

# Assessment of Digital and Financial Inclusion of women farmers/ entrepreneurs/women-led agri startups

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# © MANAGE 2023 About the Publication

This research study was conducted by National Institute of Agricultural Extension Management (MANAGE), Hyderabad. The results and findings discussed in the report are based on the study undertaken in seven districts of Uttar Pradesh namely Jaunpur, Pryagraj, Kanpur Nagar, Kanpur Dehat, Kannauj, Barabanki and Behraich.

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### Foreward



Digital financial services have expanded opportunities for millions of women across the globe. More than 240 million more women now have an account with a financial institution or mobile money service, compared to 2014. Through this increased engagement in the formal economy, women's resilience to financial, economic and health shocks is improving. However, there remains much work to do to achieve

gender equality in financial services. Approximately one billion women do not have formal financial services, due to persistent barriers in access to identification documents, mobile phones, digital skills, financial capability, as well as inappropriate products and more. Endorsed by G20 finance ministers, the report outlines 10 policy options to enable G20 members and other governments to rapidly work towards digital financial inclusion of all women. These will not only drive women's greater economic participation but will also speed up economic recovery.

In order to create a long-lasting and robust recovery, I believe that this report will serve as a call to action for all the stakeholders to reduce gender gap. A key objective of their policies and practises. Considering that gender equality is currently more necessary than merely a choice.

I appreciate MS. Pragati Shukla, MANAGE intern and ex- consultant MANAGE, Hyderabad for selecting the relevant topic " Assessment of Digital and Financial Inclusion of women farmers/ entrepreneurs/women-led agri startups" and collecting data from the field. Let me express my gratitude to Dr. Veenita Kumari, Deputy Director (Gender Studies), MANAGE, for helping her choose the suitable themes, use proper research methods to gather pertinent data, analyze it, and advise on the best course of action. Because helping the women in digital & financial inclusion is to invest in economic inclusion of country.

Shulay-

(P. Chandra Shekara)

19<sup>th</sup> April, 2023

## Acknowledgment

Digital and Financial Inclusion of women is important for economic inclusion of country. As India progresses towards its G20 Presidency in 2023, the country needs targeted policies in place to address the existing gender gap in digital and financial inclusion and drive the agenda forward in G20. It will help India to have the right policies to attain the Sustainable Development Goals.

I immensely thank Dr. P. Chandra Shekara, Director General, MANAGE for his leadership and support during the study. Also, I extend my sincere thanks to Dr. Veenita Kumari, Deputy Director (Gender Studies) for guiding and facilitating to conduct field survey. It was all her conscientious supervision, valuable suggestions, kindness, untiring assistance, judicious technical support. I will always be proud of having had the chance to work under her mentorship.

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My heartfelt gratitude to all the women from FPO/ enterprise/ farmers of all seven districts who spared their precious time and provided valuable information related to the study.

Selfless love is the dearest one on this planet, I can't express more word of thanks to my parents, Sri. Purushottam Shukla and Smt. Alka Shukla, my younger brother Abhay Shukla with whose affection, support this study scarcely have been accomplished.

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19<sup>th</sup> April 2023

Pragati Shukla

LIST OF SYMBOLS AND A	<b>ABBREVIATIONS SYMBOLS</b>
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Symbols	Abbreviation	
%	Percentage	
et.al.	And other people	
Fig.	Figure	
i.e.	That is	
Rs.	Rupees	
S.No.	Serial No.	
No.	Number	
GOI	Government of India	
OECD	Organization for Economic Cooperation and Development	
NABARD	National Bank for Agriculture and Rural Development	
TOI	Times of India	
FPO	Farmer Producer Organization	
FPC	Farmer Producer Company	
ILO	International Labour Organisation	
CSC	Community Service Center	
NGO	Non-Government Organization	

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# Assessment of Digital and Financial Inclusion of women farmers/ entrepreneurs/women-led agri startups

#### ABSTRACT

Financial literacy is defined as a combination of financial awareness, knowledge, skills, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being. A few G20 countries like Australia, Canada, France, Japan and the United Kingdom (UK) have achieved close to 100 percent financial inclusion of women in certain parameters such as account ownership and use of debit/credit cards. India, in 2021, had an insignificant gender gap in terms of account ownership with around 77 percent of women (almost equal number as men) having an account with a financial institution. Skill in the use of digital device and tools is affected by due to lack of access & awareness, less exposure to digital literacy and less skill in the use of digital devices/ gadgets. Purchasing a device/ gadget is still a household decision and women are generally neither a user or a dormant user nor an influencer in the decision making process of purchase of these devices. Womens' didn't know the difference between a PAN card and an ATM card. They prefer to withdraw money through Aadhaar Card from Community Service Center (CSC), which was more convenient to them. Trained women were better knowledgeable of digital and financial inclusion. It is therefore necessary to give hands-on skill to women on digital and financial inclusion so that they become more confident in the use, access and knowledge on these technologies.

#### 1. Introduction

India is a country that is endowed with enormous natural resources, different climates, variety of agricultural landscapes and boasts a distinct environmental and cultural diversity. We have grown up hearing that India is predominantly an agrarian State which is true in a way because even now nearly 55 percent of the country's population is dependent on agriculture and allied sectors for their primary livelihood according to the 2011 census. India is the largest milk producer; ranks second in vegetables and fruits; third in fish, egg, and poultry production in the world; India is the world's largest producer of spices, pulses, milk, tea, cashew and jute; and the second-largest producer of wheat, rice, fruits and vegetables, sugarcane, cotton, and oilseeds. India is also currently the world's 4<sup>th</sup> largest producer of agrochemicals and has the largest livestock population of around 535.8 million—which translated to approximately 31 percent of the world's livestock population in 2019. Additionally, India has the largest land area under irrigation globally. (*Times of India, 2020*)

Thanks to a combination of the social, natural, and economic capital of the country, we are now the world's second-largest food producer country. India is blessed with land, light, water, and labor and Indian companies now produce everything required for agriculture, from seeds, fertilizers, and irrigation equipment to farm machinery and plant health technologies, making this sector a truly aatmanirbhar one. Diversification into high-value crops (fruits and vegetables) and milk, aided by continuous improvements in communication, infrastructure, and innovative techniques, have transformed the agriculture sector into a dynamic enterprise.

