A Study on

Transforming Common Service Centers into Village Knowledge Centers (VKCs) for effective delivery of Agricultural Extension Services to Farmers

National Institute of Agricultural Extension Management (MANAGE)

(An Autonomous Organization of Ministry of Agriculture and Farmers Welfare, Govt. of India)

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EXCUTIVE SUMMARY

The research project on "Transforming Common Service Centers into Village Knowledge Centers for Effective Delivery of Agricultural Extension Services to Farmers" provides an in-depth analysis of the potential transformation of India's Common Service Centers (CSCs) into Village Knowledge Centers (VKCs) to meet the evolving needs of rural farmers on agricultural information services. The CSCs are established under the National E-Governance Plan (NeGP) in entire India, serving as critical one-stop-shop service for delivering a range of government departmental services, financial services and few agricultural services. However, this study identifies that a more tailored approach and dedicated agricultural extension services, could significantly benefit India's large rural farming population in the country.

Currently, CSCs provide essential services that range from government-to-citizen (G2C) transactions to business services, but they often lack in providing agricultural services to farmers in rural areas. The report highlights the need for these centers to provide more specialized agricultural services, such as crop advisory, access to modern agricultural practices, market and value-added information, weather forecast and alerts, government schemes information etc. The existing service model of CSCs serves as a robust foundation, but with additional support, these centers could directly address pressing agricultural challenges, such as timely crop management, improved market linkages and critical farming activities.

A major finding of the study is the critical role of Village Level Entrepreneurs (VLEs), who manage CSCs and serve as primary service providers to farmers. However, these VLEs often lack the agricultural training necessary to support farmers effectively. The report underscores the need for regular, specialized training for VLEs, enabling them to assist farmers with crop management, pest control, soil health management, and financial literacy. This training is seen as pivotal for CSCs to evolve into VKCs that can deliver substantial value in agricultural extension.

Furthermore, the report suggests that expanding the range of agricultural services available through CSCs could include additional support for horticulture, livestock, and fisheries to reflect the diverse needs of rural farmers. A focus on providing more real-time market information and price forecasts could enable farmers to make more informed decisions, thereby reducing financial risk and fostering economic stability within rural communities.

The report outlines a roadmap for transforming CSCs into VKCs by addressing key areas such as training, infrastructure, service diversity, and real-time data access. By implementing these recommendations, CSCs could play a central role in empowering farmers, enhancing agricultural productivity, and supporting sustainable rural development in India.

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1. INTRODUCTION

1.1 Introduction

The Government of India formulated the National E-Governance Plan with the vision of providing all government services in an integrated manner at the doorstep of the citizen, at an affordable cost. The NeGP initiatives consist of 27 Central, State and Integrated Mission Mode Projects (MMPs) along with 8 other support components for rapid introduction of e-governance in the country. The NeGP envisioned a three pillar model for delivery of "web-enabled Anytime, Anywhere access" to information and services in rural India. These are: I. Connectivity: State Wide Area Network (SWAN), II. National Data Bank/ State Data Centre (SDC), III. Common Services Centers (CSCs). The NeGP was an enormous step towards making the Government accessible to citizens, in ways that can not only save huge costs to the Government but also make it more transparent and efficient in its day-to-day interactions with the common man. To that effect, the role of Common Services Centers envisaged as the front-end delivery network for Government services assumed great significanc4e.

CSC e-Governance Service India Limited is a Special Purpose Vehicle (CSC SPV) incorporated under the Companies Act, 1956 by the Ministry of Electronics and Information Technology (MeitY). It provides a centralized collaborative framework for delivery of services to citizens through CSCs, besides ensuring systematic viability and sustainability of system. CSCs are positioned as change agents, promoting rural entrepreneurship and building rural capacities and livelihoods. They are also the enablers of community participation and collective action for engendering social change through a bottom-up approach with key focus on the rural citizen. The vision of CSC is to develop CSCs as a dependable, reliable and ubiquitous IT enabled network of Citizen Service Points connecting local population with the government departments, business establishments, banks and insurance companies and educational institutions, with an impact on primary, secondary and tertiary sectors of the country's economy

The Common Services Centres were envisioned as the front-end delivery points for government, private and social sector services to rural citizens of India. The idea is to develop a platform that can enable Government, private and social sector organizations to integrate their social and commercial goals for the benefit of rural populations in the remotest corners of the country through a combination of IT as well as Non-IT services. The aim of the scheme was

not merely to roll out IT infrastructure but to build a network of 100,000+ rural businesses across India. To that effect, the CSC scheme was designed to create a value proposition for all stakeholders and alignment of their economic interests. The CSC Scheme was envisaged to be a bottom-up model for delivery of content, services, information and knowledge that can allow like-minded public and private enterprises - through a collaborative framework - to integrate their goals of profit as well as social objectives into a sustainable business model for achieving rapid socio-economic change in rural India.

