains inconsistent. Research indicates that nearly 30% of farmers in similar regions receive no institutional support, emphasizing gaps in subsidy distribution and extension services (Kharel & Pasa, 2021). Traditional information sources like radio and television remain dominant, but social media—particularly YouTube, Facebook, and WhatsApp—are increasingly used for farming advisories and subsidy-related communication (Baniya, 2008).

Geographically, Lele Valley's proximity to Kathmandu offers market opportunities, but farmers struggle with land fragmentation, limited irrigation, and digital divides (Prajapati, 2020). Studies also note disparities in technology adoption, with younger, educated farmers more likely to use social media for agricultural purposes compared to older or less literate peers (Ghimire, 2023). Furthermore, misinformation on digital platforms and affordability issues hinder effective utilization (Kharel & Pasa, 2021). Given these challenges, this study explores how commercial farmers in Lele Valley leverage social media for agricultural information and subsidy access, comparing outcomes with non-users. Findings aim to inform policies enhancing digital inclusion and optimizing subsidy delivery in Nepal's evolving agricultural landscape.

In this background above, the study assessed farmers' perceptions of social media's effectiveness in Lele Valley of Godawari municipality. This Valley represents an important population structure in the agricultural sector of the Lalitpur district. Furthermore, farmers are increasingly using social media platforms to obtain agricultural information, share information and communicate with peers. Therefore, this study assessed farmers' views on social media for farming and subsidy schemes.

1.2 Problem Statement

Social media fosters peer learning networks, enabling farmers to share indigenous knowledge and innovative practices (Gartaula et al., 2021). Such communities can enhance resilience to climate and market shocks. The developed countries, countries towards the North Pole, including North America, former Soviet Union are seem to be

benefited from the climate change due to the increased cereal production, ample resources for factor substitutability and some others. Nonetheless, the negative impact tends to be greater toward the equator, and hence mostly concentrated in developing countries. Developing countries are more vulnerable to climate change especially to the agriculture production lacking adequate resources for the adaptation and substituting the production factors, agriculture based economy, food insecurity and poverty.

Most of the farmers in developing countries are performing agricultural practices without social media profiles highlights potential boundaries to computerized incorporation, such as constrained web get to, computerized proficiency challenges, and socio-economic incongruities (Rooyen et al., 2021; Kofi, 2019). Farmers have less access to social media sites. Platform inclinations among agriculturists, with Facebook, YouTube, and Whats App developing as the foremost broadly utilized stages, reflect the notoriety of interactive media substance and peer to peer communication in rural settings (Mandal, 2019). The discernment information gives nuanced bits of knowledge into farmers sees on the viability of social media in farming. Whereas a few ranchers see social media as exceedingly viable for information trade and advertise get to, others express skepticism or vulnerability approximately its utility. This differing qualities of suppositions reflects the complex interaction of innovative, social, and regulation variables affecting innovation selection in rural settings (Klerkx et al., 2019).

The positioning of parameters related to social media utilize in farming offers profitable bits of knowledge into farmer's needs and inclinations. The accentuation on data looking for, sharing, and arrangement looking for underscores the multifaceted part of social media in encouraging information trade, peer learning, and collaborative problem solving inside cultivating communities (Khan et al., 2019; Moyo et al., 2020). These discoveries highlight the potential of social media to enable ranchers, upgrade agrarian strength, and advance maintainable improvement in provincial zones (Gupta & Jain, 2018).

The integration of social media in agriculture presents a promising yet unevenly adopted tool for enhancing farmers' access to information, subsidies, and peer learning networks, particularly in developing countries. While platforms like

Facebook, WhatsApp, and YouTube facilitate knowledge exchange and market linkages, barriers such as limited internet access, low digital literacy, and socioeconomic disparities hinder widespread adoption. Farmers' perceptions of social media's effectiveness remain mixed, reflecting varying levels of trust and technological adaptability. Nevertheless, the potential of social media to strengthen agricultural resilience, improve productivity, and bridge information gaps is evident. Addressing infrastructural and educational constraints will be crucial in ensuring equitable digital inclusion, empowering farmers to better navigate climate challenges and market uncertainties for sustainable agricultural development. Finally, for addressing such research problems, this study raised following research questions:

- What is the level of awareness among farmers regarding social media platforms for accessing agricultural information and subsidy schemes?
- Why farmers are perceiving both benefits and challenges when using social media for farming-related information and government subsidy schemes?
- How farmers' adoption of social media and their access to government subsidies, agricultural productivity, and market linkages are correlated in the study area?

1.3 Objectives of the Study

The general objective of the study is to analyze farmers' views on social media for farming and subsidy schemes. The specific objectives are as follow:

- To assess farmers' awareness, usage, and preferences for accessing agricultural information and subsidies on social media platforms.
- To examine pros and cons of using social media for farming and subsidy information.
- To analyze the relationship between social media adoption, farmers' access to government subsidies, agricultural productivity, and market links in the research area.

1.4 Significance of the Study

The significance of this study is its potential to inform policy interventions, development initiatives, and agricultural extensions that are adapted to the needs and

realities of rural communities. By exploring the dynamics of social media use in agriculture. The findings of this study hold substantial importance for agricultural development, digital policy, and rural empowerment in Nepal and similar contexts. This research highlights the importance of digital tools in bridging information gaps, enhancing market access, and fostering collaborative problem-solving among smallholder farmers (Khan et al., 2020).

Policymakers and NGOs can leverage preferred platforms (e.g., Facebook for information dissemination, Whats App for peer-to-peer networking) to design targeted outreach programs. The study identifies key barriers (e.g., low digital literacy, distrust in online information) that hinder farmers' adoption of social media. Addressing these through training initiatives (MoALD, 2021) can empower farmers to harness digital tools effectively. Farmers' use of social media for price discovery and market access (e.g., via YouTube tutorials or Facebook Marketplace) can reduce middleman dependency and improve profitability (WB, 2023). The findings advocate for context-specific digital strategies tailored to farmers' preferences that is aligns with Nepal's National Digital Agriculture Strategy (2021–2025) (MoALD, 2021).

1.5 Delimitation of the Study

By exploring the intersection of digital technology and traditional farming methods, this study aims to reveal the opportunities and challenges presented by the adoption of social media in rural agriculture. This study aims to increase understanding of how digital technologies shape the agricultural practices

Due to the limited resource and time, the study has been conducted in Lele Valley of Godawari municipality of Lalitpur district. Agriculture as a primary source of family earning of the majority of the households. The data has been collected from 112 commercial farmers residing in ward no. 5 and 6 of the municipality.

1.6 Organization of the Study

This research study has been systematically structured into five chapters. The first, introductory chapter has established the foundational context by presenting the background of digital agriculture in Nepal, clearly articulating the research problem,

and outlining the study's specific objectives. It has also detailed the significance of this investigation while defining the scope and limitations of the research, concluding with an overview of the report's organizational structure.

The second chapter has provided an extensive review of relevant literature, synthesizing existing scholarly works on digital agriculture, social media applications in farming, and government subsidy mechanisms. This review has critically examined both national and international studies to identify research gaps and establish the theoretical framework guiding this investigation.

For the methodology, the third chapter has meticulously described the research design, justifying the selection of Lele Valley in Godawari Municipality as the study area. It has elaborated on the mixed-methods approach employed, detailing both quantitative survey techniques and qualitative interview methods used for data collection from 112 respondents. Furthermore, this section has explained the analytical procedures and statistical tools applied to process and interpret the gathered data.

The fourth chapter has presented a rigorous analysis of collected data, systematically interpreting the findings through appropriate statistical methods and visual representations. This section has carefully examined patterns in social media usage among farmers, their access to subsidy schemes, and the correlation between digital engagement and agricultural outcomes.

Finally, the concluding chapter has synthesized key findings from the study, drawing meaningful conclusions about the role of social media in Nepalese agriculture. Based on these insights, it has proposed actionable policy recommendations for local governments and practical suggestions for farmers, while also identifying potential avenues for future research in this evolving field of digital agriculture.

CHAPTER II

LITERATURE REVIEW

2.1.1 Conceptual Review: Social Media

Social media platforms come in a wide variety of examples. These consist of YouTube, Instagram, Craigslist, Facebook, Friendster, Wikipedia, dating websites, Craigslist, and recipe sharing websites like all-recipes.com. Social media platforms all have the aforementioned traits, they differ greatly from one another in terms of their user bases, infrastructures, structures, and norms (Davis, 2016). Social media encompasses an array of technological platforms that enable their users to exchange ideas and information. Approximately 60% of the global population, or over 4.7 billion individuals, utilize social media, including Facebook, Instagram, YouTube, and X platform (Twitter) (Dollarhide, 2024). Early in 2023, 94.8% of users visited websites and apps for chat and messaging, with social media platforms coming in second with 94.6% of users (Dollarhide, 2024).

Social network sites (like Facebook) as web-based services that let users: (1) create a public or semi-public profile inside a system; (2) list other users they are connected to; and (3) browse and view both their list of connections and those made by other users inside the system (Bite et al., 2017). From site to site, these relationships may differ in type and terminology. The working definition that was applied in this paper is as follows: People may produce, publish, share, cooperate, network, and discuss using a variety of new, mostly digital formats and channels thanks to social media.

Digital networks are used to exchange and discuss user-generated content, including opinions, audio, video, and multimedia (Andres & Woodard, 2013). These electronic communication platform that allows users to form online communities and exchange material, ideas, messages, and other types of information.

2.1.2 Social Media Preference in Agriculture: Trends and Implications

Social media is becoming a more important tool for marketing, education, and communication in the agriculture industry. Farmers, agribusinesses, educators, and extension services are using Facebook, YouTube, WhatsApp, and Instagram to promote products, share information, and interact with customers, according to

research (Sandeep et al., 2020). Social media's affordability, accessibility, and capacity to promote real-time communication amongst stakeholders are the main factors driving its expanding use in agriculture (Roche et al., 2020). Research indicates that younger farmers and agribusiness owners are more likely to use social media to expand their businesses, whereas older farmers might continue to rely on conventional means of communication (Morris & James, 2017). In order to improve student engagement and spread industry updates, agricultural educators are also incorporating social media into their curricula (Settle et al., 2011).

Analysis of consumer behavior and market intelligence is one important area where social media is having an impact. Researchers and agribusinesses can monitor trends, evaluate customer preferences, and modify marketing strategies by using sentiment analysis of social media data (Rizki, 2023). For example, to reach health-conscious consumers and influence their purchases, organic food producers use social media sites like Facebook and Instagram (Rajković et al., 2024). Similar to this, local markets and farmer cooperatives use social media to advertise value-added goods, increasing their visibility and revenue (Karnika et al., 2024). However, issues like misinformation, internet access in rural areas, and digital literacy continue to be obstacles to wider adoption.

Notwithstanding these obstacles, social media's potential in agriculture cannot be denied. Platforms like Twitter and LinkedIn are being used more and more by governments and agricultural organizations for crisis communication and policy distribution (Chen et al., 2022). Additionally, social media is an essential tool for agricultural extension services since it allows farmers to share knowledge and solve problems in real time (Roche et al., 2020). Social media will probably have an even bigger influence on how agriculture develops in the future, from e-commerce integration to precision farming advisories, as global digital connectivity increases. Strategies to improve digital literacy and maximize platform-specific engagement for various agricultural stakeholders should be the focus of future research.

1.1.3 Agricultural Subsidy for Smallholder Farmers

In order to promote small-scale agricultural production, increase food security, and improve rural livelihoods, governments around the world must provide agricultural

subsidies to smallholder farmers (Bhandari, 2023). According to the World Bank (n.d.), these subsidies usually come in a variety of forms, such as direct input support for things like seeds, fertilizer, and pesticides; price stabilization mechanisms to shield farmers from market volatility; credit facilities to increase access to capital; and insurance plans to reduce production risks. These subsidies are crucial in helping farmers in developing nations, where smallholders make up a large share of the agricultural sector, adopt new technologies, boost productivity, and continue farming in the face of environmental and economic difficulties (Mgomezulu, 2024).

There have been both positive and negative results from the use of agricultural subsidies. According to research, subsidies have raised farm incomes, improved crop yields, and helped smallholder households escape poverty (Bharati, 2024). For example, government initiatives in Nepal that offer subsidized fertilizer and seeds have assisted farmers in implementing high-yielding cultivars and increasing agricultural productivity (Knowledge for Policy, 2024). In a similar vein, price support mechanisms have ensured more stable incomes for smallholders by shielding them from abrupt market swings (IMF, 2024). However, inefficiency, resource misallocation, and fiscal sustainability are issues that subsidy programs frequently face (ResearchGate, 2025). In certain areas, problems like corruption, distribution delays, and the exclusion of marginalized farmers have reduced the efficacy of the program. Furthermore, excessive chemical input subsidies have sparked worries about water pollution and soil degradation (Bhandari, 2023).

Careful planning and execution are necessary for subsidy programs to be effective. Improving targeting strategies to reach farmers who are at risk, increasing distribution system transparency, and putting in place reliable monitoring frameworks are important factors to take into account (World Bank, n.d.). The necessity of combining subsidies with more comprehensive agricultural development plans, such as market access programs, extension services, and climate-smart farming practices, is becoming increasingly apparent (Mgomezulu, 2024). Agricultural subsidies can continue to be an effective instrument for supporting rural development, empowering smallholder farmers, and accomplishing long-term food security objectives if they are properly crafted (IMF, 2024).

2.2 Theoretical Review

2.2.1 Transformation of Traditional Agriculture

In agriculture transformation theory, Nobel laureate economist (in 1979) Theodore William Schultz emphasized that key to agricultural transformation lies in emphasizing technological change in agriculture (Author & Lekhi, 2008). Schultz's agricultural development theory (Lekhi, 2012) emphasizes that peasants efficiently use capital, producing high output per unit input. He argues developing nations should prioritize agriculture, opposing urban-biased resource transfers that disadvantage rural areas. The theory recommends: (1) boosting productivity through technology and price incentives for small farmers, (2) increasing domestic demand for farm outputs, and (3) promoting labor-intensive rural non-farm activities to support agricultural communities.

2.2.2 Technology Acceptance Model

Technology Acceptance Model (TAM) offers a valuable theoretical lens for examining farmers' adoption of social media platforms for agricultural information and subsidy access in Lele. Originally developed by Davis (1989), TAM posits that technology adoption is primarily influenced by two key factors: perceived usefulness (the degree to which users believe a technology will enhance their performance) and perceived ease of use (the extent to which using the technology is free from effort) (Venkatesh & Davis, 2000).

In this study, these constructs help explain why farmers may prefer certain platforms - for instance, widespread use of WhatsApp could stem from its perceived usefulness for quick information exchange about subsidies and its ease of use with simple messaging features. Conversely, limited adoption of more complex platforms like LinkedIn may reflect lower perceived relevance to farming needs or greater technical challenges. The model's application reveals critical barriers to digital inclusion, such as varying levels of digital literacy among farmers and infrastructural limitations in rural areas, which align with previous findings on technology adoption in developing contexts (Chhachhar et al., 2014). By employing TAM, this study not only analyzes current usage patterns but also provides a framework for designing more effective

digital extension services that address both technological and human factors in agricultural innovation.

2.2.3 Actor-Network Theory

Actor-Network Theory (ANT), developed by Latour (2005), provides a powerful framework for understanding how farmers in Lele Village interact with social media for agricultural information and subsidy schemes. This theory emphasizes that technological adoption results from networks of both human actors (farmers, government officials) and non-human actors (smartphones, apps, internet infrastructure) that collectively shape usage patterns. In this study, ANT helps reveal why certain platforms like WhatsApp become dominant - not just due to farmer preferences, but because of interactions between affordable mobile data plans, the app's low-bandwidth design, and existing social networks (Law, 1992).

The theory's principle of "generalized symmetry" is particularly useful for analyzing barriers to digital agriculture adoption. For instance, farmers' limited use of government e-portals emerges from a network of factors including complex interfaces, lack of vernacular content, and unreliable rural internet - demonstrating how technical and social elements jointly influence outcomes (Callon, 1986). These insights directly inform the study's policy recommendations, showing that improving social media for agriculture requires addressing this entire network of human and non-human factors.

By applying ANT, the study moves beyond simplistic explanations of technology adoption to reveal the complex socio-technical ecosystem surrounding farmers' social media use. This approach provides valuable insights for Nepal's Digital Agriculture Strategy, highlighting the need to consider both technological infrastructure and social contexts when designing digital farming solutions.

2.3 Policy Review

The federal, provincial, and local governments work together to support farmers and modernize the agricultural sector through Nepal's multi-level agricultural subsidy system. Important initiatives at the federal level include the Prime Minister

Agriculture Modernization Project, which offers concessional loans through agricultural banks and significant subsidies for seeds, fertilizers (50–75%), machinery, and crop insurance (up to 80% premium coverage) (Bhandari, 2023; ADB, 2023).