Upon imagining an Indian farmer, one will only think of a man, old and impoverished, wearing a dhoti kurta and a pagri, with dark skin wearing, standing against a barren/dry landscape, and looking with hope and despair, having incurred losses, and bearing the wrath of climate extremes. Often, it is the man who represents this sector and women seldom find a place in popular media or imaginations even after forming the core of this sector and investing an equivalent amount of blood and sweat to bring food to our tables. **Down to Earth magazine** reported that around 80 percent of the farm work is undertaken by women in India, which is astonishing and goes against the popular narrative of farmers being largely men. Strange as it may seem, women constitute over 42 percent of agricultural labor in the country but own less than two percent of farmland, which could be attributed to several social norms and rights-related issues. This is an alarming figure and raises several questions on land rights and social inequalities persisting in rural India. Women are not given their share of recognition in Indian farm sector and, therefore, have limited entitlements. While recognition is a key issue, another crucial matter of concern is that of control. Even if a woman owns the land, she does not have control over it; instead, it will be in the hands of a male—her husband or father.

In my brief interaction of farm women of Dharmapur village of Jaunpur, one woman said that women in and around her village perform all the agricultural activities, starting from seed production, sowing, reaping/harvesting, conversion of primary produce to secondary products, to selling the crop in the market. The whole agricultural life cycle, thus, can be performed by women, which establishes the fact that women have a crucial role in agriculture sector and possess the knowledge and skill to run agriculture system by themselves.

**Digital Inclusion:** Digitalization is an important component of an economy's economic development, but it does have an impact on public financial services *(Sehrawat and Giri, 2016)*. The policy is becoming increasingly important for digitalization in many nations, including India. Digitization may help foster high and sustainable development; it will transform the face of Agriculture sector in future, ensuring higher profit for farmers and reducing harm *(Upadhyaya, 2019)*. In low-

and middle-income countries (LMICs), digitisation of agricultural value chains is enabling access to markets, assets and services for smallholder farmers. Digital agriculture solutions, such as digital payments and digital procurement, create efficiencies both for agribusinesses and farmers in the last mile. A study conducted in Gujarat expressed that Akodara Village is recognized as the "*first Indian digital village*." The ICICI Bank sponsored this Village and transformed it into a fully digital village with appropriate infrastructure, guiding the Village towards online transactions, and he says digitalization is the need of the era (*Saxena and Joshi*, 2017). Most people are not using digital transaction system because they were not aware of this system. The expansion of bank branches has not reached the internal part of in the Uttar Pradesh and Bihar which is most important for awareness of financial inclusion education (*Pandey and Raman*, 2012-2013).

Women and girls remain underrepresented across creation, use and regulation of technology. They are less likely to use digital services or enter tech-related careers, and significantly more likely to face online harassment and violence. This limits not only their own digital empowerment but also the transformative potential of technology as a whole—over the past decade, women's exclusion from the digital sphere has shaved \$1 trillion off the GDP of low- and middle-income countries. (*UN Women, 2023*)

In today's increasingly connected world, women are being left behind. A significant gender gap in mobile phone ownership and usage in low-and middle-income countries is hindering growth for the mobile industry that means women are missing out. Successfully targeting women not only advances women's digital and financial inclusion, but unlocks significant growth potential for the mobile industry. (*GSMA*, 2023)

A study conducted by OECD (2018) stated that:

- Gender-based digital exclusion has many causes. Hurdles to access, affordability, (lack of) education , skills and technological literacy, and inherent gender biases & socio-cultural norms.
- Digital technologies offer leapfrog opportunities and help empower women.
- Women have much to gain from boosting their use of digital tools. While going digital can be enabling for all, the digital gender divide means there is important scope for women to extract more value from their use of digital tools.
- Removing obstacles to adult education is important for all workers, and for women in particular. This calls for more flexible opportunities for adults to upgrade their skills and for co-ordination across institutions and actors, including not only education & training institutions, employers, but also social policy institutions.
- ICT skills can help narrow the gender wage gap. Men and women differ in their endowment of skills needed in the digital era. Women in fact, display a relative advantage in ICT task-based skills which can garner relatively higher rewards in labour markets, contributing to lowering of the gender wage gap.
- The gap in entrepreneurship and in start-ups & venture capital (VC) investment point to socio-cultural gender bias

**Financial Inclusion-** Financial inclusion is considered as a key enabler of economic growth and poverty reduction. The term financial inclusion is broadly defined as the access to and use of formal financial services by households and firms, those without such access are financially excluded. Having access to financial services allows firms to invest and households to smoothen their consumption and build capital over time, which leads to improvement in the business environment as well as in people's

livelihoods. But having access to financial services does not guarantee farm women/ Women Agripreneurs/ Women-led FPOs/Women-Led Agri Start-ups can actually use them. The literature on access to finance typically disregard this issue and tend to mix access with the actual distribution of credit. Being able to manage an official bank account can be a challenge for women in informal sector. Around 2 billion adults across the globe remain unbanked and women remain more financially excluded than men, especially in developing countries (*World Bank, 2014; Ghosh and Vinod, 2017*)

According to Organization for Economic Co-operation & Development (OECD) financial literacy is defined as a combination of financial awareness, knowledge, skills, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being (*OECD*, 2012). A study conducted by NABARD and CRIER in 2021, a few G20 countries like Australia, Canada, France, Japan and the United Kingdom (UK) have achieved close to 100 percent financial inclusion of women in certain parameters such as account ownership and use of debit/credit cards. India, in 2021, had an insignificant gender gap in terms of account ownership with around 77 percent of women (almost equal number as men) having an account with a financial institution. This can be attributed to the schemes such as PMJDY. As of August 2022, approximately 55 percent of Jan Dhan account holders were women.

The gender gap in women's access to financial inclusion persists at reprehensible levels. The 2021 Global Findex report indicates a 12.0 percent gap in the usage of bank accounts, with many women using their accounts only for direct benefit transfers. (*Time of India, 2023*).