It is reported that over 5,96,247 CSCs are functional across India as on January 2024. The number of functional CSCs in Rural areas as well as Urban areas as on January 2024 is 4,73,370 and 1,22,877 respectively. The total number of transactions as on January 2024 is 374.93 lakhs. The number of transactions through Digital Seva Portal (DSP) is 180.33 lakhs. The number of transactions through non-Digital Seva Portal is 194.60 lakhs. The CSCs are operational at Gram Panchayat level in rural areas under various brand names in the states of India. One CSC center cate the services 2-3 villages in the rural aeas.

The basic mandate of these village level IT hubs is to provide IT enabled citizen services in the rural areas. The utility services such as payment of bills to government departments are free to citizens but other Government to Citizens (G2C) services will be provided on fee. The CSCs would provide high quality and cost-effective video, voice and data content and services, in the areas of e-governance, education, health, telemedicine, entertainment as well as other private services. The CSCs officering web-enabled e-governance services in rural areas, including application forms, certificates, and utility payments such as electricity, telephone and water bills, rural banking, health service, education and training, DTP, printing and Internet browsing.

In addition to above citizen services, the CSC guidelines also envisage that a wide variety of content and services that could be offered in the area of Agriculture and allied sector also. The products and services offered by CSCs in Agriculture and allied sectors are CSC e-Agri, Agri Tele-Consultation & E –Pashu Chikitsa, Nursery & Seed Production, Kisan E- Mart, Soil Testing Center, Protected Cultivation & Organic Farming and Drone Pilot Training Facility.

The Common Service Centres can:

1. Provide citizen centric services of the State and Central Government in a convenient and efficient manner through the CSCs across rural India
2. Enhance the accountability, transparency and responsiveness of the government to citizen's needs
3. Provide efficient and cost effective methods of service delivery to departments and agencies
4. Allow private and social sector to collaborate with the government to offer world-class services in rural India
5. Train village level entrepreneurs in business and IT management skills
6. Empower the rural citizen through information dissemination and market linkages

1.2 CSC 2.0 Scheme

Based on the assessment of the erstwhile Common Service Centres Scheme, the Government of India initiated CSC 2.0 Project in August, 2015, under the Digital India. Under the Digital India programme, at least one CSC (preferably more than one) is envisaged in 2.5 lakh Gram Panchayats for delivery of various electronic services to citizens across rural India. This aims to establish self-sustaining network of 2.5 lakhs CSC centres at Gram Panchayat (GP) level under Digital India- Pillar 3-Public Internet Access Programme – National Rural Internet Mission and deliver various citizen centric services. This programme has been implemented by the CSC e-Governance Services India Ltd (CSC Special Purpose Vehicle). CSC 2.0 is a service delivery oriented entrepreneurship model with a large bouquet of services made available for the citizens through optimum utilization of infrastructure already created in the form of SWAN, SSDG, e-District, SDC, and NOFN/BharatNet.

1.2.1 Objectives of CSC 2.0

- Non-discriminatory access to e-Services for rural citizens by making CSCs complete service delivery centres, utilizing the infrastructure already created in terms of other Mission Mode Projects.
- Expansion of self-sustaining CSC network till the Gram Panchayat level – 2.5 lakh CSCs, i.e. at least one CSC per Gram Panchayat, more than one preferred.

- Empowering District e-Governance Society (DeGS) under the district administration for implementation.
- Creating and strengthening the institutional framework for rollout and project management, thereby, supporting the State and District administrative machinery and handholding of VLEs through local language Help Desk support.
- Enablement and consolidation of online services under single technology platform, thereby making the service delivery at CSCs accountable, transparent, efficient and traceable, with a technology-driven relationship between all stakeholders.
- Providing Centralized Technological Platform for delivery of various services in a transparent manner to the citizens.
- Increasing sustainability of VLEs by sharing maximum commission earned through delivery of e-services and encouraging women to join as VLEs.