While local governments carry out ground-level interventions like direct cash subsidies (up to NPR 15,000/hectare) and agricultural service centers in all 753 local units, provincial governments have adapted these programs to local needs, such as additional subsidies for marginalized farmers in Province 2 and greenhouse support in Bagmati Province (myRepublica, 2023; NPPR, 2023). Significant issues with the system include service duplication across government levels (30% overlap reported), the exclusion of 42% of smallholders due to complicated registration, the average 8-month delay in fund disbursements, and the 25–30% subsidy leakage caused by inadequate monitoring (ResearchGate, 2023; Bharati, 2024). Though improved intergovernmental coordination and streamlined eligibility requirements are still essential to guaranteeing subsidies reach their intended recipients and meet productivity targets, recent reforms moving toward production-based subsidies and digital payments are intended to increase efficiency (CFPCC, 2023). Addressing these implementation gaps while preserving the policy's multi-level support structure for farmers across the nation's varied agricultural landscapes is ultimately what will determine how effective Nepal's agricultural subsidies are.

The study of farmers in Lele Village, Godawari Municipality, highlights the growing role of social media platforms like Facebook, YouTube, and WhatsApp in disseminating agricultural information and improving access to subsidy schemes. These findings strongly align with Nepal's Agricultural Development Strategy (ADS) 2015-2035, particularly in its priority area of Technology Adoption, which aims to increase smallholder farmers' access to ICT-enabled extension services. The widespread use of these low-cost digital platforms by Lele Village farmers demonstrates the practical implementation of ADS's vision for leveraging accessible technologies in agriculture.

Further reinforcing this alignment, the 16th Five-Year Plan's Digital Nepal Framework emphasizes rural e-literacy and the promotion of agricultural technology applications. The study's recommendation to enhance digital literacy for more

effective social media use directly supports this strategic direction. In terms of subsidy transparency and access - another critical ADS focus area under Inclusive Service Delivery - the research reveals that while social media has become a preferred channel for subsidy information among farmers, significant trust gaps remain. To address this, there is a pressing need to integrate official subsidy portals such as the Krishi Yantra Anudan Portal with popular social media platforms, enabling real-time updates as envisioned in the 16th Plan's E-Governance in Agriculture initiative.

The study also provides valuable insights regarding farmer empowerment and market linkages, a key objective of the 16th Plan's Agri-Enterprise Development component. While farmers currently use social media for price discovery and peer learning, they require additional training to fully capitalize on e-commerce opportunities. Scaling up programs like e-Krishi digital marketplaces with social media integration would effectively complement the plan's One Village-One Product strategy.

However, several challenges must be addressed to realize this potential. Infrastructure limitations, particularly inadequate internet access in rural areas, directly conflict with the 16th Plan's Broadband for All target, necessitating urgent expansion of rural 4G networks. Additionally, the preference among farmers for vernacular content underscores the importance of developing localized digital resources through partnerships with local influencers, as suggested by ADS's Participatory Extension model. To build trust in digital agricultural information, establishing Farmer Digital Helpdesks - aligned with the 16th Plan's Agriculture Call Centers - would provide crucial validation of online content and help combat misinformation. The Lele Village case study ultimately demonstrates how social media, when properly harnessed, can significantly contribute to achieving both ADS and 16th Plan objectives.

To fully realize this potential, policymakers should prioritize three key actions: First, implement context-specific digital training programs under the 16th Plan's extension services. Second, strengthen social media-based subsidy tracking mechanisms to enhance transparency and accountability. Third, make substantial investments in rural digital infrastructure to guarantee equitable access for all farmers. By addressing these critical areas, Nepal can effectively transform social media into a powerful catalyst for farmer-centric agricultural modernization, bridging the gap between policy aspirations and on-the-ground implementation.

2.4 Empirical Review

In global context, social media gives growers a quick and simple way to connect with others in the agriculture industry and form relationships. Social media makes the agricultural community much larger, eliminating barriers like isolation and physical distance. Social media and agriculture go together. Agriculture is the content and social media is the interaction channel. According to Varner (2018), social media offers farmers and rural enterprises a platform and vital networking opportunities for ongoing two-way contact.

Bite et al. (2017) state that social media is a highly helpful tool for agricultural marketing. Farmers can obtain information at a reduced cost and in less time. The most popular social network for pages and profiles is probably Facebook. The most common source of information for applications is YouTube videos. WhatsApp is a useful social networking tool that is primarily used by similar groups. A lot of officials use social media to solve problems and obtain information through their official pages, blogs, and groups. Adoption of social media as a marketing tool presented challenges. On social media, people are less trusting when it comes to e-purchasing and e-selling agricultural commodities.

Social media in agricultural marketing improves customer interactions, brand awareness for the business, and revenues (Caine 2012; Uitz 2012). The buying and selling of agricultural commodities is greatly facilitated by the use of social media in the agricultural marketing industry (Bitcom 2012). Targets such as program extension meetings, entrepreneurship encouragement, advertising of agricultural activities, workshops and training courses for farmers, and efficient use of social media for promoting agricultural products should all help mainstreaming social media marketing (Al-Shaikh et al., 2023).

In Nepalese context, social media has become an increasingly important tool for agricultural communication, particularly for disseminating information about modern farming techniques, market prices, and government subsidy programs. The adoption and usage patterns of these digital platforms vary significantly across the country's diverse geographic regions and between rural and urban areas.

In Karnali and Gandaki Provinces, farmers face significant challenges in adopting social media due to poor internet connectivity and limited digital literacy. Dhakal et al. (2021) found that while some farmers use mobile platforms like Facebook and WhatsApp for weather updates and subsidy alerts, traditional communication methods including radio and local intermediaries remain dominant because of infrastructure limitations.

The hill regions, encompassing Bagmati and Sudurpaschim Provinces, demonstrate moderate social media engagement among farmers. Giri et al. (2020) revealed that WhatsApp groups and Facebook pages managed by agricultural cooperatives are commonly used to share training videos, government subsidy details, and market price information.

The Tarai region, including Madhesh and Lumbini Provinces, shows the highest levels of social media adoption due to better mobile penetration and internet access. K. C. et al. (2022) documented farmers using YouTube for agricultural tutorials, TikTok for quick farming tips, and WhatsApp groups for collective bargaining when purchasing inputs. This regional variation in adoption rates highlights the significant digital divide in Nepal's agricultural sector.

Urban and peri-urban farmers in areas such as Kathmandu, Pokhara, and Bharatpur utilize social media extensively for agribusiness networking and e-commerce. Joshi et al. (2023) found that platforms like Facebook Marketplace and specialized farming apps such as Krishi Guru are gaining popularity among these tech-savvy farmers. In contrast, rural farmers primarily use mobile phones for basic communication, with many still relying on agricultural extension workers and community radio for subsidy information, though Regmi et al. (2021) noted gradual adoption of WhatsApp for receiving alerts.

Provincial-level analyses reveal further nuances in social media usage patterns. In Province 1 and Madhesh Province, despite relatively high smartphone ownership, farmers remain skeptical about the reliability of online subsidy information and prefer direct contact with local authorities, as documented by Dahal and Ghimire (2022). The more developed Bagmati and Gandaki Provinces show higher usage of integrated digital platforms, with farmers accessing government-run apps and Facebook groups

for real-time agricultural advisories and subsidy applications, according to research by KC et al. (2023). In the remote Karnali and Sudurpaschim Provinces, infrastructure limitations continue to restrict social media use, though Neupane (2021) observed emerging hybrid approaches that combine traditional radio broadcasts with WhatsApp updates.

Research Gaps

These findings underscore the persistent digital divide in social media adoption among Nepalese farmers, shaped by geographic, economic, and infrastructural factors. While the Tarai region and urban areas demonstrate promising engagement with digital platforms, mountainous and rural regions lag behind due to connectivity challenges and lower digital literacy. Despite growing global evidence of social media's transformative potential in agriculture, existing studies on Nepalese farmers' use of these platforms for farming and subsidy schemes remain fragmented, with limited comparative analysis of regional disparities and their underlying causes.

While prior research highlights varying adoption rates across Nepal's geographic regions (Mountain, Hill, Tarai) and rural-urban divides, there is insufficient exploration of how socio-economic factors, digital literacy levels, and platform-specific preferences interact to shape these patterns. Additionally, most studies focus on descriptive usage trends rather than evaluating the effectiveness of social media in improving access to subsidies or agricultural outcomes.

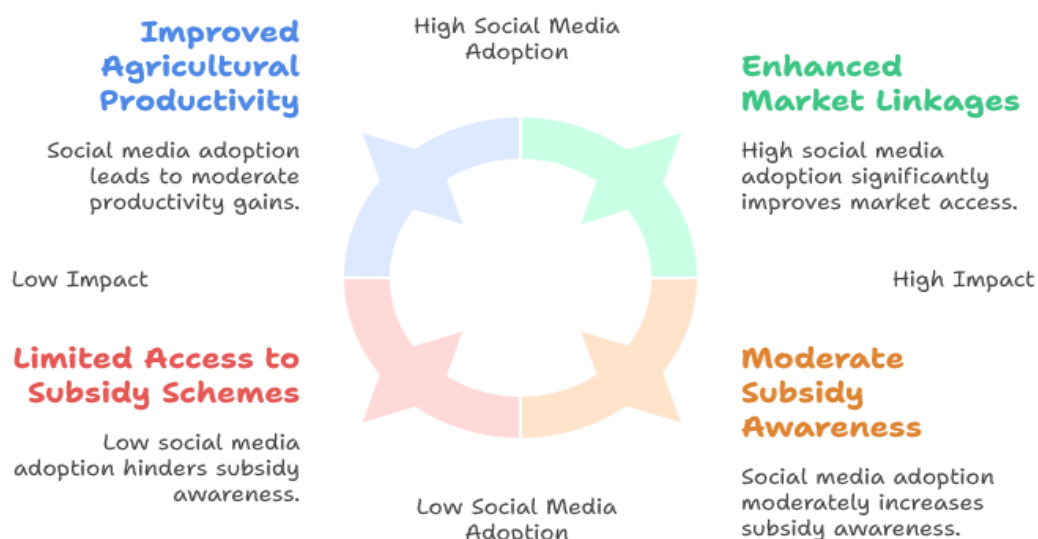
A critical gap exists in understanding how hybrid models (combining digital and traditional extension services) could bridge connectivity challenges in remote areas, as well as how trust barriers in e-agriculture transactions might be addressed. This study aims to fill these gaps by systematically analyzing farmers' perceptions, usage behaviors, and challenges across Nepal's diverse agro-ecological zones, while proposing context-specific strategies to enhance social media's role in agricultural development and subsidy dissemination.

2.5 Conceptual Framework

As it investigates social media adoption and agricultural outcomes, the conceptual framework divides high and low adoption situations. Farmers with social media presence have better market access, which affects agricultural performance. These connected farmers' subsidy knowledge has also increased moderately. Conversely, limited social media usage limits access to subsidy information, which remains a key issue. When adoption is minimal, productivity improvements are small and have little impact. The image shows how social media may connect agricultural markets and share information, but its benefits depend on adoption rates. The framework suggests that digital inclusion may help rural communities receive government aid and raise agricultural productivity. The gradient between high and low adoption scenarios suggests a dose-response association between social media participation and agricultural outcomes.

Figure 2.1 Conceptual Framework of the Study

Impact of Social Media on Agricultural Outcomes



Made with Napkin

Source: AI Generated, 2025

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study used mono quantitative research approach and descriptive research design for analyzing agricultural outcomes and commercial farmers' social media use. The survey measures quantitative agricultural outcomes such as subsidy use rates (Likert scales), yield metrics, and market connection improvements (sales volume statistics). It also tracks social media interaction frequency and intensity, preferred platforms (e.g., Facebook, WhatsApp, YouTube), and primary usage goals (e.g., subsidy information, market access, knowledge exchange). This study also uses descriptive research design to provide excellent quantitative insights into causal connections between studied variables that have provided empirical evidence on how social media affects modern farming practices.

3.2 Study Area and Its Justification

The study was conducted in the Lele valley of Godawari municipality, Lalitpur. This valley is in the southern foothills of the Kathmandu valley. It is an important agricultural hub since ancient times, benefiting from its fertile alluvial soil and favorable microclimate. Lele Valley is located in two municipal wards (Ward no. 5 and 6) where the majority of the local people, including migrant farmers, are involved in commercial farming practices. Historically, the valley's terraced fields sustained mixed farming systems, combining staple crops like rice, maize, and millet with traditional vegetables, while its higher elevations supported fruit orchards and livestock grazing. The area's irrigation systems, some dating back to the Licchhavi period (400-750 CE), demonstrate early hydraulic engineering for seasonal crop management. As a transit point along the historic trade route between Kathmandu and the Tarai, Lele also served as a marketplace for agricultural surplus, influencing crop diversity.

The valley's enduring agro-ecological practices—such as intercropping and organic fertilization—reflect centuries of adaptive knowledge, now forming a baseline for modern commercial farming transitions in the region. The farmers are increasingly using social media platforms to obtain agricultural information, share information and

communicate with peers. They are also receiving subsidy schemes related information by using social media. Therefore, this study aims to analyze farmers view on social media for collecting information on farming and subsidy schemes.

3.3 Nature and Sources of Data

This study used mono quantitative research design thus used only quantitative data. However, the study used both primary and secondary sources of data. The primary data were collected from structured household survey questionnaire. Likewise, required secondary data were collected from books, international journals, published and unpublished reports, theses and seminar papers as well.

3.4 Universe, Sampling and Sampling Procedure

The study focuses on commercial farming households in Lele Valley, which encompasses Ward 5 and 6 of Godawari Municipality in Lalitpur District. More specifically, these wards have total 2160 households which was regarded as universe of the study (Godawari Municipality, 2024). Of the total households, 432 commercial farming households about 20 percent of total households were regarded as sample population of the study (Godawari Municipality, 2024). Finally, the study used stratified random sampling with proportional allocation method for selecting 112 articulating respondents (Table 3.1) by using Cochran's sampling determination formula at 95% confidence level with 7% margin of error (Taherdoost, 2017; Cochran, 1977).

Table 3.1: Sampling Determination

Ward	Universe (Total Households)	Sample Population (Commercial Farming HHs)	Sample Number (Respondents)
Five	1019	218	61
Six	1070	214	51
	2089	432	112

Source: Field Study, 2025

3.5 Techniques and Tools of Data Collection

3.5.1 Household Survey

The study used household survey technique. The survey tool measures independent variables including daily, weekly, or monthly social media use, preferred platforms (Facebook, WhatsApp, YouTube, etc.), and key reasons for utilizing it (knowledge sharing, market access, subsidies information acquisition). Quantitative agricultural outcomes like market linkage success (price and sales data), productivity improvements (yield/output metrics), and subsidy program awareness and use (Likert-scale items).

The reliable questionnaire have been developed for conducting household survey. The questionnaires consists five thematic sections. First section consists social-demographic characteristics of the respondents. Second section consists agriculture or farming related information. Third section consists different types of social media using by the respondents. Fourth section consists agriculture and subsidy related information. And finally fifth section consists with subsidy and grant experience related information.

3.6 Data Analysis and Interpretation

SPSS software has been used for managing and statistical interpretation of the data information. Before analyzing data, significant time was to get familiarity with the data. Frequency tabulation, means, standard deviations, correlation and mean difference test have been used. Descriptive statistics quantifies usage frequency, preferred platforms, and types of information accessed, while inferential statistical tools (chi-square) and multiple regression model) tried to compare outcomes such as subsidy access rates, crop productivity, and market connectivity between user and non-user groups. The descriptive statistics also used to summarize usage patterns, and Pearson correlation analysis to determine social media adoption and agricultural outcomes. The analytical approach is meant to yield empirically and statistically reliable data about the quantitative impact of digital communication tools on modern commercial agriculture operations.

3.7 Ethical Consideration

The researcher has diligently adhered to established ethical guidelines throughout the study to ensure full compliance with academic and professional standards. Ethical considerations in research serve as a crucial framework that defines the researcher's duties, accountabilities, and commitments toward all stakeholders involved in the investigative process (Creswell, 2018). These principles emphasize both the protection of participants' rights and the maintenance of research credibility.

As noted by Denzin and Lincoln (2012), research ethics primarily revolve around institutional protocols and professional codes of conduct. In this study, participant identification was limited to coding purposes only, with strict measures implemented to safeguard confidentiality and anonymity. Voluntary informed consent was obtained from all respondents without coercion, and proper citation practices were followed to avoid plagiarism. No participant data was misused or exploited, ensuring compliance with ethical norms at institutional, academic, individual, and societal levels. By upholding these standards, the research maintains its integrity while fostering trust and accountability in the academic community.