In India in 2021, 42 percent women had an inactive account compared to only 30 percent men. The difference of 12 percentage points is much higher than the global

average of 5 percent point gap. In terms of owning a debit/credit card, India had the lowest percentage of women at 20 percent in 2021. Despite rapid digitalization in India, there is still significant gender gap in access to mobile and internet usage. Although the percentage of women owning mobile phones increased from 45.9 percent to 54.0 percent between 2015-16 and 2020-21, almost 70.0 percent of Indian women had never used internet. Economic inclusion can lead to financial inclusion and vice versa, gender dynamics hold women back on both accounts. This needs to change. Commercial banks often focus on men and formal businesses, neglecting the women who make up a large and growing segment of the informal economy. Many microfinance institutions (MFIs) have risen to the challenge, focussing primarily on women, but to change the status quo, much more is needed, from formalising MFIs to providing women with financial knowledge. Women tend to contribute larger portions of their income to household consumption than their male counterparts do. Targeting women with financial inclusion can also benefit households, communities and society. (*International Labour Organisation, 2023*).

A study conducted by MSC (Micro Save Consulting) (2022) on **India's blanket** approach to financial inclusion is leaving women behind stated that:

- Develop a National Gender Action Plan
- Put data to optimal use for women
- Change stakeholder's behavior towards women's access to financial services and their use
- Redefine financial inclusion success to include usage, leading to improved financial health

# **Digital Financial Inclusion: Across India**

The percentage of women making/receiving digital payments increased by only 6.0 percentage points from 2017 to 2021. There was also a gender gap of 17.0 percentage points in the use of digital payments between 2018 and 2021. The gender gap also varies across Indian States in terms of (a) access to bank accounts; (b) ownership of mobile phones and access to internet; and (c) use of mobile phones and internet for financial transactions in 2019-20. (*NABARD & ICRIER, 2022*)

- Tamil Nadu had the greatest number of women who had a bank account that they themselves operate.
- Goa had the highest percentage of women who have mobile phone that they operate and use for themselves, and also for financial transactions.

# **Objective of the study:**

- 1. To study knowledge of farm women/ entrepreneurs/ women-led agri startups on digital and financial literacy.
- 2. To analyze the determinants of digital and financial inclusion.

### 2. Review of Literature

**Financial Inclusion-** Srijanani, 2012 concluded in her findings that the expansion of financial inclusion can raise the financial condition and can improve the standard of living of the poor and disadvantaged groups of people.

Barik and Sharma (2019) reported in their analysis that financial inclusion depicts that, among every population group, ownership of bank account has speedily increased from previous time periods. Though there are financial inclusion gaps existing among the different population groups, there is no doubt that a significant amount of progress has been undertaken than the earlier period. The recent government schemes like PMJDY has facilitated the poor and the marginalized people to open a bank account with zero or minimum balance. As a consequence of this, enormous progress has happened in India. This progress has assisted to fill-up the financial inclusion gaps between the different populations groups (i.e., between male and female, poor and rich and young and adult).

According to Global Findex Database (2017) only 20.0% of the Indian adults are able to have saving account in their names. Furthermore, this number declines further in case of poor individuals, female population, rural people, young adults and primary or less educated population groups. Similarly, with regard to access of credit from formal financial institutions, the situation is worse. Only 7.0% of the Indian adults are able to access credit from formal financial system. While considering poor people, women, young adults and primary or less educated population, the number further decreases to 6.0%, 5.0%, 5.0% and 6.0%, respectively.

Deka (2015) concluded in their study that women's financial inclusion through financial literacy is necessary for their growth, development and overall empowerment. Financial inclusion has been suggested to be an essential pre-

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requisite for poverty alleviation, upholding human rights and sustainable development. In a patriarchal society like India, the rights and opportunities are curbed due to lack of financial independence. Financial inclusion as a tool can increase her personal savings, raise her income levels through entrepreneurship and micro-enterprises, using mainstream banking products and services to meet their household needs, accumulation of assets etc. Also, women face multiple levels of exclusion and discrimination. Gender related barriers thus, must be carefully studied and examined in such programs. Women's financial inclusion cannot be over emphasized.

UNSGSA (2015) concluded in their study that women due to gender inequality have literally made no progress in closing the gender gap regarding access to basic financial services. Although the overall number of women and men having access to basic financial services has increased, women still remain nine percentage points less likely than men regarding access to basic financial services.

As per GSMA (2015), some 2.3 billion women do not have internet access all over the world. India is the world's second biggest market for mobile phones, with more than one billion users, yet women make up only 2.0% of internet users in rural areas.

Manta (2019) conducted a study on 'Financial Inclusion and Gender Barriers for Rural Women' and concluded that the attainment of women's financial inclusion will remain elusive unless a gendered approach is adopted by regulators and financial institutions. Rural women all over the world face similar type of barriers to financial inclusion as patriarchal structures are highly prevalent in developing countries. Rural women represent a different market segment of the entire population with diverse features and financial needs. Thus, rural women must be served with different set of financial products and services which are homogenous with their day to day needs. Kumar and Gupta (2019) expressed in their study that digitalization is a powerful instrument for farmers' development. According to this study, other demographic characteristics such as education level, household income, age demographic, and amount of farmland are related to digitalization.

Cnaan, Moodithaya & Handy (2012) concluded in their study that digitalization is a multi-layered notion that requires a comprehensive strategy that considers everything from fundamental financial needs to the use of technical resources to make financial services more efficient.

## 3. Research Methodology

The purpose of this chapter is to explain the various methods and procedure followed during data collection and data analysis.

- 1. Selection of the State
- 2. Selection of the districts
- 3. Selection of the respondents
- 4. Tools of data collection
- 5. Data processing and analysis
- 1. Selection of the State- Uttar Pradesh is a State in Northern India. It is the most populated State in India, as well as the most populous country subdivision in the world. The State is divided into 18 divisions and 75 districts, with the State capital being Lucknow, and Allahabad (Prayagraj) serving as the judicial capital. The State is bordered by Rajasthan to the west, Haryana, Himachal Pradesh and Delhi to the northwest, Uttarakhand and an international border with Nepal to the north, Bihar to the east, Madhya Pradesh to the south, and touches the States of Jharkhand and Chhattisgarh to the south-east.

For data collection, this State was purposively selected as the researcher is a native to this State and very well acquainted with the place and regional languages i.e. Hindi, Bundeli, Awadhi, Kanauji and Bhojpuri.

**2. Selection of the Districts-** Out of 75 districts of Uttar Pradesh, 6 districts were selected puposively i.e. Jaunpur, Pryagraj (previously known as Allahabad), Kanpur Nagar, Kanpur Dehat, Kannauj, Barabanki and Behraich.