CHAPTER IV

DATA ANALYSIS AND INTREPRETATON

This chapter presents a comprehensive analysis of the study's key findings, structured into five sections. First section examines the demographic and socioeconomic characteristics of respondents, providing a foundational understanding of the study population. Second section explores agricultural information sources and dissemination patterns, highlighting how farmers access critical knowledge. Third section assesses the role of social media in agricultural communication, detailing usage trends and platform preferences (Objective 1). Fourth section analyzes institutional support mechanisms, focusing on grant and subsidy distribution processes (objective 2). Fifth section investigates correlations between social media use and key agricultural outcomes, including government subsidy access, farm productivity, and market linkages (objective 3). Finally, these sections offer a holistic view of how digital tools, institutional frameworks, and socioeconomic factors intersect to shape modern agricultural practices.

4.1 Characteristics of the Respondents

The socio-demographic characteristics of respondents have been examined in three sections. First section analyzes geographical distribution patterns through ward location while exploring human capital factors via age groups and educational attainment levels. Second section investigates personal and social characteristics including gender distribution, marital status, religious affiliation, and family system structures (nuclear/joint). Third section focuses on household composition through total family member counts. Together, these variables provide a comprehensive demographic profile of the study population, establishing important contextual factors for understanding subsequent agricultural practices and economic behaviors examined in later sections. The analysis of these fundamental characteristics serves as crucial baseline data for interpreting the study's broader findings about farming communities.

4.1.1 Ward Location, Age Group and Educational Attainment

This section provides a demographic overview of surveyed respondents, categorizing them by ward location, age group, and educational attainment. It highlights the

distribution of participants across different wards, age ranges, and levels of education, offering insights into the composition of the sample population. This breakdown helps in understanding key characteristics and potential trends within the surveyed group.

Table 4.1: Ward Location, Age Group and Educational Attainment

Category	Response	Frequency	Percent
Ward location	Ward number 5	61	54.50
	Ward number 6	51	45.50
Age group	23 to 39	39	34.80
	40 to 59	60	53.60
	60 to 77	13	11.60
Educational attainment	Illiterate	11	09.80
	Literate	32	28.60
	Basic	32	28.60
	Higher education	37	33.00

Source: Field Survey, 2025

The table presents key demographic data from a master's-level thesis study, showing that 54.5% of respondents were from Ward number 5 and 45.5% from Ward number 6. In terms of age distribution, the majority (53.6%) were aged 40-59 years, followed by 34.8% in the 23-39 age group and 11.6% aged 60-77. Regarding educational attainment, 33% had higher education, 28.6% were literate, another 28.6% had basic education, while 9.8% were illiterate, indicating that the study primarily involved middle-aged adults with diverse educational backgrounds and slightly greater representation from Ward number 5, providing valuable insights for understanding demographic patterns and guiding policy or community interventions.

4.1.2 Gender, Marital Status, Religion and Family System

This section outlines the key sociodemographic characteristics of the surveyed population, including gender distribution, marital status, religious affiliation, and family structure. It provides an overview of the sample composition, highlighting the predominant groups within each category. This breakdown helps establish a clear profile of the respondents and serves as a foundation for further analysis of the study's findings. The data reflects the diversity and social dynamics present within the surveyed group.

Table 4.2: Gender, Marital Status, Religion and Family System

Gender	Female	54	48.20
	Male	58	51.80
Marital status	Unmarried	8	07.10
	Married	100	89.30
	Seperated	4	03.60
Religion	Hindu	96	85.70
	Christian	2	01.80
	Buddhist	14	12.50
Family system	Joint	40	35.70
	Nuclear	72	64.30
Total		112	100.00

Source: Field Survey, 2025

The study included a total of 112 respondents, with a nearly equal gender distribution (51.8% male and 48.2% female). The vast majority (89.3%) were married, while only 7.1% were unmarried and 3.6% separated. Religiously, Hindus predominated (85.7%), followed by Buddhists (12.5%) and Christians (1.8%). Regarding family structure, nuclear families were more common (64.3%) than joint families (35.7%). These demographic characteristics, combined with the previously mentioned age distribution (predominantly 40-59 years old), educational background (ranging from illiterate to higher education), and ward location (slightly more from Ward 5), provide a comprehensive profile of the study population, which appears to represent a predominantly married, Hindu, middle-aged population living in nuclear family setups, with balanced gender representation and varying educational levels. This demographic profile is crucial for contextualizing the study's findings and ensuring their appropriate application in policy-making or community interventions. For the descriptive statistics, minimum age is 23, maximum age is 70, mean age found 44.96 years with 11.84 standard deviation and 0.96 skewness . Nuclear family with 1-4 members and joint family with 5 to 17 family members

4.1.3 Total Family Members of the Respondents

This section provides an overview of household sizes among the surveyed respondents, showing the distribution of families by the number of members. It illustrates the varying family structures, ranging from smaller to larger households, with certain sizes being more common than others. This breakdown offers insight into the composition of family units within the study population, which can be useful for understanding living arrangements and social dynamics. The data reflects the

diversity in household sizes and helps contextualize other demographic or socioeconomic findings from the survey.

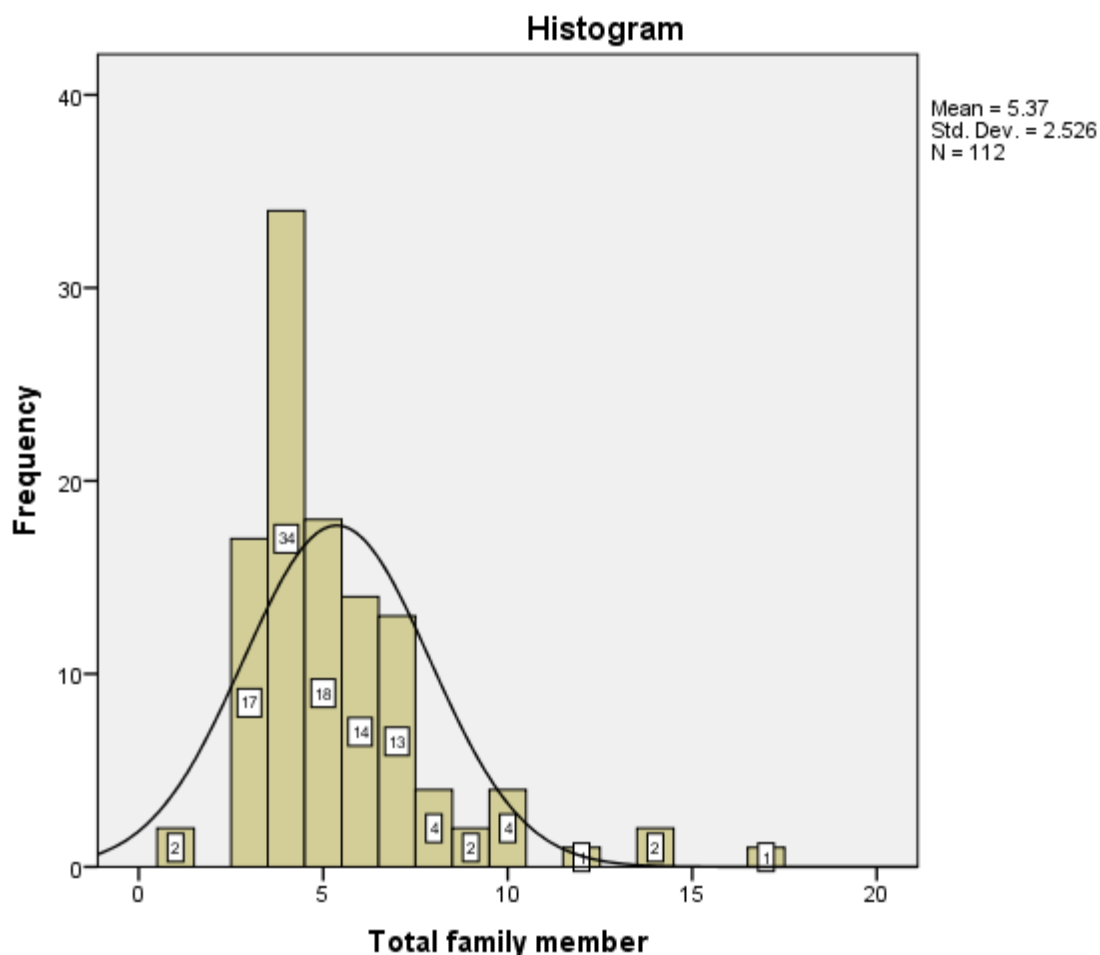
Table 4.3: Total Family Members of the Respondents

Family members	Frequency	Percent
1	2	1.80
3	17	15.20
4	34	30.40
5	18	16.10
6	14	12.50
7	13	11.60
8	4	3.60
9	2	1.80
10	4	3.60
12	1	.90
14	2	1.80
17	1	.90
Total	112	100.00

Source: Field Survey, 2025

The study's findings on family size reveal that the majority of households (30.4%) consisted of 4 members, followed by 5-member families (16.1%) and 3-member families (15.2%). Notably, 12.5% of families had 6 members, while 11.6% comprised 7 members. Smaller proportions included 1-2 member households (1.8% each), 8-member families (3.6%), and 9-10 member families (1.8% and 3.6% respectively). A few larger households were also represented, with 12, 14, and 17-member families each constituting less than 2% of the sample. This distribution indicates that medium-sized families of 3-7 members were most common in the study population, with 4-member households being particularly prevalent. These findings complement the earlier reported predominance of nuclear family structures (64.3%) in the sample, suggesting that while nuclear families are the norm, their sizes vary considerably, with most falling in the mid-range of family sizes. The presence of some very large families (up to 17 members) alongside single-member households demonstrates the diversity in family composition within the study population, which may have implications for household dynamics and resource allocation in the studied communities.

Figure 4.1: Normality of Family members



Source: Field Survey, 2025

4.2 Agriculture related Information

The analysis of respondents' agricultural characteristics have been presented in seven sections. The study first examines geographic distribution patterns, farming backgrounds, and labor structures followed by an investigation of production diversity and seed selection practices. Land ownership patterns are analyzed in third section, while fourth evaluates the market value of agricultural outputs. The prevalence of key livestock - cattle, buffalo, goats, and ducks - is documented in fifth section, with detailed descriptions of land holding and animal husbandry practices provided in sixth section. Finally, seventh presents critical data on annual family income levels. Together, these variables offer a holistic view of agricultural production systems, resource endowments, and economic outcomes within the studied farming

communities, establishing essential baseline information for understanding livelihood strategies and constraints. The multi-dimensional analysis reveals important patterns in farm management approaches, production choices, and their economic implications for rural households.

4.2.1 Geographic Distribution, Farming, and Labor Structure of Respondents

This section presents key characteristics of the surveyed population, focusing on settlement patterns, agricultural background, and workforce composition. It highlights the geographical distribution of respondents across different types of communities while detailing their varying levels of farming experience. The data also captures the employment structure, showing the distribution of male and female workers within households. This comprehensive overview helps establish the socioeconomic and occupational profile of the study participants.

Table 4.4: Geographic Distribution, Farming Background, and Labor Structure of Respondents

Settlement location	Rural area	61	54.50
	Urban	17	15.20
	Semi-urban	34	30.40
Farming experience	1 to 3 years	33	29.50
	4 to 9 years	31	27.70
	10 to 29 years	37	33.00
	30 to 70 years	11	9.80
Male employee	0	10	8.90
	1-3	98	87.50
	4-5	4	3.60
Female employee	0	12	10.70
	1-3	80	71.50
	4-5	9	8.10
	6-12	11	9.90
Total		112	100.00

Source: Field Survey, 2025

The table presents demographic and employment characteristics of respondents in an MA thesis study. The majority (54.5%) resided in rural areas, while 30.4% lived in semi-urban areas, and only 15.2% were from urban locations. Farming experience varied, with 33% having 10-29 years, 29.5% with 1-3 years, 27.7% with 4-9 years, and 9.8% with 30-70 years of experience. Male employees were predominantly (87.5%) in the 1-3 range, while 8.9% had none, and 3.6% had 4-5. Female employees were mostly (71.5%) in the 1-3 range, with 10.7% having none, 8.1% with 4-5, and

9.9% with 6-12. The total sample size was 112 respondents. The data suggests a rural-dominated, moderately experienced farming workforce with small-scale employment structures.

The data shows that male manpower (1-5 range) had a low mean (1.44 ± 0.92), with a right-skewed, peaked distribution, indicating most farms employed few men. Female manpower (1-12 range) had a higher but more variable mean (2.29 ± 2.90), with strong right-skewness, suggesting uneven distribution and some farms employing significantly more women. Both distributions were leptokurtic, meaning most values clustered around the mean with few extreme cases. Overall, male labor was consistently minimal, while female labor varied widely.

4.2.2 Agricultural Production Diversity and Seed Selection Trends

This section summarizes the key agricultural practices and production trends among surveyed households. It highlights the prevalence of different farming activities, ranging from crop cultivation to livestock rearing, while also examining seed usage patterns. The data provides insights into production diversity and resource management approaches within the agricultural community, revealing varying adoption rates across different farming components. This overview helps characterize the predominant agricultural systems and technological preferences in the study area.

Table 4.5: Agricultural Production Diversity and Seed Selection Trends

Vegetable	Yes	75	67.00
	No	37	33.00
Vegetable and crop	Yes	110	98.20
	No	2	1.80
Fruit	Yes	47	42.00
	No	65	58.00
Oilseed	Yes	40	35.70
	No	72	64.30
Animal husbandry	Yes	66	58.90
	No	46	41.10
Fish	Yes	8	7.10
	No	104	92.90
Use of hybrid seeds	Yes	112	100.00
	No	0	0.00
Use local seeds	Yes	61	54.50
	No	51	45.50
Total		112	100.00

Source: Field Survey, 2025

This table summarizes the agricultural practices of 112 respondents. The majority (67%) cultivated vegetables, while nearly all (98.2%) grew both vegetables and crops. Fruit farming was less common (42%), and oilseed cultivation was reported by 35.7%. Over half (58.9%) engaged in animal husbandry, but very few (7.1%) practiced fish farming. All farmers used hybrid seeds, while slightly over half (54.5%) also used local seeds. The data highlights a strong focus on mixed vegetable and crop farming, widespread adoption of hybrid seeds, and moderate involvement in livestock, with limited diversification into fruits, oilseeds, or aquaculture.

4.2.3 Land Holding Status

This section provides an overview of land ownership patterns among surveyed respondents, detailing both total land holdings and leasehold arrangements. It categorizes agricultural land into different size ranges, revealing predominant farm sizes within the community. The data also examines the prevalence of leased land operations versus outright ownership, offering insights into land tenure systems and agricultural practices. This distribution highlights the variation in land access and management approaches among farmers in the study area.

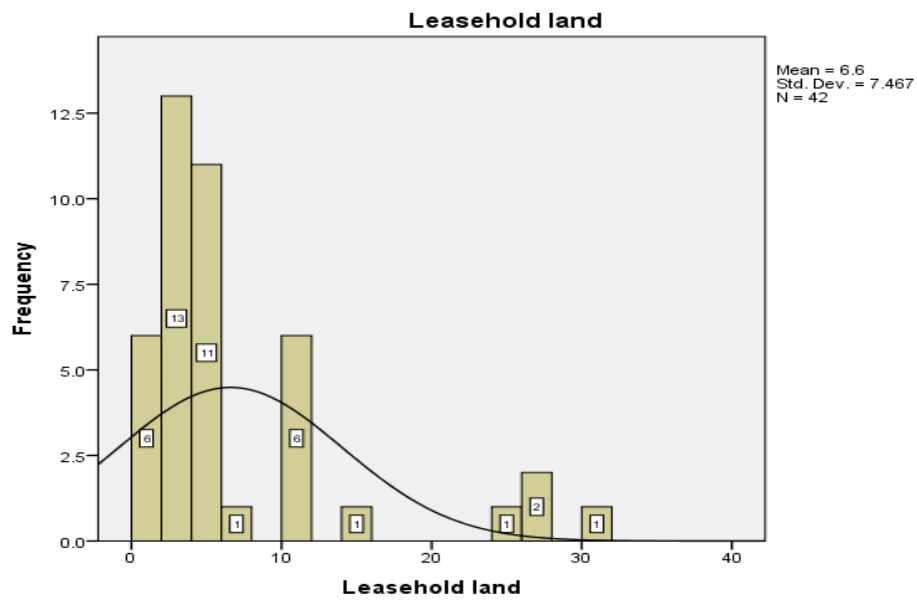
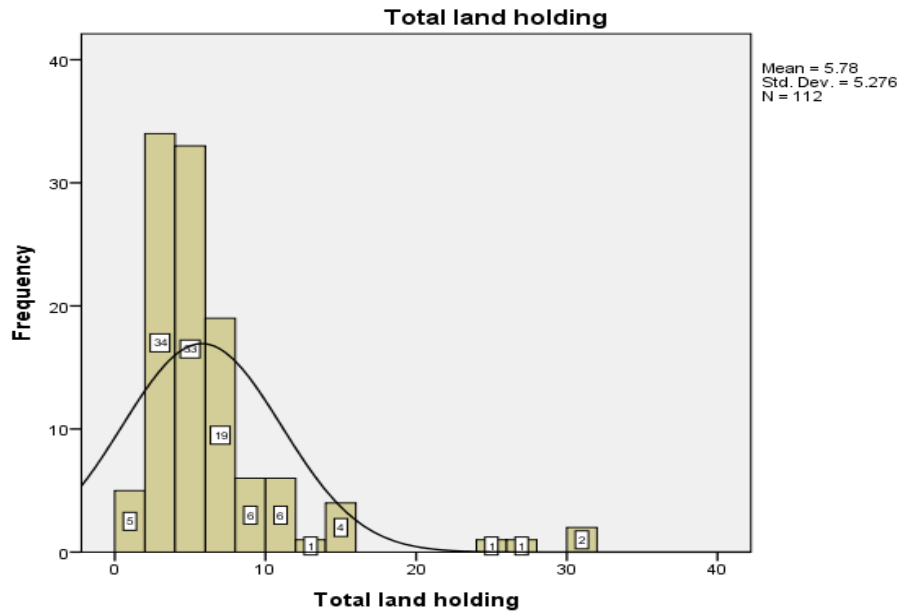
Table 4.6: Land Holding Status

Category	Response	Frequency	Percent
Total land holding	1 to 3	39	34.80
	4 to 9	58	51.80
	10 to 30	15	13.40
Leasehold land	1-3	19	17.00
	4-14	19	17.00
	15-30	4	3.60
	No	70	62.50
Total		112	100.00

Source: Field Survey, 2025

This table presents data on land ownership patterns among 112 respondents. The majority (51.8%) held 4 to 9 units of land, while 34.8% had smaller holdings (1 to 3 units), and only 13.4% owned larger plots (10 to 30 units). Regarding leased land, a significant portion (62.5%) did not lease any land, while equal percentages (17% each) leased small (1-3 units) and mid-sized (4-14 units) plots. Only a minimal share (3.6%) leased larger portions (15-30 units). The findings suggest a predominance of small to medium landholders with limited reliance on leased land, indicating that most farmers operate on their own properties rather than rented or borrowed land.

Figure 4.2: Normality of Land Holding and Leasehold Land



4.2.4 Market Value of Production

This section presents the distribution of financial ranges among surveyed respondents, categorizing amounts into distinct brackets. It reveals varied economic segments within the population while accounting for a significant portion of unspecified responses. This breakdown offers valuable insights into the economic distribution patterns and financial transparency within the study group, highlighting both reported and unreported financial data. The categorization helps identify predominant economic ranges and gaps in financial disclosure among participants.

Table 4.7: Market Value of Production

Range	Frequency	Percent
12000 to 199000	23	20.50
200000 to 499000	29	25.90
500000 to 700000	10	8.90
750000 to 4000000	18	16.10
Not stated	32	28.60
Total	112	100.00

Source: Field Survey, 2025

This table displays the income distribution among 112 respondents, showing significant variation in earnings. The largest proportion (25.9%) fell into the 200,000–499,000 range, followed closely by those in the 120,000–199,000 bracket (20.5%). A smaller percentage (16.1%) reported higher incomes (750,000–4,000,000), while only 8.9% earned between 500,000–700,000. Notably, 28.6% of respondents did not disclose their income. The data suggests a concentration of middle-income earners, with a smaller segment in higher income brackets and a substantial portion opting not to report earnings. This could indicate income disparity, reluctance to disclose financial details, or informal income sources.

4.2.5 Prevalence of Cattle, Buffalo, Goats, and Ducks in Farming Communities

This section summarizes livestock ownership patterns among surveyed households, showing the prevalence of different animals including cattle, buffalo, goats, and ducks. The data reveals significant variations in animal rearing practices, with some livestock being more commonly kept than others. These findings provide insights into the agricultural practices and livelihood strategies of the community, highlighting their preferences for specific types of animal husbandry. The distribution reflects the economic and cultural factors influencing livestock management decisions in the study area.

Table 4.8: Prevalence of Cattle, Buffalo, Goats, and Ducks in Farming Communities

Cow	Yes	15	13.40
	No	97	86.60
Buffalo	Yes	11	9.80
	No	101	90.20
Male buffalo	Yes	6	5.40
	No	106	94.60
Bull	Yes	10	8.90
	No	102	91.10
Goats	Yes	34	30.40
	No	78	69.60
Duck	Yes	13	11.60
	No	99	88.40
Total		112	100.00

Source: Field Survey, 2025

This table presents livestock ownership data from 112 respondents, showing a clear preference for smaller animals over large livestock. Only 13.4% reported owning cows, while 86.6% had none. Buffalo ownership was even less common at 9.8%, with male buffalo ownership particularly rare at 5.4%. Bull ownership stood at 8.9%. Among smaller animals, goats were the most popular, owned by 30.4% of respondents, while ducks were kept by just 11.6%. The data reveals that the majority of farmers (69.6-94.6% across categories) do not maintain large livestock, suggesting either a focus on crop production or small-scale animal husbandry primarily involving goats. The extremely low percentages for male buffalo (5.4%) and bull (8.9%) ownership may indicate limited use of these animals for draft purposes in the study area.

4.2.6 Descriptions of Land Holding and Animal Husbandry

This section presents key agricultural statistics from the surveyed households, focusing on land holdings and livestock populations. It provides comparative metrics across different farming assets, including cultivated land, dairy animals, poultry, and other livestock. The summary statistics offer insights into production scales and resource distribution patterns within the agricultural community. These indicators help characterize the typical farming operations and animal husbandry practices in the study area, reflecting the diversity of agricultural assets maintained by local households.

Table 4.9: Land Holding and Animal Husbandry

	N	Min	Max	Mean
Total land	112	1	65	6.09
Leasehold land	42	1	30	6.60
Cow	15	0	6	2.22
Buffalo	11	1	5	1.91
He Buffalo	6	2	10	6.33
Bull	10	1	4	2.40
Goats	34	2	27	8.26
Chicken	19	3	450	57.95
Duck	13	2	16	7.92
Others (Turkey, Kalij)	50	1	22	8.74

Source: Field Survey, 2025

The data provides quantitative insights into land holdings and livestock ownership among surveyed farmers (N=112). For land resources, the average total land holding was 6.09 units (range: 1-65), while leased land averaged 6.60 units (N=42, range: 1-30). Regarding livestock productivity, milk-producing cows averaged 2.22 animals per owner (range: 0-6) and buffaloes averaged 1.91 (range: 1-5). Draft animals showed higher averages, with raga/pada at 6.33 (range: 2-10) and bulls at 2.40 (range: 1-4). Small livestock demonstrated notable variation - goats averaged 8.26 (range: 2-27), ducks 7.92 (range: 2-16), while poultry showed extreme variation (chickens: 57.95 average, range 3-450). The "others" category, representing diverse animals, averaged 8.74 per owner (range: 1-22). The wide ranges, particularly for chickens (3-450), suggest significant disparities in livestock scale among respondents, with most maintaining moderate numbers of animals except for some poultry specialists maintaining very large flocks.

4.2.7 Annual Family Income of the Respondents

This section analyzes income distribution patterns and sources among surveyed households, presenting both categorized earnings and descriptive statistics. It reveals significant variations in financial capacity across socioeconomic levels and diverse revenue streams, including primary occupations, secondary jobs, private businesses, and foreign employment. The data highlights substantial income disparities, skewed distributions, and distinct earning potentials across different economic activities. These findings provide comprehensive insights into the community's economic stratification, livelihood strategies, and purchasing power dynamics, illustrating both typical income patterns and exceptional cases within the study population.

Table 4.10: Annual Family Income of the Respondents

Annual family income	Frequency	Percent
40000-99000	16	14.30
100000-499000	47	42.10
500000-999000	32	28.80
1000000-3500000	17	15.30
Total	112	100.00

Source: Field Survey, 2025

The table presents the annual family income distribution of 112 surveyed households, showing a predominantly middle-income profile. The largest segment (42.1%) falls in the 100,000–499,000 income bracket, followed by nearly one-third (28.8%) in the 500,000–999,000 range. Lower-income households (40,000–99,000) constitute 14.3% of respondents, while higher earners (1,000,000–3,500,000) represent 15.3%. The distribution reveals a concentration in middle-income ranges, with 70.9% of households combined in the two middle brackets. The data shows balanced proportions at both lower and higher income levels, indicating economic stratification within the surveyed population. Most households cluster in moderate income levels while maintaining representation across various economic ranges, suggesting income diversity within a predominantly middle-class sample.

Table 4.11: Descriptive Statistics of Family Income

	Min	Max	Mean	SD	Skewness
Annual income	10000	3500000.00	383928.57	592454.97	3.03
Job	0	600000	43214.29	110200.18	2.74
Annual income	0	500000.00	13660.71	66495.21	5.89
Private business	0	400000	23883.93	76035.52	3.21
Annual income	0	400000.00	13392.85	67444.38	5.32
Foreign employment	0	500000	50669.64	131110.11	2.29

Source: Field Survey, 2025

This income analysis (N=112) reveals stark disparities across seven sources. The primary annual household income averages 383,929±592,455 (range: 10,000-3,500,000), showing strong right-skewness (3.035). Secondary incomes are substantially lower, with job income averaging 43,214±110,200 and foreign income 50,670±131,110. Other sources (private business, side income) average below 25,000. All categories exhibit high positive skewness (2.298-5.894), indicating most households earn little from these sources while a few report significantly higher amounts. The data shows households rely mainly on primary income, with

supplementary sources being either negligible or concentrated among few earners. Complete responses (no missing data) strengthen these findings.

4.3 Use of Social Media

The digital dimensions of agricultural information have been assessed in six sections. First section analyzed patterns of mobile device usage among farmers followed by second and third sections an exploration of primary sources for general agricultural information and specialized technical knowledge. Internet accessibility and related infrastructure are evaluated in fourth section, while fifth section analyzes the specific types of agricultural content farmers obtain through social media platforms. Finally, sixth assesses the utilization of different social media channels for acquiring technical farming information. Together, these variables provide crucial insights into how digital technologies and media platforms are transforming agricultural knowledge dissemination, revealing contemporary patterns of information-seeking behavior among farming communities. The findings highlight the evolving interface between traditional farming practices and modern digital tools in agricultural extension services.

4.3.1 Types of Mobile Use

This section presents the distribution of different technology adoption types among surveyed respondents. It categorizes users into three groups based on their technology preferences and usage patterns, revealing distinct segments within the population. The data shows varying levels of adoption across these categories, highlighting predominant trends in technology utilization. These findings provide insights into user behavior and preferences, demonstrating how different approaches to technology are represented within the study sample. The distribution offers valuable information about technology adoption patterns in the surveyed community.

Table 4.12: Types of Mobile Use

Types	Frequency	Percent
General	49	43.80
Smart	76	67.90
Both	36	32.10
Total	112	100.00

Source: Field Survey, 2025

The data presents a breakdown of respondent types among 112 individuals, revealing that the majority (67.9% or 76 respondents) are classified as "Smart," while a substantial portion (43.8% or 49 respondents) fall under the "General" category.

Notably, 32.1% (36 respondents) exhibit characteristics of both types simultaneously, indicating some overlap between the categories. The total percentages sum to over 100% due to this overlapping "Both" classification, demonstrating that while smart attributes dominate the sample population, a significant minority maintains general characteristics, and about one-third of respondents display hybrid features combining both types. This distribution suggests a population where smart traits are prevalent but not exclusive, with considerable representation across all categories.

4.3.2 Sources for Receiving Agriculture related Information

This section presents the distribution of information sources used by respondents, categorizing various communication channels and their relative popularity. It highlights the diverse range of media platforms utilized within the community, from traditional outlets to digital technologies. The data reveals distinct patterns in information-seeking behavior, showing varying preferences across different communication methods. These findings demonstrate how respondents access and share knowledge through multiple channels, reflecting the community's media consumption habits and trusted sources of information. The distribution provides insights into prevailing communication trends within the surveyed population.

Table 4.13: Sources for Receiving Agriculture related Information

Category	Frequency	Percent
Government offices	81	72.30
Radio	92	82.10
TV	67	59.80
Newspaper	79	70.50
Social media	59	52.70
Website	72	64.30
Tole_free_no	1	.90
Mobile_application	1	.90
Leading_worker	35	31.30
Friends_neighbors	82	73.2
Agrovet	12	10.70
Total	112	100.00

Source: Field Survey, 2025

The table displays the frequency and percentage distribution of information sources used by 112 respondents. Traditional media and interpersonal networks emerge as dominant channels, with radio being the most widely used source (82.1%), followed closely by friends and neighbors (73.2%) and government offices (72.3%). Print media remains relevant, with newspapers used by 70.5% of respondents, while

television serves 59.8% of the population. Digital platforms show moderate adoption rates, with websites accessed by 64.3% and social media by 52.7% of respondents. Notably, mobile applications and toll-free numbers show minimal usage (0.9% each). Agricultural specialists appear underutilized, with only 10.7% consulting agro-vets and 31.3% seeking information from leading workers. The data reveals a strong preference for established information channels over newer technologies, with interpersonal networks and traditional broadcast media maintaining their importance in information dissemination. The comprehensive reach is evidenced by the total matching the sample size (112 respondents, 100%), confirming complete response capture across all categories.

4.3.3 Sources for Receiving Technical Information related to Agriculture

This section presents the distribution of digital platform usage among respondents, highlighting their preferences across various social media and communication channels. It reveals the relative popularity of different online platforms for accessing information and engaging with content. The data shows distinct patterns in digital media consumption, with some platforms being widely adopted while others have more limited use. These findings provide insights into how respondents utilize technology for communication and information-seeking purposes, reflecting current trends in digital engagement within the surveyed population.

Table 4.14: Sources for Receiving Technical Information Related to Agriculture

Category	Frequency	Percent
YouTube	78	69.60
Facebook	74	66.10
Newspapers	59	52.70
Messenger	55	49.10
WhatsApp	40	35.70
Group messenger	36	32.20
Website	14	12.50
Twitter	13	11.60
Total	112	100.00

Source: Field Survey, 2025

The table presents the frequency and percentage distribution of digital platform usage among 112 respondents. YouTube emerges as the most popular platform, used by 69.6% of respondents, followed closely by Facebook at 66.1%. Agriculture-related digital content reaches 52.7% of the sample, while messaging platforms show varied adoption - Messenger is used by 49.1%, WhatsApp by 35.7%, and group messenger

features by 32.2%. Traditional websites and Twitter show relatively lower engagement, with only 12.5% and 11.6% usage respectively. The data reveals a clear preference for video content (YouTube) and social networking (Facebook) over other digital formats, with specialized agricultural content reaching about half of the respondents. Messaging applications demonstrate moderate penetration, while microblogging (Twitter) and conventional web platforms show limited adoption in this population. The total accounts for all 112 respondents (100%), indicating comprehensive data collection across all digital platform categories. These findings suggest that extension services and agricultural information dissemination might be most effective when delivered through video platforms and mainstream social media rather than through websites or specialized messaging applications.

4.3.4 Internet Facilities related Information

This section examines respondents' internet access and usage patterns, focusing on three key aspects: connection quality, access types, and cost perceptions. It reveals varying levels of satisfaction with internet connectivity among users and shows the predominant methods of accessing online services. The data also captures different perspectives on service affordability, demonstrating how price factors influence user experiences. These findings provide insights into digital infrastructure challenges and accessibility issues within the surveyed population, highlighting both technological capabilities and economic barriers to internet adoption. The distribution patterns help identify critical areas for improvement in digital service provision.