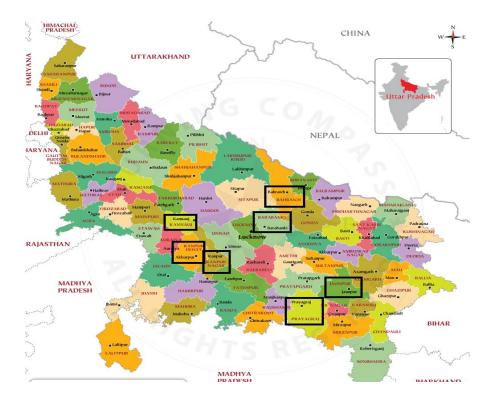


Fig1. Map of Uttar Pradesh

**3. Selection of the Respondents-** For the respondents' selection, SAMETI UP was contacted, as SAMETIs of all the States are an important stakeholders of MANAGE and these organizations work in close coordination. Block office of Hanumanganj (Prayagraj), KVK Daleep Nagar (Kanpur Dehat) and TCL (Trust Community Livelihood) a NGO were also contacted to get initial information for identification of the respondents. Total 85 respondents were contacted for Data collection.

**3.1 Selection of the FPOs-** With the support of SAMETI UP, 32 FPOs were located. Out of these, only 3 were finalized on the basis of inclusion-exclusion criteria:

Table No. 1	(Inclusion-Exclusion	<b>Criteria of FPOs</b> )
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Head	Inclusion	Exclusion
<b>Registration Status</b>	20	12
Run By Gender	7 (Women)	13 (Men)
Locality*	3	4

\* Due to the researcher's time constraint, selection of the FPOs was limited to the proximity and connectivity from one place to another place

The following FPOs were visited and data collected from the women members of these FPOs:

3.1.1 Dharmapur Farmer Producer Organization (Dharmapur, Jaunpur)-

This FPO is run by Mrs. Sandhya Singh. She is a 49 years old lady who completed her post-graduation study in Geography. She started this FPO in 2016. Main aim of this FPO was **to promote natural farming**. There are 1000 members in this FPO, out of which 665 are women.



Plate 3.1.1 At Dharmapur Farmer Producer Organisation, Jaunpur

**3.1.2 Rishit Farmer Producer Organization (Buxa, Jaunpur)-** This FPO is run by Mrs. Durga Maurya, started in 2021. The main objective of this FPO is **to focus on doubling women farmer's income**. There is 225 members in this FPO, out of which 125 are women. All the women members have account under 'PM Jan Dhan Khata Yojana' and PAN Card.



Plate 3.1.2 At Rishit Farmer Producer Organisation, Buxa, Jaunpur

3.1.3. Navunnati Mahila Producer Co. Ltd. (Bahadurpur, Pryagraj) - Due to time constraint, the researcher was unable to visit this FPO in-person. Therefore, with the help of Block office of Hanumanganj, all the board members of this FPO assembled at the Block office, Hanumanganj. This FPO is run by Mrs. Manjula Srivastava, which was started in December, 2022. Currently only 10 women are members in this FPO. All of them have

PAN Card. The main purpose of this FPO is to eliminate all the mediators and directly sell their produce in the market.



Plate 3.1.2 At Hanumanganj Block Office with Navunnati Mahila Producer Co. Ltd. Members (Bahadurpur, Pryagraj)

**3.1.3 Udyami Mahila Farmer Producer Company (Behraich) -** This FPC was recommended by TCL Trust Community Livelihood, an NGO. The members had gathered in Panchayat bhavan of Suratganj Village. Board members of FPC are Sushila Devi, Bharti, Chameli, Nageena, Laxami, Sheela Devi, Neetu Singh, Rajrani. This FPC was started in 2021. The main objective of this FPC is **to purchase production from small and marginal farmers.** 

**3.2.1 Vrihad Gaushala Saruni (Kerakat, Jaunpur) -** This was a Gaushalacum agri-startup where women prepare dhoop sticks with cow dung. Few women got trained in mushroom cultivation and they started mushroom cultivation. This gaushal is run by two women Mrs. Sandhya Singh and Mrs. Suman Devi.



Plate 3.2.1 Mushroom Cultivation done by Mrs. Suman Devi



Plate3.2.2 Women preparing Dhoop sticks from cow dung

- **3.3.1 Madhav Food Pvt. Ltd. (Mandhna, Kanpur Nagar) -** This agri-startup is run by Dr. Deepti Tiwari. She completed her Ph.D in Food Technology. Currently 40 women and 4 men are working in her factory. Products of her start-up are pickle, jam, murabba, jelly, buknoo etc.
  - 2. Selection of the respondents- Farm women, women agri startups, FPO members etc. were the respondents of this study. The respondents were selected who were in either of these category. The respondents were randomly selected from the identified institutions or locale.

SI.No.	Area	No.
1.	Dharmapur Village	10
2.	Buxa Village	5
3.	Sarsaul	15
4.	Maitha	10
5.	Suratganj Village	22
	Total	62

 Table No.2
 Selection of Farm women from different Villages



Plate 3.2.1 With the Farm women of District- Kanpur Dehat



Plate3.2.2 With the Farm women of District- Kannauj (in a training program conducted by KVK, Kannauj)



Plate3.2.3 With the Farm women of District-Barabanki (in a training program conducted by TCL)

# 4. Tools of Data Collection-

**4.1 Knowledge of Farm-women/ Women-agripreneurs/ agri-startuos/FPOs on Digital and Financial Inclusion**- Data was collected with the help of a semi- structured interview schedule. The schedule was created in google form also, so as to facilitate in easy data recording. Data was collected from the target group from Jaunpur, Pryagraj, Kanpur Nagar, Kanpur Dehat, Kannauj, Barabanki and Behraich. Data was collected by conducting survey through a face to face interview with 12 women-led FPO members, 2 womenled agri startup and 62 women-farmers.

**4.2 Determinants of Digital & Financial Inclusion for Farm-women/ Women-agripreneurs/ agri-start-uos/FPOs-** Data was collected through Focused Group Discussion with farm-women.

**5. Data Analysis-** The data collected from the field was further scrutinized to validate the data. Quantitative techniques were employed for analysis of the primary data collected from the respondents during the field survey. A database management system in MS excel version was developed for easy data entry of the information

collected from the field survey. The entered data was analyzed for consistency checks, sorting of open ended questions cross checking as well as validating the data entry. The collected data was statistically analyzed by using suitable simple descriptive statistics (averages, percentages); and the analyzed data was presented in tabulation and graphic form for better interpretation.