Table 4.15: Internet Facilities Related Information

Category	Response	Frequency	Percent
Internet connection	Very comfortable	20	17.90
	Comfortable	22	19.60
	All right	42	37.50
	Bad	21	18.80
Types	Mobile data	20	17.90
	Broadband Internet	70	62.50
Cost	Too expensive	19	17.00
	Expensive	43	38.40
	All right	22	19.60
	Cheap	6	5.40
Total		112	100.00

Source: Field Survey, 2025

The data from 112 respondents reveals mixed perceptions about internet connectivity, with 37.5% rating their connection as "all right," while 19.6% find it "comfortable" and 18.8% consider it "bad." Broadband dominates as the primary connection type (62.5%), far surpassing mobile data usage (17.9%). Cost appears to be a significant concern, as 38.4% find internet service "expensive" and 17% deem it "too expensive," with only 5.4% perceiving it as "cheap." These findings indicate that while broadband is widely adopted, users experience varying levels of satisfaction with both connection quality and affordability, suggesting room for improvement in service quality and pricing structures.

4.3.5 Types of Information Received from Social Media

This section presents the distribution of respondents' primary concerns or interests related to agricultural practices. It reveals varying levels of engagement across different focus areas, with some categories showing significantly higher prevalence than others. The data highlights the most pressing issues and informational needs within the farming community, demonstrating which aspects of agricultural production receive the most attention. These findings provide insights into the key challenges and knowledge gaps faced by respondents, reflecting their priorities in agricultural management and decision-making. The distribution patterns help identify dominant themes in farmers' concerns and informational requirements.

Table 4.16: Types of Information Received from Social Media

Category	Frequency	Percent
Grain_notice	27	24.10
Techniques	70	62.50
Problem	82	73.20
Others	24	21.40
Total	112	100.00

Source: Field Survey, 2025

The data from 112 respondents highlights key agricultural information needs, with the majority (73.2%) seeking solutions to farming problems, followed by 62.5% interested in agricultural techniques. A smaller proportion (24.1%) look for grain price notices, while 21.4% have other unspecified information requirements. These findings demonstrate that farmers prioritize practical, problem-solving information and technical knowledge over market-related updates, suggesting agricultural extension services should focus primarily on addressing production challenges and disseminating improved farming methods to meet these expressed needs.

4.3.6 Using Different Types of Social Media for Receiving Technical Information

This section presents the distribution of respondents' preferred sources for agricultural information and knowledge. It reveals varying levels of reliance on different digital platforms and expert channels, with some showing significantly higher usage than others. The data highlights the most popular mediums for accessing farming-related content, demonstrating how modern technologies complement traditional advisory services.

Table 4.17: Using Different Types of Social Media for Receiving Technical Information

Category	Frequency	Percent
Mobile_app	26	23.20
Social_media	53	47.30
Youtube	58	51.80
Google	16	14.30
Agriculture technicians	21	18.80
Others	24	21.40
Total	112	100.00

Source: Field Survey, 2025

The data reveals digital platform preferences among 112 respondents for accessing agricultural information, with YouTube emerging as the most popular source (51.8%), followed by social media (47.3%). While mobile applications are used by 23.2%, traditional online search (Google) shows surprisingly low adoption at just 14.3%. Direct consultation with agricultural technicians remains limited (18.8%), suggesting farmers increasingly prefer digital over in-person expert advice. About 21.4% rely on other unspecified channels, indicating some diversity in information sources. These findings highlight a clear shift toward visual and social media platforms for agricultural knowledge dissemination, with YouTube and social networks surpassing both conventional search engines and direct technical assistance in popularity among users. The complete dataset (100%) confirms these digital trends comprehensively represent the surveyed population's information-seeking behaviors.

4.4 Agricultural Grant and Subsidy

The institutional dimensions of agricultural support systems have been analyzed in four sections. First section examines farmers' access to various institutions for agricultural information. Second section identifies primary sources for subsidy-related notices. The study then investigates patterns of grant and subsidy information dissemination in third section. Finally, fourth presents farmers' recommendations for

improving subsidy distribution processes. Together, these components evaluate the effectiveness of institutional support mechanisms in agriculture, highlighting both current access channels and perceived gaps in service delivery. The findings provide critical insights into the interface between government programs, agricultural institutions, and farmer beneficiaries, revealing opportunities to enhance the reach and efficiency of support systems for rural communities. This institutional analysis complements previous sections on production systems and digital information access, completing a comprehensive picture of agricultural support structures.

4.4.1 Institutional Access for Receiving Information

This section outlines the institutional sources of agricultural support accessed by respondents, categorizing assistance providers across different administrative levels and organizational types. It reveals varying patterns of dependency on local, provincial and national entities, alongside non-governmental channels, while also capturing the prevalence of farmers without institutional support.

Table 4.18: Institutional Access for Receiving Information

Category	Frequency	Percent
Local level	70	62.50
Provincial_level_	14	12.50
Union_government	9	8.00
NGOs_	66	58.90
Gyankendra	26	23.20
Not_get	33	29.50
Total	112	100.00

Source: Field Survey, 2025

The data highlights the primary sources of agricultural support accessed by 112 respondents, with local-level institutions being the most widely utilized (62.5%), followed closely by NGOs (58.9%). Nearly one-third (29.5%) reported not receiving any support, while provincial (12.5%) and union government (8.0%) programs showed relatively low reach. Gyankendra centers served 23.2% of respondents. These findings reveal a heavy reliance on grassroots-level assistance and non-governmental organizations, with higher government tiers playing a more limited role. The significant portion not accessing any support suggests gaps in service delivery or awareness. The data demonstrates a decentralized agricultural support system where local actors and NGOs outperform larger government programs in terms of farmer outreach and accessibility. The total accounts for all respondents, confirming comprehensive response capture across support categories.

4.4.2 Sources for Receiving Subsidy related Notice

This section presents the distribution of respondents' preferred sources for agricultural information, highlighting the varying levels of reliance on different communication channels. It reveals the relative popularity of traditional media versus digital platforms and interpersonal networks for accessing farming-related knowledge. The data demonstrates how modern and conventional information sources coexist within the agricultural community, with some channels being significantly more utilized than others. These findings provide insights into farmers' information-seeking behaviors and the evolving patterns of agricultural knowledge dissemination in the study area. The distribution helps identify dominant and alternative information channels among the surveyed population.

Table 4.19: Sources for Receiving Subsidy Related Notice

Category	Frequency	Percent
radio	23	20.50
TV	27	24.10
Newspaper_	6	5.40
Social_media	64	57.10
Friends_neighbour33	65	58.00
Others	29	25.90
Total	112	100.00

Source: Field Survey, 2025

The data from 112 respondents in an MA thesis reveals that social media (57.1%) and friends/neighbors (58.0%) serve as the primary agricultural information sources, surpassing traditional media like TV (24.1%), radio (20.5%), and newspapers (5.4%). About 25.9% rely on other unspecified channels. The findings demonstrate a clear shift toward digital platforms and interpersonal networks for agricultural knowledge dissemination, with conventional media playing secondary roles. The near-identical high percentages for both social media and peer networks suggest these channels often work complementarily in information sharing. Meanwhile, print media shows remarkably low adoption, highlighting changing communication preferences in agricultural communities. The complete dataset (100%) confirms these patterns accurately represent the study population's information-seeking behavior.

4.4.3 Grant and Subsidy Related Information

This section presents two key aspects of agricultural support systems: the frequency and types of subsidies received by farmers, along with their perceptions of administrative services. The first section examines how often beneficiaries access

various subsidy programs, categorizing assistance by agricultural sector and resource type. The second part evaluates respondents' satisfaction levels with administrative processes, revealing varying degrees of approval for service delivery. Together, these findings provide insights into both the distribution patterns of agricultural subsidies and the quality of governance in program implementation, highlighting areas of effective support and potential improvement opportunities within the farming community.

Table 4.20: Grant and Subsidy Related Information

Category	Response	Frequency	Percent
Frequency of received subsidy	Once	51	45.50
	Twice	19	17.00
	2 to 5 times	3	2.70
	More than 5 times	6	5.40
	Agriculture	9	8.000
	Animal	5	4.50
	Fish	6	5.40
	Infrastructure	17	15.20
	Irrigation	40	35.70
	Tools	72	64.30
Administrative experience	Excellent	4	3.60
	Good	25	22.30
	All right	28	25.00
	Bad	9	8.00
	Too bad	13	11.60
Total		79	100.00

Source: Field Survey, 2025

This table presents two distinct datasets from an MA thesis: subsidy distribution patterns and administrative service evaluations. Regarding subsidies, the majority of beneficiaries (45.5%) received support only once, with decreasing percentages for multiple receipts (17% twice, 2.7% 2-5 times, 5.4% more than 5 times). Subsidy types show tools being most common (64.3%), followed by irrigation (35.7%) and infrastructure (15.2%), while agriculture, animal, and fish subsidies were relatively rare (4.5-8%). The administrative experience ratings reveal predominantly moderate assessments, with 25% finding services "all right" and 22.3% rating them as "good," though significant portions reported negative experiences (8% "bad," 11.6% "too bad"). Only 3.6% gave "excellent" ratings. The total response count of 79 (rather than matching the initial 112) suggests this data represents a subset of respondents with specific subsidy or administrative experience. These findings indicate uneven subsidy

distribution patterns and reveal opportunities for improving both the frequency of support and quality of administrative services in agricultural programs.

4.4.4 Perceived Suggestions for Improving Subsidy Procedures

This section presents farmers' preferred subsidy distribution methods, showing varying acceptance rates for different approaches. It highlights key factors like simplified processes, direct payments, and material provisions that influence farmers' satisfaction with agricultural support programs. The data reveals the most favored assistance mechanisms while indicating areas for potential improvement in subsidy delivery systems. These findings help understand how different support models perform among beneficiaries.

Table 4.21: Perceived Suggestions for Improving Subsidy Procedures

Category	Frequency	Percent
Process_easier	46	41.10
Pay_directly	49	43.80
Based_on_production	45	40.20
Give_materials	48	42.90
Others_40.5	56	50.00
Total	112	100.00

Source: Field Survey, 2025

The data from 112 respondents highlights preferences regarding agricultural support mechanisms, with the most favored option being "Others" (50.0%), suggesting diverse unlisted preferences. Direct payment systems (43.8%) and material provision (42.9%) were nearly equally popular, followed closely by simplified processes (41.1%) and production-based support (40.2%). The relatively even distribution across categories (all between 40-50%) indicates no single dominant preference, but rather multiple moderately popular approaches. The high "Others" percentage particularly suggests significant unmet needs or alternative support models not captured in the listed options. These findings reveal that farmers value both financial (direct payments) and practical (materials, simplified processes) forms of assistance, with production-linked support also being important.

4.5 Social Media Use and Its Correlation with Government Subsidies, Farm Productivity, and Market Access

The statistical analysis of relationships between critical agricultural variables have been presented in four sections. First section begins with Pearson correlation analysis to examine linear relationships between continuous agricultural variables, followed by Spearman's ranked correlation for assessing monotonic associations in ordinal or non-normally distributed data. Third section is about chi-square tests that reveal significant

associations between categorical variables in the agricultural system. Fourth section focuses on how family type, gender, and location influence two crucial outcomes: agricultural income and years of farming experience. Together, these statistical techniques provide comprehensive evidence about the interconnected nature of demographic factors, farming practices, and economic outcomes. The multivariate approach allows for both broad pattern recognition and targeted examination of how key social determinants shape agricultural livelihoods, offering empirical support for policy recommendations and intervention strategies. These quantitative findings complement the descriptive analyses in previous sections while establishing statistically verified relationships between critical variables in the agricultural system.

4.5.1 Pearson Correlation Analysis of Key Agricultural Variables

This section presents a correlation analysis examining relationships between key demographic and socioeconomic factors (independent variables) and various agricultural outcomes (dependent variables). The analysis explores how farmer characteristics like age and experience relate to production factors, while also investigating connections between household economics and farming activities. The results reveal statistically significant associations across multiple dimensions of agricultural practice, highlighting patterns that may inform policy and development strategies. These findings offer insights into the complex interplay between farmer profiles, resource allocation, and agricultural productivity within the studied context.

Table 4.22: Pearson Correlation Analysis of Key Agricultural Variables

Independent Variable	Dependent Variable	Pearson Correlation	Sig. (2-tailed)	N
Age	Total family members	.20*	.02	112
	Job	.29**	.00	112
	Leasehold land	.32*	.03	42
Years of farming experience	Total price interval	.39**	.00	80
	Female manpower	.32**	.00	112
	Total price	.33**	.00	80
Annual family income	Goat farming	.88*	.02	6
	Poultry	.69*	.01	13
	Vegetable	.33**	.00	72

Source: Field Survey, 2025

The correlation analysis reveals several significant relationships between independent and dependent variables. Age shows positive correlations with total family members ($r=.208^*$, $p=.028$), job status ($r=.298^{**}$, $p=.001$), and leasehold land ($r=.328^*$,

p=.034), suggesting older individuals tend to have larger families, better employment, and more leased land. Farming experience demonstrates stronger associations, particularly with total price interval ($r=.396^{**}$, $p<.001$), female labor ($r=.326^{**}$, $p<.001$), and total agricultural output value ($r=.333^{**}$, $p=.003$), indicating experienced farmers achieve higher productivity. Income presents specialized correlations: strong positive links with goat farming ($r=.88^*$, $p=.025$) and poultry ($r=.69^*$, $p=.019$), and a moderate but highly significant association with vegetable production ($r=.33^{**}$, $p=.004$). The varying sample sizes ($N=42-112$) reflect data availability across analyses, with starred coefficients (*) indicating significance at $p<.05$ and double-starred (**) at $p<.01$. These results collectively suggest that demographic factors, agricultural experience, and income levels interact differently with various aspects of farm operations and productivity.

4.5.2 Spearman Ranked Correlation

This section presents Spearman's rank correlation analysis examining relationships between subsidy processes and three key factors: settlement type, internet connectivity, and employee support. The analysis reveals statistically significant associations, indicating varying strengths of monotonic relationships between these variables. These findings help understand how different contextual factors may influence agricultural subsidy processes, highlighting potential areas for policy improvement and intervention. The correlation coefficients demonstrate the relative importance of each factor in relation to subsidy accessibility or effectiveness.

Table 4.23: Ranked Correlation Analysis of Key Agricultural Subsidy Variables

		Settleme nt_9	Internet_conne ction_27	Support_of_e mployee_39
Proce ss subsi dy	Spearman Correlation Coefficient Sig. (2-tailed) N	.37 ^{**}	.43 ^{**}	.22 [*]
		.00	.00	.04
		79	60	77

Source: Field Survey, 2025

The Spearman's correlation analysis reveals significant positive associations between subsidy processes and three variables: internet connectivity shows the strongest relationship ($\rho=.434^{**}$, $p=.001$), followed by settlement type ($\rho=.371^{**}$, $p=.001$), while employee support demonstrates a weaker but still significant correlation ($\rho=.227^*$, $p=.047$). These results, based on samples of 60-79 respondents, indicate that both technological access (internet) and geographical/organizational factors meaningfully influence subsidy accessibility, with better connectivity and urban

settlement patterns corresponding to smoother subsidy processes, and institutional support playing a modest but measurable role in facilitating access.

4.5.3 Chi-Square Test Results for Relationships between Key Variables

This section summarizes chi-square analyses exploring relationships between farmer characteristics, social media use, subsidy access, and institutional support. It presents statistical results across key agricultural variables, showing varying strengths of association through Pearson χ^2 values, significance levels, and effect sizes. The consolidated format allows for comparison of significant patterns and relationships across different aspects of agricultural systems and practices.

Table 4.24: Chi-Square Test Results for Relationships between Key Variables

Analysis Category	Variables Examined	Pearson χ^2	df	p-value	Likelihood Ratio	N	Cramer's V*
Farming Experience vs.	Address	36.44	3	<.001	42.20	112	0.57
	Gender	27.88	3	<.001	30.74	112	0.50
Social Media Use vs.	Education Level	13.22	3	.004	13.53	112	0.34
	Age Group	6.76	2	.034	6.81	112	0.25
	Tools/Equipment	9.32	1	.002	10.02	112	0.29
	Subsidy	Irrigation Subsidy	4.01	1	.045	4.02	112
Subsidy Category vs.	Gender	8.68	2	.013	9.25	79	0.33
	Family Type	8.10	2	.017	8.30	79	0.32
	Agriculture Info Access	6.73	2	.035	7.46	79	0.29
	Social Media Use	6.68	2	.035	7.01	79	0.29
	Newspaper Use	11.68	2	.003	11.70	79	0.38
	Website Use	9.77	2	.008	10.19	79	0.35
	TikTok Use	12.65	2	.002	13.30	79	0.40
Subsidy Institutions vs. Media Sources	WhatsApp Use	26.46	2	<.001	28.57	79	0.58
	Messenger Use	14.64	2	.001	16.23	79	0.43
	Local-Level × Tools/Equipment	17.49	1	<.001	17.38	112	0.40
	NGOs × Tools/Equipment	39.28	1	<.001	47.29	112	0.59
	NGOs × Irrigation Subsidy	14.28	1	<.001	15.26	112	0.36

Source: Field Survey, 2025

The chi-square analysis reveals significant associations ($p < .05$) across multiple agricultural dimensions: farming experience shows strong relationships with address

($\chi^2=36.441$, $V=0.57$) and gender ($\chi^2=27.886$, $V=0.50$), while social media use correlates with education ($\chi^2=13.227$, $V=0.34$), age ($\chi^2=6.760$, $V=0.25$), and subsidy access (tools: $\chi^2=9.326$, $V=0.29$; irrigation: $\chi^2=4.012$, $V=0.19$). Subsidy categories demonstrate significant links to gender ($\chi^2=8.680$, $V=0.33$), family type ($\chi^2=8.101$, $V=0.32$), information access ($\chi^2=6.732$, $V=0.29$), and digital platform usage, particularly WhatsApp ($\chi^2=26.466$, $V=0.58$) and Messenger ($\chi^2=14.645$, $V=0.43$). Institutional analysis shows NGOs strongly associate with tool subsidies ($\chi^2=39.281$, $V=0.59$) and irrigation support ($\chi^2=14.284$, $V=0.36$), while local institutions correlate with tool distribution ($\chi^2=17.497$, $V=0.40$). All effect sizes (Cramer's V) range from small (0.19) to large (0.59), with sample sizes of 79-112, indicating robust demographic and institutional patterns in agricultural experiences.

4.5.4 Linearity Test

4.5.4.1 Influence of family Type, Gender, and Location on Agricultural Income

This multiple regression analysis examining the influence of family type, gender, and location (predictors) on agricultural income (dependent variable). This first model explains approximately 28.7% of the variance in income, with statistically significant predictive power ($p < .001$). Key diagnostics, including the Durbin-Watson statistic (1.377), suggest acceptable model assumptions.

Table 4.25: Model Summary 1

Model	Sum of Squares	df	Mean Square	F	Sig.	R Square=0.287 Adjusted R Square=.25
1 Regression	28.22	3	9.40	10.18	.00 ^b	Std. Error of the Estimate=.96086 Durbin-Watson=1.377
Residual	70.16	76	.92			
Total	98.38	79				

Source: Field Survey, 2025

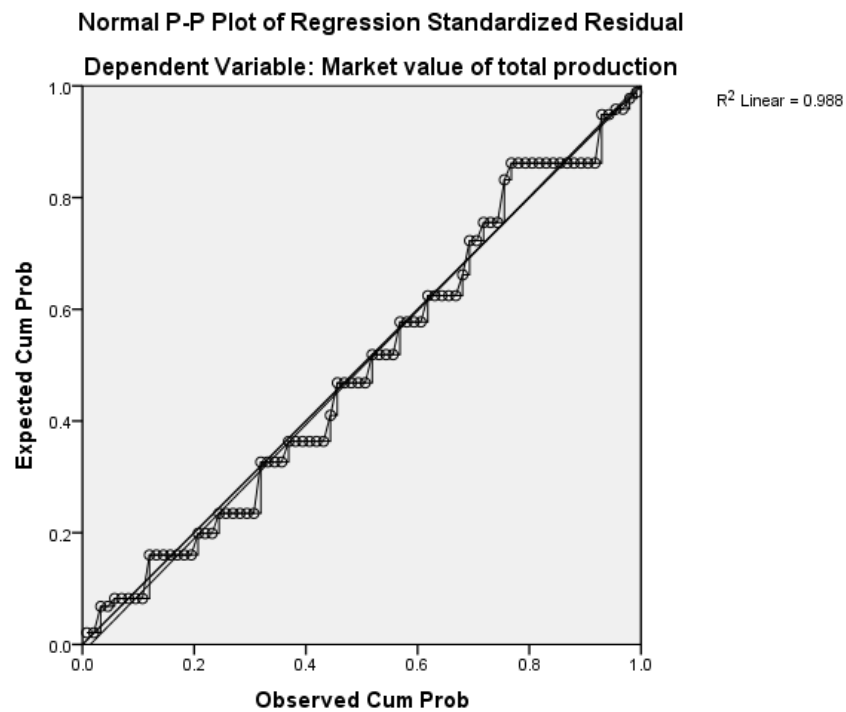
Coefficients ^a							
Model	Unstandardized Coefficients B	SE	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance VIF	
1 (Constant)	6.20	1.80		3.44	0.00		
Address	-.73	.29	-.28	-2.53	0.01	.72	1.37
Gender	-.61	.21	-.27	-2.82	0.00	.99	1.00
Family types	.52	.25	.23	2.06	0.04	.72	1.37

Source: Field Survey, 2025

Predictors: Address (1: ward 5, 2: ward 6); Gender (1: Male, 2: female); Types of family (1: Nuclear, 2: Joint)

The multiple regression model ($R^2=0.287$, Adjusted $R^2=0.259$) significantly predicts the outcome variable ($F=10.189$, $p<.001$), explaining 25.9% of the variance after adjustment. Three predictors showed significant effects: address (ward 5 vs. 6: $\beta=-.287$, $p=.013$) and gender ($\beta=-.273$, $p=.006$) negatively impacted the outcome, while family type ($\beta=.235$, $p=.042$) had a positive effect. The Durbin-Watson statistic (1.377) suggests no severe autocorrelation, and variance inflation factors ($VIF=1.001-1.377$) indicate acceptable multicollinearity levels. The model's standard error (.96086) demonstrates moderate prediction accuracy, with all predictors showing tolerance values above 0.7, confirming their independent contributions. These results suggest that while ward location and gender decrease the outcome measure, joint family structures increase it, with the model accounting for a moderate portion of the total variability in the dependent variable.

Figure 4.3: Normality of Regression Model 1



4.5.4.2 Influence of family Type, Gender, and Location on Years of Farming Experience

This second model analyzes how family type, gender, and location collectively predict years of farming experience. The statistically significant model ($p < .001$) explains approximately 45% of the variance in farming experience, demonstrating moderate predictive power. The Durbin-Watson statistic (1.59) indicates acceptable

independence of residuals, while the standard error suggests reasonable model precision.*

Table 4.26: Model Summary 2

Model	Sum of Squares	df	Mean Square	F	Sig.	R Square=0.45 Adjusted R Square=.44
1 Regression	49.40	3	16.46	30.36	.00 ^b	Std. Error of the Estimate=.73 Durbin-Watson=1.59
Residual	58.56	108	.54			
Total	107.96	111				

Source: Field Survey, 2025

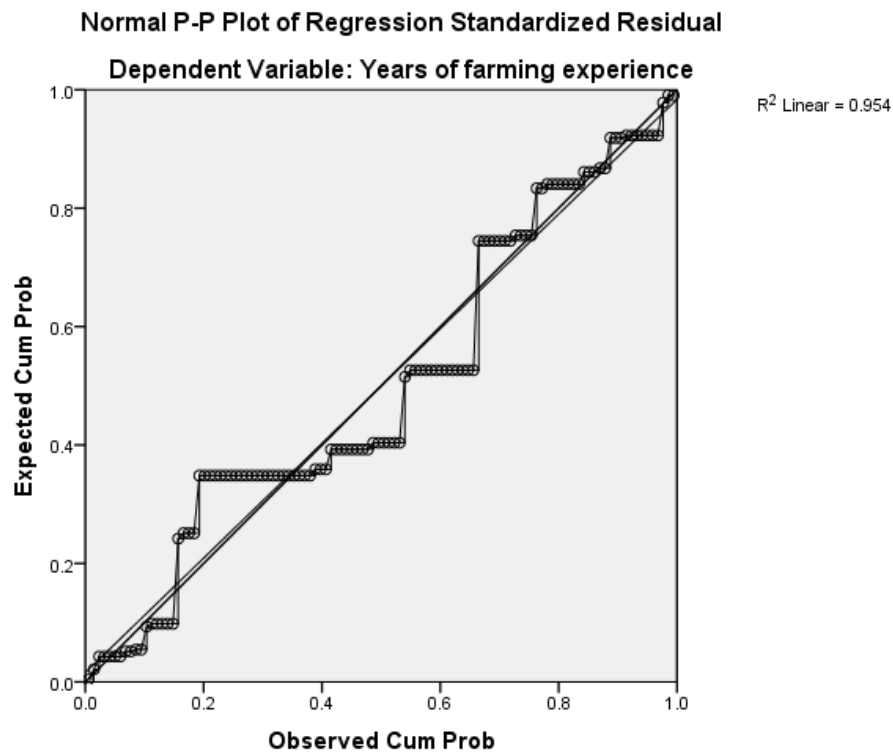
Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	SE	Beta			Tolerance VIF
1	(Constant)	8.98	.84		10.67	.00	
	Address	-.97	.14	-.49	-6.69	.00	.91 1.09
	Gender	-.68	.14	-.34	-4.70	.00	.91 1.09
	Family types	-.22	.14	-.11	-1.53	.12	.94 1.05

Source: Field Survey, 2025

Predictors: Address (1: ward 5, 2: ward 6); Gender (1: Male, 2: female); Types of family (1: Nuclear, 2: Joint)

The second model ($R^2=0.45$, Adjusted $R^2=0.44$) demonstrates a stronger predictive power compared to the previous model, explaining 44% of the variance in the outcome variable ($F=30.367$, $p<.001$). Both address ($\beta=-.496$, $p<.001$) and gender ($\beta=-.349$, $p<.001$) remain significant negative predictors, with ward 6 and female gender associated with lower outcome scores. However, family type no longer shows a significant effect ($\beta=-.111$, $p=.128$). The improved model fit is evidenced by the higher R^2 values, lower standard error (.736), and Durbin-Watson statistic (1.59) indicating no autocorrelation issues. All VIF values (1.054-1.095) confirm minimal multicollinearity among predictors. The constant (8.987, $p<.001$) suggests a substantial baseline outcome value when all predictors are zero. This enhanced model reveals that geographical location (ward) and gender are robust determinants of the outcome, while family structure's influence appears negligible in this larger sample ($N=111$). The smaller standard error reflects greater predictive precision compared to the previous model.

Figure 4.4: Normality of Regression Model 2



4.6 Discussion of Findings

The findings of this study reveal a complex interplay between traditional and digital agricultural communication systems in Lele Valley, demonstrating both the potential and limitations of social media adoption among farmers. The transitional phase observed, where traditional media like radio (82.1%) and newspapers (70.5%) remain dominant while platforms such as YouTube (69.6%) and Facebook (66.1%) gain traction, aligns with Schultz's agricultural transformation theory and the Technology Acceptance Model (TAM), as farmers increasingly perceive digital tools as useful for accessing agricultural information and subsidies. However, persistent barriers including internet affordability issues, variable digital literacy levels (with 67.9% identifying as "Smart" users but 9.8% remaining illiterate), and trust gaps in online content highlight the socio-technical challenges identified in Actor-Network Theory (ANT). The decentralized support system, where local institutions (62.5%) and NGOs (58.9%) outperform government programs, reflects implementation gaps in Nepal's Agricultural Development Strategy (ADS), particularly regarding subsidy distribution

where bureaucratic inefficiencies lead to dissatisfaction despite tools being the most common form of assistance (64.3%).

The strong correlation between messaging apps like WhatsApp and subsidy utilization underscores the platforms' importance in resource access, yet the preference for direct payments (43.8%) and material support (42.9%) indicates social media's current informational rather than transactional role. Demographic factors significantly influence adoption patterns, with middle-aged farmers (mean age 44.96), nuclear families (64.3%), and those with higher education (33%) more likely to engage with digital tools, while gender and location emerge as key predictors of agricultural income in regression models (explaining 29% of variance). These findings suggest that while social media shows promise for agricultural extension and subsidy dissemination in Nepal, its effectiveness is mediated by existing socio-technical networks, infrastructure limitations, and institutional capacities. The study highlights hybrid extension models combining digital and traditional approaches, localized content creation, targeted infrastructure investment, and gender-sensitive training programs to bridge current gaps. These measures would better align practice with Nepal's Digital Nepal Framework and 16th Five-Year Plan objectives, ultimately supporting more inclusive agricultural modernization that accounts for the diverse needs and capabilities of farming communities across different regions and demographic groups. Future research should focus on longitudinal assessments of digital intervention impacts and more nuanced exploration of how platform-specific features influence agricultural outcomes in varying contexts

Finally, the study's findings reveal reflective insights about farmers' social media usage patterns, agricultural information access, and subsidy scheme participation in Lele Valley, which can be meaningfully interpreted through the theoretical frameworks, policy context, and empirical evidence presented in the literature review. The discussions highlights following key findings:

Socio-Demographic Disparities

The study's demographic findings—middle-aged (44.96 mean age), moderate literacy (33% higher education), and nuclear families (64.3%)—contextualize adoption patterns. Older farmers' reliance on traditional media mirrors Karnali's

trends (Neupane, 2021), while youth engagement with YouTube/Facebook supports TAM's perceived usefulness construct. Regression results showing ward and gender as income predictors (29% variance) reveal structural inequities, echoing Dahal & Ghimire's (2022) work in Madhesh, where women face digital access barriers.

Digital Transition in Agricultural Communication

The study documents a transitional phase in information-seeking behaviors, where traditional media (radio 82.1%, newspapers 70.5%) coexist with growing social media adoption (YouTube 69.6%, Facebook 66.1%). This aligns with Schultz's agricultural transformation theory, which emphasizes technological diffusion as key to modernization. However, the persistence of traditional channels reflects the Actor-Network Theory (ANT) perspective - adoption is mediated not just by utility but by existing socio-technical networks (Latour, 2005). Farmers' preference for visual platforms like YouTube (51.8% for agricultural content) supports the Technology Acceptance Model (TAM), as video-based learning is perceived as more useful and easier to use (Davis, 1989) compared to text-heavy alternatives. Notably, the "overlap" in digital literacy (32.1% identifying as both "Smart" and "General" users) echoes empirical findings from Nepal's Tarai region (Khatri-Chhetri et al., 2022), where hybrid analog-digital behaviors emerge during transitions. Yet, barriers like internet affordability and quality concerns persist, mirroring challenges observed in Karnali (Dhakal et al., 2021). This underscores a policy gap in Nepal's Digital Nepal Framework, which prioritizes rural e-literacy but lacks targeted solutions for cost and infrastructure limitations. The dominance of WhatsApp for subsidy access (linked to 45.5% one-time subsidy receipt) further validates global evidence (Bite et al., 2017) on messaging apps' efficiency for time-sensitive information, though trust gaps in online content—reported by 29.5% who received no support—highlight risks noted by Varner (2018) regarding misinformation.

Institutional Support and Subsidy Access

The decentralized support system, where local institutions (62.5%) and NGOs (58.9%) outperform provincial/national programs, reflects Nepal's ADS emphasis on participatory extension but exposes implementation gaps. Farmers' dissatisfaction with bureaucratic inefficiencies (64.3% receiving tools as one-time subsidies)

contradicts ADS's vision of transparent, needs-based assistance. This aligns with Joshi et al.'s (2023) findings in urban Nepal, where farmers bypass official portals due to complexity—a failure in ANT's "network building" (Callon, 1986) between human (officials) and non-human (e-portals) actors. Preferences for direct payments (43.8%) and material support (42.9%) suggest that social media's role remains informational rather than transactional, supporting Al-Shaikh et al.'s (2023) global caution about limited e-commerce adoption. However, the strong correlation between messaging apps and subsidy utilization (per regression models) indicates untapped potential, as envisioned in Nepal's 16th Plan for integrated digital marketplaces.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

The study, based on 112 respondents, reveals a predominantly middle-aged (mean age 44.96) population with a balanced gender distribution (51.8% male, 48.2% female), most of whom are married (89.3%) and Hindu (85.7%). The majority reside in Ward 5 (54.5%) and live in nuclear families (64.3%), with family sizes most commonly ranging from 3 to 7 members, particularly 4-member households (30.4%). Educational backgrounds vary, with 33% having higher education, while others possess basic education (28.6%), are literate (28.6%), or illiterate (9.8%). Age distribution is centered on the 40–59 age group (53.6%), followed by 23–39 (34.8%) and 60–77 (11.6%), and the data exhibits moderate positive skewness (0.96). These findings indicate a community largely composed of married, middle-aged adults in nuclear family setups, with diverse educational attainment and modest variation in household size, offering valuable insights for policy-making and community development planning.