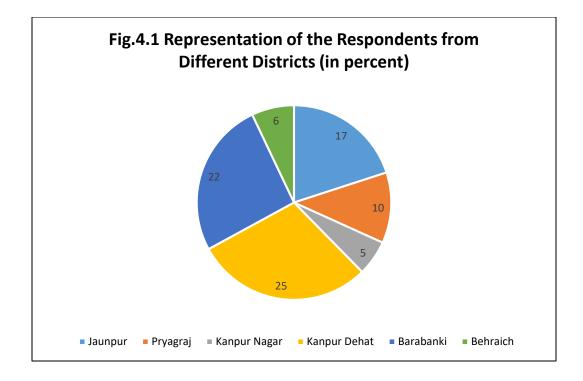
## **4.Results and Discussion**

The collected data were analyzed and logically presented for better comprehension of the findings. This section presents results & discussion under the following sub-heads:

- 1. To study knowledge of farm women/ entrepreneurs/ women-led agri startups on digital and financial literacy.
- 2. To analyze the determinants of digital and financial inclusion.
- **1.1 Districts-** The distribution of the respondents is presented in table 1. It shows that 20.0 percent of the respondents were from Jaunpur district, 11.0 percent were from Pryagraj, 5.88 percent from Kanpur Nagar, 29.41 percent from Kanpur Dehat, 25.88 percent from Barabanki and 7.05 percent from Behraich district.

SI. No.	Name	Frequency	Percentage
1.	Jaunpur	17	20.0
2.	Pryagraj	10	11.0
3.	Kanpur Nagar	5	5.88
4.	Kanpur Dehat	25	29.41
5.	Barabanki	22	25.88
6.	Behraich	6	7.05
	Total	85	100.0

**Table No. 4.1 No. of respondents from different Districts** 



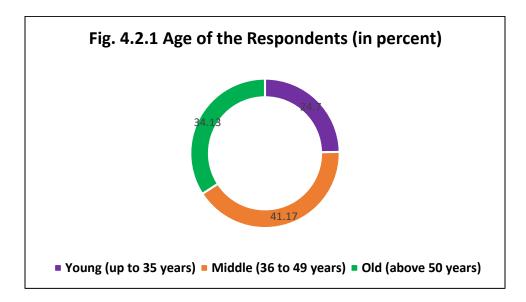
# **4.2 Socio-personal attributes of the respondents:**

Table No. 4.2 Socio-personal attributes of Respondents

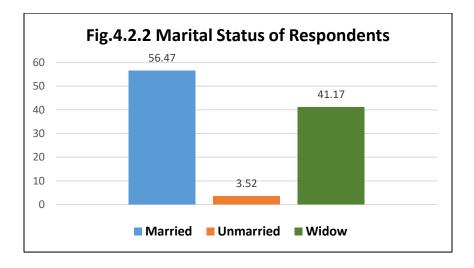
SI. No.	Attributes	Categories	Percentage
1.	Age	Young (Up to 35 years)	24.70
		Middle (36 to 49 years)	41.17
		Old (50 & above years)	34.13
2.	Marital Status	Married	56.47
		Unmarried	3.52
		Widow	41.17
3.	Educational	Illiterate	27.05
	Deckground	Functionally literate	21.17
	Background	Primary School	1.17
		Middle School	17.68
		High School	1.17
		Intermediate	12.94
		Graduation	16.47
		Graduation & Above	2.35

4.	Social	SHG	84
	Participation	Producer Group Farmer's Organization	4 2

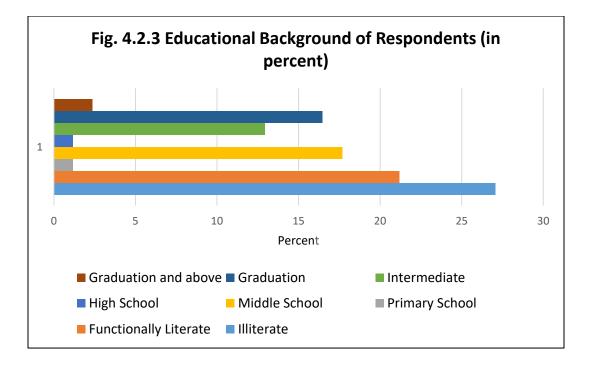
**1.** Age- Majority of the respondents (41.17%) were middle aged, followed by old age and young age with 34.13 percent and 24.73 percent respectively.



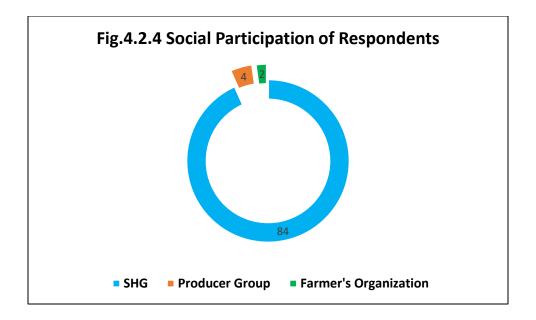
**2. Marital Status-** Majority (56.47%) of the respondents were married followed by widow and unmarried with 41.17 percent and 3.52 percent respectively.



**3. Educational Background-** Mostly (27.05%) of the respondents were illiterate, followed by functional literate, graduate, intermediate, primary, high school and graduation and above with 21.17 percent, 16.47 percent, 12.94 percent, 1.17 percent, 1.17 percent and 2.35 percent respectively. The deep routed culture of male domination and lack of awareness is the main cause for female illiteracy. The result is low literacy rate among women farmers in India.



5. Social Participation- Majority (84.0%) of the respondents were members of Self Help Groups (SHGs). SHGs have created has given women an important sense of self-assurance in their journey to become aatmanirbhar or self-reliant. Observing the crucial role they play, corporations and foundations globally have designed SHG-led programmes to help women achieve economic empowerment. 4.0 percent were member of producer groups whereas only 2.0 percent of them were members of farmer's community.



# Knowledge of farm women/ entrepreneurs/ women-led agri startups on digital and financial literacy

**4.3** Access to digital devices/gadgets- The respondents were asked whether they had access to digital devices/gadgets. The response shows that only 31.76 percent of the respondents had access to smart phone. These women (32.93%) were educated high school and above, while only 3.52 percent of the respondents had access to both smart phone and basic mobile. They are using their husband's or children's mobile. A negligible percentage (4.70%) of the respondents had access to any of the digital device or gadgets i.e. radio, television, landline telephone, mobile phone (basic), smart phone, personal computer, laptop, tablet and internet because low levels of infrastructure, network quality, and coverage disproportionally affect access for women and girls. Their choice of network is often restricted by various factors, such as more basic handsets, fewer choices of SIM, and the cost of data.

women and girls are more price-sensitive than men. Women often have lower levels of income and they almost always come second in a patriarchal social order.