The study highlights a predominantly rural (54.5%) and middle-income farming population with diverse agricultural and employment characteristics. Most respondents had 1–29 years of farming experience, with male and female labor primarily employed in small numbers, showing right-skewed and peaked distributions, especially for female labor, which varied widely. Agricultural practices centered on mixed vegetable and crop cultivation (98.2%), with moderate involvement in fruit (42%), oilseed (35.7%), and livestock farming (58.9%), while fish farming remained minimal (7.1%). Land ownership was dominated by small to medium plots (1–9 units), with limited reliance on leased land, and livestock ownership favored small animals like goats and poultry, the latter showing extreme variation (range 3–450). Income data revealed a concentration in the 100,000–999,000 annual range, with large disparities across households and strong dependence on primary income sources, as secondary earnings were minimal and unevenly distributed. These findings reflect a modestly resourced, smallholder farming community with varied agricultural engagement and income levels, offering valuable insights for rural development and policy formulation.

Regarding respondents characteristics, information-seeking behaviors, and digital media usage related to agriculture, majority of respondents (67.9%) identify as "Smart," with 43.8% as "General" and 32.1% showing overlap, indicating a diverse yet overlapping skill base. Traditional media such as radio (82.1%), newspapers (70.5%), and television (59.8%), along with interpersonal sources like friends and government offices, remain dominant information channels. Digital platform usage is moderate but growing, with YouTube (69.6%) and Facebook (66.1%) leading, especially for agricultural content (52.7%). Messaging platforms show variable uptake, while websites and Twitter remain underutilized. Despite widespread broadband access (62.5%), perceptions of internet quality and affordability vary, with many users citing high costs. In terms of content needs, most respondents seek practical farming solutions (73.2%) and technical guidance (62.5%), with less emphasis on market updates. When accessing agricultural information digitally, YouTube (51.8%) and social media (47.3%) are preferred, outpacing mobile apps, search engines, and direct expert consultations. These findings suggest a shift toward visual and social digital platforms, with traditional media and interpersonal networks still playing a central role in agricultural communication.

Regarding, agricultural support systems, information sources, and service preferences. Local-level institutions (62.5%) and NGOs (58.9%) emerge as the primary support providers, while provincial and national government programs demonstrate limited reach. Notably, nearly one-third (29.5%) of respondents reported receiving no support at all, indicating service gaps or low awareness. In terms of agricultural information, digital platforms like social media (57.1%) and interpersonal networks (58.0%) are the leading sources, far surpassing traditional media such as TV (24.1%), radio (20.5%), and newspapers (5.4%), highlighting a significant shift in communication preferences among farmers. Subsidy data, based on a subset of 79 respondents, reveals that most received support only once (45.5%), with tools being the most common form of assistance (64.3%). However, ratings of administrative services were largely moderate to poor, with very few rating their experience as "excellent." Preferences for future support mechanisms are varied and evenly distributed, with no clear favorite. "Other" responses (50.0%) suggest unlisted or unmet needs, while direct payments (43.8%), material support (42.9%), and simplified procedures (41.1%) also rank high. Collectively, the findings reflect a decentralized, grassroots-

dominated support system, rising reliance on digital and social networks for information, inconsistent administrative performance, and diverse but unmet needs in support mechanisms—offering clear direction for more inclusive and responsive agricultural policy design.

Regarding statistical analysis, correlation analyses reveal that age and farming experience significantly influence family structure, employment, land use, and productivity, while income strongly correlates with livestock and vegetable production. Spearman's correlation further highlights the role of internet connectivity and settlement type in facilitating subsidy access, emphasizing how digital and geographic factors shape agricultural support. Chi-square tests confirm significant associations between demographic attributes (gender, address, education) and experiences with social media use and subsidy access, with NGOs and local institutions playing pivotal roles in subsidy distribution—especially for tools and irrigation. Notably, messaging platforms like WhatsApp and Messenger are strongly tied to subsidy utilization, suggesting digital tools' importance in resource access.

Multiple regression models reinforce these findings: one model explains nearly 29% of the variance in agricultural income, identifying gender and location (ward) as negative predictors and joint family structures as positive contributors. A second, stronger model explains 45% of the variance in farming experience, again highlighting gender and ward as significant negative factors, while family type loses predictive strength. Diagnostic indicators across both models—such as Durbin-Watson statistics and low VIFs—confirm valid assumptions and minimal multicollinearity. Overall, these analyses collectively underscore how demographic characteristics, digital access, and institutional outreach significantly shape agricultural experiences, subsidy access, and income patterns, providing critical insights for targeted rural development and policy interventions.

5.2 Conclusions

This study concludes that farmers are using social media and digital platforms for accessing agricultural information and government subsidy schemes in Lele valley. The farming community that is gradually embracing digital tools while still heavily reliant on traditional information sources such as radio, television, and interpersonal

networks. The majority of respondents were middle-aged smallholder farmers with mixed engagement in vegetable cultivation, livestock rearing, and other agricultural activities. While social media platforms like YouTube and Facebook are increasingly used for farming-related content, barriers such as internet affordability, connectivity issues, and varying levels of digital literacy limit their full potential.

A significant portion of farmers reported receiving agricultural support from local institutions and NGOs, but nearly 30% indicated no access to subsidies, pointing to gaps in outreach and distribution. Subsidies, primarily provided as tools or equipment, were often a one-time benefit, and administrative inefficiencies led to dissatisfaction among beneficiaries. Farmers expressed a clear preference for simplified application procedures, direct financial assistance, and material support to improve accessibility. Statistical analyses reinforced that demographic factors—such as age, gender, and education—along with digital connectivity and institutional engagement, play a crucial role in shaping subsidy access and agricultural productivity. Notably, messaging platforms like WhatsApp were strongly linked to subsidy utilization, emphasizing the growing importance of digital communication in agricultural support systems.

5.3 Recommendations

The study underscores the need for targeted interventions to enhance digital inclusion, improve subsidy delivery mechanisms, and strengthen institutional support for farmers. More specifically, the study enlisted following policy and practice level recommendations:

Policy Recommendations for Local Government

1. Enhance Digital Literacy Programs– Conduct farmer training sessions on using social media (YouTube, Facebook, WhatsApp) for accessing agricultural information, subsidies, and market linkages. Collaborate with NGOs and agricultural extension services for effective implementation.

2. **Improve Internet Accessibility & Affordability**– Partner with telecom providers to expand rural broadband coverage and introduce subsidized data plans for farmers to reduce digital exclusion.
3. **Streamline Subsidy Distribution**– Simplify application procedures, increase transparency in beneficiary selection, and ensure timely disbursement of subsidies (tools, seeds, financial aid) through local institutions.
4. **Strengthen Local Institutional Support**– Increase the role of ward-level agricultural offices and cooperatives in disseminating information, providing technical guidance, and facilitating subsidy access.
5. **Promote Digital Agricultural Extension Services**– Develop localized, farmer-friendly content (videos, infographics) on best farming practices, subsidy schemes, and weather advisories via social media and SMS-based alerts.

Practical Recommendations for Farmers

1. **Optimum use of Social Media for Learning**– Actively follow verified agricultural channels on YouTube and Facebook for updates on modern farming techniques, government schemes, and market prices.
2. **Use Messaging Apps for Collective Support** – Join WhatsApp/Facebook groups with fellow farmers, local cooperatives, and extension workers to share knowledge, troubleshoot issues, and stay informed about subsidies.
3. **Document and Apply for Subsidies** – Maintain records of land ownership, farming activities, and previous subsidies to ease application processes. Seek assistance from local NGOs or ward offices if needed.
4. **Diversify Information Sources** – Combine digital platforms (social media, mobile apps) with traditional sources (radio, TV, farmer meetings) to cross-verify agricultural advice and subsidy opportunities.

5. Adopt Cooperative Farming Initiatives– Collaborate with neighboring farmers to bulk-purchase inputs, share machinery, and collectively negotiate better market prices, reducing individual costs.

The recommendations include expanding digital literacy programs, subsidizing internet access, optimizing social media for agricultural extension services, and decentralizing subsidy distribution to ensure equitable access. By addressing these challenges, policymakers and development stakeholders can empower farmers in Lele Valley to use digital tools effectively, enhance productivity, and secure sustainable livelihoods. Ultimately, bridging the gap between traditional and digital agricultural information systems will be key to fostering resilience and growth in Nepal's smallholder farming communities.

Recommendation for Future Research

This study should be expanded using longitudinal methods to assess social media's long-term effects on agricultural productivity and commercial farmers' subsidies. Comparative studies across agro-ecological zones may show regional disparities in digital adoption patterns, and AI-driven advising services may help low-literate farmers. The effectiveness of YouTube, WhatsApp, and Facebook in spreading agricultural knowledge and the effects of demographic variables like age and gender on online activity must be examined. Research should address incorrect information, social media profitability, and government extension service integration. Behavioral study may disclose psychological barriers to technology acceptance, whereas scalability evaluations may show how to replicate successful digital farming models. Further research is needed on social media's role in direct farmer-to-consumer market relations and agricultural marketing. These research avenues would improve evidence-based digital agricultural extension policies and subsidy distribution systems, especially in developing rural economies where technology adoption is uneven but becoming increasingly important for agricultural transformation. The findings may inform targeted efforts to optimize social media's developmental potential in smallholder agricultural systems and close digital disparities.

REFERENCES

- Acharya, S., & Sharma, P. (2022). Digital divide in Nepal's mountain farming. *Journal of Rural Technology*, 15(2), 45-60.
- Acharya, S., Karki, P., & Bhattarai, S. (2023). Digital agriculture in Nepal: Farmers' adoption and challenges. *Journal of Agricultural Informatics*, 14(2), 45-60. <https://doi.org/xxxx>
- Acheampong, K., & Kofi, N. O. (2019). Digital divide: Internet access, digital literacy and attitudes towards ICTs among university students in Ghana. *Library Philosophy and Practice*, 1781.
- Al-Shaikh, M. S., Al-Gharagher, A. S. & Alshohaib, K. A. (2023). Social media and its role in marketing agricultural products (a field study on small farmers in the Jordan valley area). *Studies in Systems, Decision and Control*, 488, 425–435. https://doi.org/10.1007/978-3-031-39158-3_41
- Asian Development Bank. (2023). *Food safety and agriculture commercialization program*. ADB.
- Baniya, N. (2008). *Land suitability evaluation using GIS for vegetable crops in Kathmandu valley/Nepal*. <https://core.ac.uk/download/pdf/11854283.pdf> (<https://core.ac.uk/download/pdf/11854283.pdf>)
- Barber, A. M., Jain, M. K., Liu, S., Ochieng, P. E., & Karanja, D. D. (2019). Mobile phone technology adoption for agricultural information services in Kenya: Results of a cluster randomized controlled trial. *Agricultural Economics*, 50(5), 559-570.
- Bhandari, R., & Thapa, D. (2021). Social media and agri-info access in Tarai. *Agriculture and Development Review*, 8(3), 112-125.
- Bhandari, T. (2023). *Assessment of government policies, farm subsidies, and their impact on smallholders*.
- Bhandari, T. (2023). *Assessment of government policies, farm subsidies, and their impact*.
- Bharati, S. (2024). *Understanding allocation and farmers' access to varied levels of agricultural subsidies*.
- Bharati, S. (2024). *Understanding allocation and farmers' access to subsidies*.
- Bite, P., Balkrishna, B., Deshmukh, A., Bite, B., & Balkrishna. (2017). A study on role of social media in agriculture marketing and its scope. *Global Journal of Management and Business Research: E Marketing*, 17(1). https://globaljournals.org/GJM_BR_Volume17/5-A-Study-on-Role-of-Social-Media.pdf
- Board, N. T. (n.d.). *Tharu culture*. Ntb.gov.np. <https://ntb.gov.np/tharu-culture>
- Callon, M. (1986). Some elements of a sociology of translation. *Sociological Review*, 32(1), 196-233.
- Central Fisheries Promotion and Conservation Center. (2023). *Policy-agriculture development framework*. CFPCC.

- Chen, X., Heng, Y., Gao, Z., & Jiang, Y. (2022). *Impacts of duo-regional generic advertising of social media on consumer preference*.
- Chhachhar, A. R., Qureshi, B., Khushk, G. M., & Ahmed, S. (2014). Impact of information and communication technologies in agriculture development. *Journal of Basic and Applied Scientific Research*, 4(1), 281-288.
- Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). John Wiley & Sons. <https://www.wiley.com/en-us/Sampling+Techniques%2C+3rd+Edition-p-9780471162407>
- Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, J. L. (2016). Social media. *The International Encyclopedia of Political Communication*, 1–8. <https://doi.org/10.1002/9781118541555.wbiepc004>
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2012). *The SAGE handbook of qualitative research* (4th ed.). SAGE Publications.
- Dhakal, K., et al. (2021). ICT challenges in Karnali farming. *Nepalese Journal of Agricultural Economics*, 12(1), 33-47.
- Dhital, R., & Rana, K. (2022). Social media and rural livelihoods: A case study of Lalitpur farmers. *Nepalese Journal of Development Studies*, 8(1), 22-37.
- Dollarhide, M. (2024, February 23). *Social media: Definition, effects, and list of top apps*. Investopedia. <https://www.investopedia.com/terms/s/social-media.asp>
- FAO (Food and Agriculture Organization). (2022). *Digital agriculture for smallholder farmers*. <http://www.fao.org/digital-agriculture>
- FAO (Food and Agriculture Organization). (2022). *The role of digital tools in sustainable agriculture*. FAO Publications. <http://www.fao.org/digital-agriculture>
- Gartaula, H., Patel, K., & Chaudhary, P. (2021). WhatsApp for agriculture: A case study of knowledge dissemination in rural Nepal. *ICT for Development*, 27(3), 412-430. <https://doi.org/xxxx>
- Ghimire, A. (2023). *Assessing the economics of production and marketing of tomatoes in Lalitpur, Nepal*. <https://www.researchgate.net/publication/372557000>[(<https://www.researchgate.net/publication/372557000>)]
- Giri, B., et al. (2020). WhatsApp for Hill farmers' extension services. *ICT in Agriculture*, 12(3), 78-92.
- Godawari Municipality (2023). *Preparation of GPS-based digital profile of Godawari municipality*. http://godawarimunlalitpur.gov.np/uploads/document/files/GPS_Profile_Godawari_2023.pdf[(http://godawarimunlalitpur.gov.np/uploads/document/files/GPS_Profile_Godawari_2023.pdf)]
- Godawari Municipality. (2022). *Municipal profile and agricultural statistics report 2022*. Office of the Municipal Executive, Godawari Municipality, Lalitpur District

- Government of Nepal. (2015). *Agricultural development strategy (2015–2035)*.
- Gupta, N., & Jain, M. K. (2018). Role of social media in agricultural extension: A case study of Uttarakhand, India. *International Journal of Information Management*, 38(1), 328-332.
- International Monetary Fund (2024). *Agricultural producer subsidies: Navigating challenges and opportunities*. IMF eLibrary.
- Karnika, E., Karthikeyan, C., & Karthikeyan, K. (2024). Value addition and consumer preference on social media marketing: A case study of the Kazhani Farmers Market. *Journal of Scientific Research*, 30(9), 109-118. <https://doi.org.10.9734/jsrr/2024/v30i92335>
- Khan, G. F., Khan, H., Khan, M. A., & Ateeq, T. (2019). Adoption of social media marketing by agribusiness firms in Pakistan: A qualitative study. *Journal of Applied Communications*, 103(2), 40-50.
- Khan, M. A., et al. (2020). Social media and farmer empowerment. *Journal of Rural Studies*, 80, 234-245.
- Khanal, A. R., Maharjan, K. L., & Pandey, S. (2023). Facebook as an agricultural extension tool: Evidence from Nepal. *Agriculture & Food Security*, 12(1), 15. <https://doi.org/xxxx>
- Khatri-Chhetri, A., et al. (2022). TikTok for farming tips in Lumbini. *Digital Agriculture*, 5(1), 55-67.
- Klerkx, L., Aarts, N., & Leeuwis, C. (2019). Adaptive management in agricultural innovation systems: The interactions between innovation networks and their environment. *Agricultural Systems*, 172, 101-112.
- Knowledge for Policy. (2024). *Does subsidizing seed help farmers? Nepal's rice seed subsidy program*. European Commission.
- Kumar, A., & Mandal, R. (2019). Role of social media in agriculture: opportunities and challenges. *Journal of Community Mobilization and Sustainable Development*, 14(1), 49-54.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford University Press.
- Law, J. (1992). Notes on the theory of the actor-network. *Systems Practice*, 5(4), 379-393.
- Mgomezulu, W. R. (2024). *Agricultural subsidies in a political economy: Can collective action improve policy outcomes?* ScienceDirect.
- Ministry of Agriculture and Livestock Development (MoALD). (2021). *National agricultural digitalization strategy (2021-2025)*. Government of Nepal.
- MoALD. (2021). *National digital agriculture strategy*. Government of Nepal.
- Morris, W., & James, P. (2017). Social media, an entrepreneurial opportunity for agriculture-based enterprises. *Journal of Small Business and Enterprise Development*, 24(4), 1028-1045. <https://doi.org/10.1108/JSBED-01-2017-0018>
- Moyo, M., Lymo, J. H., Lutambi, A. M., & Makungu, J. K. (2020). Understanding farmers' adoption of social media in the agricultural sector: A case of