# 4.4 Skill in use of Digital Devices/ tools

 Table No. 5 Respondents' skill on use of Digital Device and Tools

SI.	Statement	Response	
No.			
		Yes	No
1.	Can use a basic mobile	61 (71.76%)	24 (28.23%)
2.	Can make/ receive a call on smart phone	53 (62.35%)	32 (37.64%)
3.	Can read and reply a SMS on smart phone	39 (45.88%)	46 (54.11%)
4.	Aware of all the features of a smart phone	23 (27.05%)	62 (72.94%)
5.	Can switch on and off a PC / Laptop	17 (20%)	68 (80%)
6.	Can search content through internet	19 (22.35%)	66 (77.64%)
7.	Can create an email-id	17 (20%)	68 (80%)
8.	Can open, read and reply to email	12 (14.11%)	73 (85.88%)
9.	Can compose and send emails	10 (11.76%)	75 (88.23%)
10.	<ul> <li>Familiar with these social medias:</li> <li>a. Whatsapp</li> <li>b. Facebook</li> <li>c. Instagram</li> <li>d. Linkedin</li> <li>e. Twitter</li> </ul>	26 (30.58%) 17 (20%) 8 (9.41%) 3 (3.52%)	64 (75.29%)

11.	Do you use any of the social networking	Whatsapp	40
	apps? If yes, list them.	(34.11%)	
		Facebook(15.	
		29%)	
		Instagram(3.5	
		2%)	
12.	Can interact on discussion forum using	16 (18.82%)	69 (81.17%)
	internet		
13.	Can download a video from internet	20 (23.52%)	65 (76.47%)
	through mobile and or desktop/ laptop		
14.	Can upload a video on internet through	25 (29.41%)	60 (70.58%)
	mobile and or desktop/ laptop		
15.	Knows how to withdraw money from	16 (18.82%)	69 (81.17%)
	ATM		
16.	Can print passbook from kiosk	0	85 (100%)
17.	Awareness about these digital payment	22 (25.88%)	63 (74.11%)
	apps		
	Phonepe	12.0(%)	
	G-Pay	10.0(%)	
	Paytm	3.60(%)	
	Bharatpe	0.28(%)	
18.	Have you ever used any digital payment	15 (17.64%)	70 (82.35%)
	method?		
19.	Can check balance through Net	30 (35.29%)	55 (64.70%)
	banking/Paytm/Phonepe/G-Pay/ ATM		
21.	Recording videos on mobile videos	21 (24.70%)	64 (75.29%)

22.	Recording audio and sharing on social	20 (23.52%)	65 (76.47%)
	media		
23.	Knows how to scan a Barcode	19 (22.35%)	66 (77.64%)
24.	Knows how to generate a barcode	0	85 (100%)
25.	Have you heard about	23 (27.05%)	62 (72.94%)
	Rice Doctor		
	IRRI		
	Plantix App?		
	Mean	21	

62.35 percent women can make and receive call on smart phone while, 45.88 percent respondents can read and reply a SMS on smart phone, but the Mean value of skill on use of digital device and tools was 21.0. This may be attributed to lack of access, lack of awareness, less exposure on digital literacy. Factors responsible for digital gender gap was inequitable access to education and discriminatory social norms that exist in the "offline" world and impact digital realities and potential benefits for women. The respondents mentioned that they don't need smart phone, basic mobile is sufficient for them as they only make and receive calls. 27.05 percent women were aware about crop doctor applications. They didn't know any application name but they knew the feature of the application.

## 4.5 Affordability of Digital Devices/ tools

SI. No.	Digital Devices/ tools	Yes	No
1.	Radio	0	85 (100%)
2.	TV	4 (4.70%)	81 (95.29%)
3.	Mobile Phone (Basics)	16 (18.82%)	69 (81.17%)
4.	Smart Phone	28 (32.94%)	57 (67.05%)
5.	Desktop	0	85 (100%)
6.	Laptop	0	85 (100%)
7.	Internet	0	85 (100%)
8.	Modem	0	85 (100%)
9.	Expert System	0	85 (100%)
	Mean	0.56	

Table No. 5 Respondents' Affordability on Digital Device

Mean value of affordability of digital device is 0.56, because, owning a digital device viz. Computer/laptop, tablets, modem, television or smart phones, is still a household decision and women are generally neither the end user nor an influencer in the decision making process of purchase of these devices. Vishvanath (2017) conducted a study which supports the current study findings that digital access and literacy can go a long way in empowering women through meaningful outcomes like self-employment opportunities, access to education and information on health issues in a patriarchal State like Uttar Pradesh.

**4.6 Financial Literacy**- Financial literacy is the ability to understand and effectively use various financial skills, including personal & financial management, budgeting, and investing. When you are financially literate, you have the foundation of a

relationship with money, and it is a lifelong journey of learning. The earlier you start, the better you will be, because education is the key to success when it comes to money.

Financial literacy is an important aspect that can help women gain greater control over their own lives, boost their self-esteem, and provide them with equal standing in the family and community decision-making.

**4.6.1** The respondents were asked about PAN Card. 35 percent of the respondents didn't know about it and 16.77 percent respondents didn't know the difference between PAN Card and ATM card. Only 48.23 percent Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's' account, Majority (54.11%) of the respondents

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**4.6.2** Majority (57.64%) of the respondents save their money in public sector bank because public sector banks provide services in rural areas and through

multiple branches, followed by co-operative banks and post office i.e. 18.82 percent and 17.64 percent respectively.

- 4.6.3 The purpose for opening of bank account was to face uncertainties (36.47%), followed by save money (32.94%), to get loan or credit for their business (20.01%), for Direct Benefit Transfer (DBT) (8.23%) and to make assets (2.35%).
- **4.6.4** Majority (49.41%) of the respondents visit bank occasionally because they preferred withdrawal of money through Aadhaar Card from the Community Service Center (CSC), which was more convenient to them. This may be due to their low literacy rate and lack of confidence in handling financial activities independently. Other reason was that they had trust on the local people operating the CSCs. 24.70 percent of the respondents visit bank once in a month because they are either a FPO member or has a start-up or member of other organization i.e. SHG, Producer Group, Farmer Organization. 21.17% of the respondents visit bank fortnightly and only 2.35 percent of them visit weekly once.

**4.6.5** Majority (54.11%) of the respondents had more than 5 years of relationship with bank because of some government schemes, in which money was credited only in woman's account, followed by 3 years to 5 years and 1 year to 3 years i.e. 28.23% and 17.64% respectively.

- **4.6.6** 57.64 percent of the respondents opened their bank account on her own; they went in a group not accompanied with any family member.
- 4.6.7 Majority (58.82%) of the respondents know how to deposit money in bank; they visit bank weekly or monthly, so they knew how to fill forms and where to submit the forms or in which counter they need to go.

- **4.6.8** Majority (58.82%) of the respondents knew how to withdraw money from bank; they visit bank weekly or monthly, so they knew how to fill withdrawal form, in which counter they need to go.
- **4.6.9** Majority (48.23%) of the respondents were able to converse with bank officials; these women were members of any FPO/ agri-enterprise or a manager or a treasurer in SHGs.
- **4.6.10** 20.0 percent of the respondents had applied for loan but only 3.52 percent of them were aware about interest rate on their loan and loan repayment amount etc. But very few percentage of the respondents preferred loan from SHGs due to less interest rate i.e. 2.0 percent.
- **4.6.11** 14.11 percent of the respondents visited bank in the initial phase only, to understand the loan procedure, how to open a bank account for business purpose and to understand the process etc.
- **4.6.12** 12.94 percent of the respondents had attended a training on digital and financial literacy. These women were from Barabanki District and the training was given by an NGO- Trust Community Livelihood (TCL). These women were well acquainted of the online digital transaction, knew how to scan a QR code? UPI ID and how to check balance and transaction history.
- 4.6.13 41.17 percent of the respondents opened their bank account under 'Pradhan Mantri Jan Dhan Khata Yojana', because of Direct Benefit Transfer (DBT). The Pradhan Mantri Jan Dhan Yojana (PMJDY program) has proven to be a game-changer, not only for including a higher proportion of the population in formal banking channels, but also for reducing the gender gap in account ownership. This has led to the activation of dormant women accounts and a spate of new accounts being opened by women. Families now want women to have and use their accounts, since they want to receive government benefits being sent to women.

### **Determinants of Digital and Financial Inclusion:**

The current study explores the determinants of digital financial inclusion and also examines the influence of demographic characteristics on the accessibility and usage of digital financial inclusion. The study measured the accessibility and usage of digital financial inclusion in relation to selected demographic characteristics such as age, income, education and social-participation. The findings of the study revealed that individual's socio-demographic factors such as age, education, income and social-participation have found a significant influence on the accessibility of digital financial inclusion. In addition, these factors have effect on usage of digital mode of financial transactions such as payments made and receipts through mobile phone or using the internet. The study provides valuable insights to the policymakers and service providers to improve the status of digital financial inclusion.

#### 6. Summary and Conclusion

Gender equality is not only a fundamental human right, but also a keystone of a prosperous, modern economy that provides sustainable inclusive growth. Recognizing that gender equality is essential for ensuring that men and women can contribute fully for the betterment of societies and economies at large, G20 Leaders first committed to "women's full economic and social participation" in Los Cabos in 2012. They then set the ambitious goal to reduce the gender gap in labour market participation by 25.0 percent by 2025 (the 25x25 target) at the 2014 Brisbane Summit, and committed to implementing a set of policies to improve the quality of women's employment and the provision of support services. Since then, as documented by OECD, most of the G20 countries have made progress, but much remains to be done. In 2016, the gap in labour market participation rates between men and women aged 15-64 was around 26 percent for G20 economies.

Today the digital transformation provides new avenues for the economic empowerment of women and can contribute to greater gender equality. The Internet, digital platforms, mobile phones and digital financial services offer "leapfrog" opportunities for all and can help bridge the divide, by giving women the possibility to earn additional income, increase their employment opportunities, and access knowledge and general information. We need to seize this opportunity to foster greater gender equality in the labour market, boost economic growth and build a more inclusive, digital world.

Financial literacy in India is a crucial issue, as many people struggle with basic financial concepts such as budgeting, saving, and investing. Low levels of financial literacy, lack of access to formal financial services, and a lack of financial education in schools and universities are some of the main challenges facing India. The Indian government has launched various initiatives to promote financial literacy, and digital

financial services have increased in popularity. However, many people may lack the knowledge or skills to use these services effectively. Non-governmental organizations (NGOs) are working towards improving financial literacy in India through social and behavior change communication strategies, education programs, and outreach initiatives.

# **Objective of the study:**

- 1. To study knowledge of digital and financial literacy of farm women/ enterpreneurs/ women-led agri startups.
- 2. To analyze the determinants of digital and financial inclusion.

# **Key Findings:**

- Mean value of skill in the use of digital device and tools was 21 which may be due to lack of access & awareness, less exposure to digital literacy and less skill in the use of digital devices/ gadgets. Reason for this digital gender gap was inequitable access to education and harmful social norms that exist in the "offline" world and impact digital realities and potential benefits for women.
- Mean value of affordability of digital device is 0.56, because owning a digital device which can be a computer/laptop, tablets, modem, television or smart phones, is still a household decision and women are generally neither a user or a dormant user nor an influencer in the decision making process of purchase of these devices.
- 35 percent of the respondents didn't know about PAN card and some of them (16.77%) didn't know the difference between a PAN card and an ATM card.
- Majority (57.64%) of the respondents save their money in public sector banks because, public sector banks provide services in rural areas through multiple branches.

- Majority (49.41%) of the respondents visit bank occasionally because they prefer to withdraw money through Aadhaar Card from Community Service Center (CSC), which was more convenient to them. This is due to low literacy rate and lack of awareness on financial literacy and banking sector. Other reason was their trust on local people of the CSCs.
- Women who were trained through NGOs were better knowledgeable of digital and financial inclusion. They had received training on online money transfer from NGO. It is therefore necessary to give hands-on skill to women on digital and financial inclusion so that they become more confident in the use, access and knowledge on these technologies.