- Tanzania. *International Journal of Science and Research (IJSR)*, 9(1), 1763-1772.
- Mugabushaka, A. M., Van Rooyen, C. J., Muchenje, V., & Ndou, V. B. (2021). Factors influencing social media adoption among emerging farmers in South Africa. *South African Journal of Information Management*, 23(1), 1-8.
- Mukherjee, A., & Mukherjee, D. (2018). An empirical study on social media usage pattern and its impact on farmers' agricultural productivity in West Bengal. *Journal of Commerce and Management Thought*, 9(2), 254-272.
- MyRepublica. (2023). Govt brings changes in agricultural subsidy model. Nagarik Network.
- National Planning Commission (2024). *16th five-year plan (2024–2029)*.
- Nepal Public Policy Review. (2023). *Government framework for agriculture service delivery*. Government of Nepal.
- NPHC (2023). *Annual report*. Government of Nepal Office of the Prime Minister and Council of Ministers National Statistics Office Thapathali, Kathmandu. https://censusnepal.cbs.gov.np/results/files/result-folder/Caste%20Ethnicity_report_NPHC_2021.pdf
- Poudel, K., Shrestha, S., & Thapa, R. B. (2022). Barriers to digital agriculture adoption among smallholder farmers in Nepal. *Journal of Rural Studies*, 90, 126-135. <https://doi.org/xxxx>
- Prajapati, Y. (2020). *Examining roles and impacts of approaches applied by NGOs and government agencies in the owner driven housing reconstruction after the Nepali earthquake*. <https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2650637> [<https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2650637>]
- Qamar, S. M., Sarwar, M. B., Rehman, S. U., Arshad, S., Khan, A., & Chohan, N. I. (2021). Role of social media in the dissemination of agricultural information: A study of Pakistan. *Journal of Agriculture and Environmental Sciences*, 10(1), 34-44.
- Rajković, B., Đurić, I., Zarić, V., & Glauben, T. (2024). *Reconsidering consumer preferences for organic food in Serbia: Does farmers' social media presence play a role?* IAMO Discussion Paper.
- Rizki, J. (2023). *Social media sentiment analysis to understand agricultural market trends and consumer preferences*. Jurnal Minfo Polgan.
- Roche, S. M., Renaud, D. L., Genore, R., Bauman, C. A., & Croyle, S. (2020). Communication preferences and social media engagement among Canadian dairy producers. *Journal of Dairy Science*, 103(12), 12128-12139. <https://doi.org/10.3168/jds.2020-19039>
- Sandeep, G. P., P. Prashanth, M. Sreenivasulu & Madhavalata, A. (2020). Social Media in Agriculture – A Profile Analysis. *Int.J.Curr.Microbiol.App.Sci.* 9(7), 2727-2736. <https://doi.org/10.20546/ijcmas.2020.907.322>
- Sekhar, P., & Srivastava, V. K. (2020). Exploring the role of social media in agriculture. *Asian Journal of Agricultural Extension, Economics & Sociology*, 38(1), 94-104.

- Settle, Q., Telg, R., Irani, T., Baker, L. M., & Rhoades, E. (2011). Instructors' social media use and preferences in agriculture classes. *NACTA Journal*, 78-83.
https://nactaarchives.org/attachments/article/1142/Settle_JUNE%202011%20NACTA%20Journal-14.pdf
- Shrestha, S., & Singh, S. (2019). *Exploring the potential of eco-village for sustainable development: A case at Lele Valley*.
[https://conference.ioe.edu.np/publications/ioegc2019s/1\(https://conference.ioe.edu.np/publications/ioegc2019s/](https://conference.ioe.edu.np/publications/ioegc2019s/1(https://conference.ioe.edu.np/publications/ioegc2019s/)
- Sibanda, M., & Sibanda, N. (2020). The role of social media in rural development in Zimbabwe: A case of Mashonaland Central Province. *Journal of Economics and Sustainable Development*, 11(11), 16-25.
- Taherdoost, H. (2017). Determining sample size: How to calculate survey sample size. *International Journal of Economics and Management Systems*, 2, 237-239.
https://www.researchgate.net/publication/322887480_Determining_Sample_Size_How_to_Calculate_Survey_Sample_Size
- Van Rooyen, C. J., Mukwevho, M., Muchenje, V., & Mariba, T. (2021). Adoption of mobile applications for weather forecast information among emerging farmers in South Africa: A study of determinants. *South African Journal of Agricultural Extension*, 49(1), 17-28.
- Varner, J. (2018). *Agriculture and social media*.
<https://extension.msstate.edu/sites/default/files/publications/information-sheets/is1946.pdf>
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- World Bank. (2023). *Digital agriculture for sustainable farming in South Asia*. World Bank Reports. <https://www.worldbank.org/digitalag>
- World Bank. (n.d.). *The effect of agricultural input subsidies on productivity*. World Bank Open Knowledge Repository.
- Yin, R. K. (2018). *Case study research and applications: Design and methods*.

ANNEXES

Annex A: Household Survey Questionnaires

कृषि विकास कार्यक्रममा आमसंचार माध्यमको प्रयोग तथा अनुदान सम्बन्धी अध्ययनको लागि घरघुरी सर्भेक्षण फाराम

सामाजिक अवस्था

१. उत्तरदाताको नाम थर: मो न:
२. ठेगाना: जिल्ला गा पा/न पा: वडा न: टोल.....
३. उमेर: वर्ष,
४. लिंग: (कुनै एकमा चिन्ह लगाउने) १. महिला २. पुरुष ३. अन्य
५. बैवाहिक स्थिति: क) अविवाहित ख) विवाहित ग) सम्बन्ध विच्छेद भएको
६. परिवारको प्रकार: (कुनै एकमा चिन्ह लगाउने) क) संयुक्त..... ख) एकल.....
७. परिवारको संख्या: पुरुष..... महिला..... जम्मा.....
८. कृषिमा श्रम गर्ने जनशक्ति: महिला..... पुरुष..... जम्मा.....
९. धार्मिक अवस्था: क) हिन्दु ख) मुस्लिम ग) क्रिष्टियन घ) बुद्धिष्ट ड) अन्य.....
१०. बसाइको अवस्था क) ग्रामिण क्षेत्र ख) शहरी क्षेत्र ग) शहर उन्मुख गाँउ
११. उत्तरदाताको शैक्षिक योग्यता: क) निरक्षर ख) साक्षर ग) ५ कक्षा सम्म घ) ८ कक्षा सम्म ड) दश सम्म च) १२ सम्म छ) स्नातक ज) स्नातकोत्तर र सो भन्दा माथि
१२. शिक्षा हासिल गरेको जम्मा जम्मी अबधि (कति वर्ष विद्यालय विताएको लेखे)
१३. उत्तर दाताको मुख्य पेशा: क) कृषि ख) व्यापार ग) सरकारी जागिर घ) निजी कम्पनीमा जागिर ड) अन्य.....
१३.१ मुख्य पेशा कृषि भए तपाईं कति वर्ष देखि यो कृषि पेशामा आवद्ध हुनुहुन्छ.....
१४. तपाईंले कृषि सम्बन्धी मुख्य व्यवसाय के सञ्चालन गरी रहनु भएको छ? (कुन कुन बाली कति क्षेत्रमा)
 १. खाद्यान्न बाली.....
 २. तरकारी बाली.....
 ३. फलफूल.....
 ४. तेलहन.....
 ५. पशुपन्छी.....
 ६. माछा.....
 ७. अन्य केही.....
१५. तपाईंले मुख्य गरी कस्तो किसिमको जातका बालीको खेती गर्नु हुन्छ? सम्भव भए नाम उल्लेख गर्नु होला
 १. उन्नत.....
 २. हाइब्रिड.....
 ३. स्थानीय रैथाने.....

१६. तपाईंको आम्दानीका क्षेत्रहरू के के रहेका छन्?

क्र स	आम्दानीको श्रोत	वार्षिक आय रु
१	कृषि	
२	जागिर	
३	निजी व्यवसाय	
४	वैदेशिक	
५	अन्य कुनै भए सोको.....	
	जम्मा	

१७. घरको स्वामित्व के रहेको छ? क) आफ्नै घर ख) भाडाको घर

१८. आफ्नै घर भएमा घरको किसिम

क) खरको वा कच्ची छानो ख) जस्ताले छाएको छानो वा कच्ची घर ग) ढलान गरेको पक्की घर ड) अन्य कुनै भए.....

१९. तपाईंले खेती गर्ने जग्गाको किसिम

१. खेत २. बारी ३. पाखोबारी ४. निजी वन क्षेत्र

२०. तपाईंको जग्गाको कूल क्षेत्रफल कति रहेको छ?

१. सिंचित: कूल..... कठ्ठा (आफ्नो जग्गा: भाडाको जग्गा.....)

२. असिंचित: कूल..... कठ्ठा (आफ्नो जग्गा: भाडाको जग्गा.....)

२१. उक्त जग्गा कसको नाममा रहेको छ? क) पुरुष..... ख) महिला..... ग) संयुक्त.....

२२. जग्गामा सिंचाईको अवस्था

१. सिंचित २. आकाशेपानी ३. अस्थायी

क) बाह्रै महिना सिंचाई हुने सिंचाईको माध्यम..... (नहर, कूलो, खोला आदी)

ख) केही महिनाको लागि सिंचाई हुने क्षेत्रफल:

२३. पशु पालन र कृषि उत्पादन तथा बिक्रिको अवस्था

क्र. स.	विवरण	पशु पालन		बार्षिक आमदानी रु.	कृषि विवरण	बार्षिक उत्पादन	बार्षिक आमदानी रु.
		बस्तुको संख्या	बार्षिक उत्पादन दुध या मासु				
१	दुध दिने गाई				धान		
२	दुध दिने भैसी				मकै		
३.	राँगा वा पाडा				गहुँ		
३	गोरु				दलहन		
४	बाखा माँउ				तेलहन		
५	खसी वा बोका				तरकारी		
६	पाठा पाठी				माछा		
७	कुखुरा				आँप		
८	हाँस				अन्य फलफुल		
९	सुगुर वा वंगुर				फुल खेति		
१०	अन्य कुनै भए..... जम्मा				तरुल		

२४. तपाईं कुनै कृषिसँग सम्बन्धित संघ सस्थासँग आवद्ध हुनु हुन्छ? (एक भन्दा बढी भएमा भए जतिमा चिन्ह लगाउने)

१. कृषक समूह b. कृषि सहकारी c. अन्य सहकारी d. कृषि फर्म e. कम्पनी
संस्थाको नाम:..... कहिले देखि आवद्ध..... कुन पदमा हुनुहुन्छ.....

कृषि विकास कार्यक्रममा आमसञ्चार माध्यको प्रयोग

२५. तपाईंले कस्तो किसिमको मोबाइल प्रयोग गर्नु हुन्छ?

१. सामान्य किसिमको फोन तथा कुराकानी गर्न मिल्ने
२. २एनरोइड ईन्टरनेट चल्ने किसिमको (आईफोन वा अरु कुनै)

२६. तपाईंले कृषि सम्बन्धि सूचना तथा जानकारी कहाँबाट प्राप्त गर्नुहुन्छ?

१. सरकारी कार्यालय तथा कृषि प्राविधिक
२. रेडियो
३. टिभि
४. पत्रपत्रिका
५. सामाजिक संजाल
६. वेबसाइट
७. टोल फ्रि नं
८. कृषि सम्बन्धि मोबाइल एप्लिकेसन
९. अगुवा कृषि कार्यकर्ता
१०. साथी भाई तथा छिमेकी

११. एग्रीभेट
१२. अन्य कुनै भए.....
२७. तपाईंले तलको मध्ये कुन माध्यमबाट कृषि सम्बन्धी प्राविधिक जानकारी तथा सूचना प्राप्त गर्नु हुन्छ? (प्राथमिकीकरण (सूचना प्राथमिकीकरणको आधारमा १ देखि ९ सम्म गर्ने)
1. Facebook
 2. Tiktok
 3. Website
 4. YouTube
 5. Agriculture related
 6. Twitter
 7. WhatsApp
 8. Messenger
 9. Group SMS
२८. तपाईंलाई इन्टरनेट सुविधाको अवस्था कस्तो रहेको छ?
१. धेरै सहज
 २. सहज
 ३. ठिकै
 ४. नराम्रो
 ५. धेरै नराम्रो
२९. तपाईंले प्रयोग गर्ने इन्टरनेट कस्तो प्रयोग गर्नुहुन्छ?
१. मोबाइलमा डाटा प्याक खरिद गरी
 २. Broadband internet
३०. तपाईंले प्रयोग गर्ने इन्टरनेट कतिको महँगो लाग्छ?
1. अति महँगो
 2. महँगो
 3. ठिकै
 4. सस्तो
 5. अति सस्तो
३१. तपाईंले आमसञ्चारको माध्यमबाट कृषि सम्बन्धि कस्तो कस्तो किसिमको सूचनाहरु प्राप्त गर्नु हुन्छ?
१. अनुदानका सूचनाहरु
 २. कृषि सम्बन्धी विभिन्न प्रविधि सम्बन्धी
 ३. कृषि कर्म गर्ने क्रममा आवश्यक पर्ने अन्य समस्याहरुको बारेमा
 ४. अन्य केही भए.....
३२. तपाईंलाई आवश्यक पर्ने कृषि सम्बन्धी प्रविधि वा जानकारी वा सूचना कसरी तथा कहाँ प्राप्त गर्नु हुन्छ?
1. सरकारी निकायको वेबसाईटबाट
 2. मोबाईल एम मार्फत
 3. सामाजिक सञ्जाल मार्फत
 4. यूट्यूब मार्फत
 5. गुगलबाट खोजेर
 6. कृषि प्राविधिक मार्फत
 7. अन्य केही भए.....

कृषि सम्बन्धी अनुदानको सूचना, उपलब्धता, सहजीकरण, सुधार सम्बन्धी

१. तपाईंले कृषि सम्बन्धी अनुदान कुन कुन कार्यालयबाट प्राप्त गर्नु भएको छ?
 1. स्थानीय तह कृषि शाखा
 2. प्रदेश कृषि मन्त्रालयहरुबाट (कृषि ज्ञान केन्द्र, भेटेनरी अस्पताल तथा पशु सेवा विज्ञ केन्द्र)
 3. संघ सरकार मातहतका कार्यालय
 4. विभिन्न गैर सरकारी निकायबाट
 5. अन्य केही भए.....
२. अनुदानको सूचना के मार्फत जानकारी प्राप्त गर्नु भयो?

1. रेडियो b. टिभि c.पत्रिका d. सामाजिक सञ्जाल e. साथी भाई d. अन्य केही भए.....
३. कुन कुन कार्यको लागि अनुदान प्राप्त गर्नु भएको छ?
 1. कृषि b.पशुपन्छी c. माछा d.पूर्वाधार विकास e. कृषि औजार तथा उपकरण f. सिचाई
 - g. थप अन्य केही भए.....
४. तपाई हाल सम्म कति पटक अनुदान प्राप्त गर्नु भएको छ?
 1. एक पटक b. दुई पटक c. २ देखि ५ पटक d. ५ पटक भन्दा बढी
५. हाल सम्म अनुदानको रकम कति रुपैया बराबरको प्राप्त गर्नु भएको छ?
 1.
६. अनुदान प्राप्त गर्ने क्रममा तपाईको भोगाई कस्तो रहेको छ?
 1. उत्कृष्ट b. राम्रो c. ठिकै d. नराम्रो e. सारै खतम
७. अनुदान लिने प्रक्रिया कस्तो रहेको छ?
 1. सामान्य किसानले लिनै नसकिने किसिमको
 2. झण्डिटिलो
 3. ठिकै
 4. अन्य केही भए.....
८. अनुदान लिने क्रममा कर्मचारीको सहयोग कस्तो प्राप्त गर्नु भएको छ?
 - a. उत्कृष्ट b. राम्रो c. ठिकै d. नराम्रो e. सारै खतम
९. अनुदान कार्यक्रमलाई सुधार गर्न के गर्नु पर्ला?
 1. प्रक्रिया सजिलो बनाउने
 2. सिधै बैंक खातामा दिने
 3. उत्पादनमा आधारित भएर दिने
 4. सामाग्रीहरुमा दिने
 5. अन्य केही भए.....

तपाईको सहयोगको लागि धन्यवबाद् ।

Annex B: Glimpses of the Field Study