## Conclusion

This study reports that poor access & affordability, lack of education coupled with inherent biases and socio-cultural norms curtail women and girls' ability to benefit from the opportunities offered by the digital transformation. In addition, girls' have relatively lower educational enrolment in disciplines that would allow them to perform well in a digital world – such as science, technology, engineering and mathematics, as well as information and communication technologies – coupled with women's and girls' limited use of digital tools, could lead to widening gaps and greater inequality. Individual's socio-demographic factors such as age, education, income and social-participation have found an influence on the accessibility of digital financial inclusion. In addition, these factors have effect on usage of digital mode of financial transactions such as payments made and receipts through mobile phone or using the internet. The study provides valuable insights to the policymakers and service providers to improve the status of digital financial inclusion.

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#### Apendix

#### **Interview Schedule**

#### **Socio-Personal Information**

- 1. Name of the Respondent-
- 2. Block
- 3. District-
- 4. State-
- 5. Age-
- 6. Marital Status-
- 7. Educational Background
  - a. Illiterate Primary School High School
  - b. Graduation

- b. Functionally Literate c.
- d. Middle School
- f. Intermediate
  - Graduation & Above

e.

- 8. Family Size-
- 9. Land Size-
- 10. Occupation- Primary/ Secondary/ Tertiary
- 11. Total yeas of Farming/ Agripreneurship/ Start-ups/ FPOs)-
- 12. Economically Active Family Member- a. Male b. Female c. Both
- **13. Social Participation**

#### 14. Are you member of any social economic organization? Yes/No

S.No.	Organization	<b>Type of Participation</b>	<b>Frequency of Participation</b>
1.	Panchayat		
2.	Cooperative Society		
3.	Youth Club		
4.	Farmer's Organization		
5.	FPOs		
6.	SHGs		
7.	Other (Specify)		

#### 15.Access to digital devices/ gadgets

SI.No.	Digital devices/ Tools	Possess Yes / No
1.	Radio	
2.	Television	
3.	Landline Telephone	
4.	Mobile Phone (Basic)	
5.	Smart Phone	
6.	Personal Computer	

7.	Laptop	
8.	Tablet	
9.	Internet	

# 16.Skill on use of Digital Devices/ tools

SI.No.	Statement	Yes/no
4.	Can use a basic mobile	
5.	Can make/ receive a call on smart mobile	
6.	Can read and reply a SMS on smart mobile	
7.	Are you aware of all the features of a smart	
	phone	
8.	Can switch on and off a PC / Laptop	
9.	Can you search content through internet	
10.	Can you create an email-id	
11.	Can you open, read and reply to email	
12.	Can you compose and send emails	
13.	Do you know about these social medias	
	f. Whatsapp	
	g. Facebook	
	h. Instagram	
	i. Linkedin	
	j. Twitter	
14.	Do you use any of these social networking	
14.	apps? If yes, list them.	
15.	Can interact over discussion forum in	
13.	internet	
16.	Can you download a video from internet	
200	through mobile and or desktop/ laptop?	
17.	Can you upload a video on internet through	
	mobile and or desktop/ laptop?	
18.	Do you know how to withdraw money from	
	ATM?	
19.	Do you how to print passbook from kiosk	
20.	Have you ever heard about these digital	
	payment apps	
	Phonepe	
	G-Pay	
	Paytm	
	Bharape	

21.	Have you ever use any digital payment method? If yes list them	
22.	Are you able to check your balance through Net banking/Paytm/Phonepe/G-Pay/ATM	
23.	Making voice queries to KCC	
24.	Recording videos on mobile videos	
25.	Recording audio and sharing on social media	
26.	Do you know how to scan Barcode?	
27.	Do you know how to generate barcode?	
28.	Have you heard about Rice Doctor/	
	IRRI/Plantix App?	

## 17. Affordability of Digital Devices/ tools

SI.NO.	Digital Devices/ tools	Yes/no
1.	Radio	
2.	TV	
3.	Mobile Phone (Basics)	
4.	Smart Phone	
5.	Desktop	
6.	Laptop	
7.	Internet	
8.	Modem	
9.	Expert System	

- 19. Do you have PAN Card?
- 20. Did you link you PAN Card with bank account?
- 21. Where do you save your money?
- i. IFormal
- a. Bank
- b. Post office
- c. NBFCs (NABARD, Gramin Bank, Rural Bank)
- ii. Informal
- a. Local Chit Fund
- b. Friend
- c. Relatives
- d. SHGs
- e. Any other (specify)

#### 22. Reason for Saving by the Respondents

- i. To invest in education
- ii. To face uncertainties
- iii. To repay the loan
- **iv.** To invest in agriculture
- **v.** For marriage of children
- vi. To buy land
- vii. To make other assets
- viii. To buy livestocks Any other (please specify)

#### 23. Type of bank preferred by women agripreneures/ FPO's/ Farm Women

- i. Public sector bank
- ii. Private sector bank
- iii. Co-operative bank

#### 24. Type of Account

- i. Current Account
- ii. Saving Account
- iii. No frill Account

#### 25. Frequency of bank visit

- i. Weekly twice
- ii. Weekly once
- iii. Fortnightly
- iv. Once in a month
- v. Occasionally
- vi. Never

#### 26. Relationship with bank (in years)

- i. Less than 1 year
- ii. 1 year to 3 year
- iii. 3 year to 5 year
- iv. More than 5 month

#### 27. Purpose of opening bank account

- i. To save money
- ii. To get loan

- iii. For safety of the money
- iv. For receiving bank services
- v. For Direct Benefit Transfer (DBT)
- vi. To get credit for business
- vii. Any other (Please specify)
- 28. Bank account you opened by yourself?
- 29. Do you know how to deposit the money?
- 30. Do you know how to withdraw the money?
- 31. Are you able to talk with bank officials?
- 32. Have you ever applied for loan? If yes how much?
- 33. How much intrest are you paying?
- 34. Initial phase of your business you visited any financial institution?
- 35. Have you ever attend any training related to banking awareness?

# **Glimpse of Data Collection**



With the C.E.O. of Dharmapur FPO



Focus Group Discussion with Farm Women



With the farm women of Buxa (Doing Mushroom Cultivation)



At Rishit Farmer Producer Organization, Buxa Jaunpur



At Madhav Food Pvt. Ltd. Mandhna, Kanpur Nagar



With the member of Udyami Farmer Producer Company, Barabanki



Focus Group Discussion with the Farm Women of Barabanki