1.2.2 Services offered by CSCs

Various services are being provided to the people by Common Services Centers (CSCs) in India. The services i.e. G2C (Government to Consumer), B2C (Business to Consumer) and B2B (Business to Business) are successfully provided by Common Service Centers in India.

1. Government to Consumer (G2C): Various Government Services like Birth/ Death Certificate, Insurance Services, NIOS Registration, E-Courts and results services, Electoral servicesForms Download and Submission, Property Tax and Registration, Bus Pass, Railway Ticket, Passport , Licenses, Permit , Subsidies etc. are provided by CSC centers at one place for convenience of citizens.
2. Business to Consumer (B2C): IRCTC, Air and Bus Ticket Services, Mobile and DTH Recharge, English Speaking Course, CSC Bazaar, e-learning etc.
3. Business to Business (B2B): Services like Market Research, Rural BPO (Data Collection, Digitalization of Data) comes under B2B.
4. Educational Services: Various types of Educational Services are also provided by CSC like Adult literacy which is offered through TARA Akshar+, IGNOU Services, Digital Literacy, Maharashtra Knowledge Corporation Limited (MKCL) services, NIELIT Services, NIOS Services.

5. Financial Inclusion: Financial Services like Banking, Insurance and Pension are provided to Citizens in Rural and Remote Areas, particular Women and marginalised Communities, to secure their livelihood.

1.3 The Structure of the CSC Scheme

A typical CSC was to be a retail outlet of services that offered in a structured framework of ICT Infrastructure such as PCs, printers, scanners, digital cameras, projection systems etc. The CSC was established through a bottom-up approach and was customer centric and a single window for all G2C services and other retail functions. The CSC had been visualized as a self-sustaining viable rural business, with neither capital cost nor operating subsidies. The CSC scheme was implemented in a PPP framework. This model envisaged a three-tier structure consisting of the CSC operator called (1) Village Level Entrepreneur (VLE), (2) Service Centre Agency (SCA), who are responsible for a division of about 1000 CSCs. (3) State Designated Agency (SDA), identified by the state government for managing and implementation of CSCs over the entire state.

Village Level Entrepreneur (VLE): The VLE is the key to the success of the CSC operations. A good VLE would be the one who has good entrepreneurial skills, strong social commitment as well as respect within the community. The VLE would manage the CSC business at the ground level. Selection and proper training of the VLE would play a vital role in effective implementation of the CSCs.

Service Centre Agency (SCA): The SCA is the prime driver of the CSC eco-system. The SCA would be the owner of CSC network in pre-defined areas of operations in the state. The SCA would undertake activities such as identifying the required applications and services, harnessing the state network, identifying and training the VLE, establishing the CSC (either directly or through the VLE), supplying, aggregating and updating content and services. The SCA would be supported by the NLSA and the respective State Designated Agency (SDA) to implement the CSC Scheme

The State Designated Agency (SDA): The CSC Scheme was rolled out in the State through the SDA. The SDA played three major roles as follows:

1. Facilitator for policy, regulatory and other relevant changes with the State Government
2. Facilitator for enabling E-Government services

3. Enabler for infrastructure and other support to the SCA

1.4 CSC Special Purpose Vehicle: The CSC SPV is the implementing agency at national level for rollout of CSC 2.0 and the implementation done through the involvement of State-UT Administration/ State Designated Agency (SDA)/ District e- Governance Society (DeGS). This agency coordinates with all concerned Departments or Ministries like Department of Telecom, Ministry of Panchayati Raj, Ministry of Rural Development, which is essential to take forward the expansion of CSC Network for an enhanced process of service delivery. CSC 2.0 envisages development of an integrated universal technological cloud based CSC platform to improve the service delivery.

1.5 Background

India's agriculture sector continues to be fundamental source of employment and livelihood for nearly 60 percent of the country's population. In the face of ongoing economic slowdown amid the Coronavirus pandemic, India's agriculture sector has witnessed a higher output and a renewed focus on digital technology and digitisation of supply and value chain. Indian agricultural outcome leading the recovery, and this provides an opportunity to set the tone to resume and reinvigorate the agenda of doubling the farmer's income. Technology and scientific research that is accessible to farmers and agri-processing sectors will play a fundamental role in achieving this ambitious target.

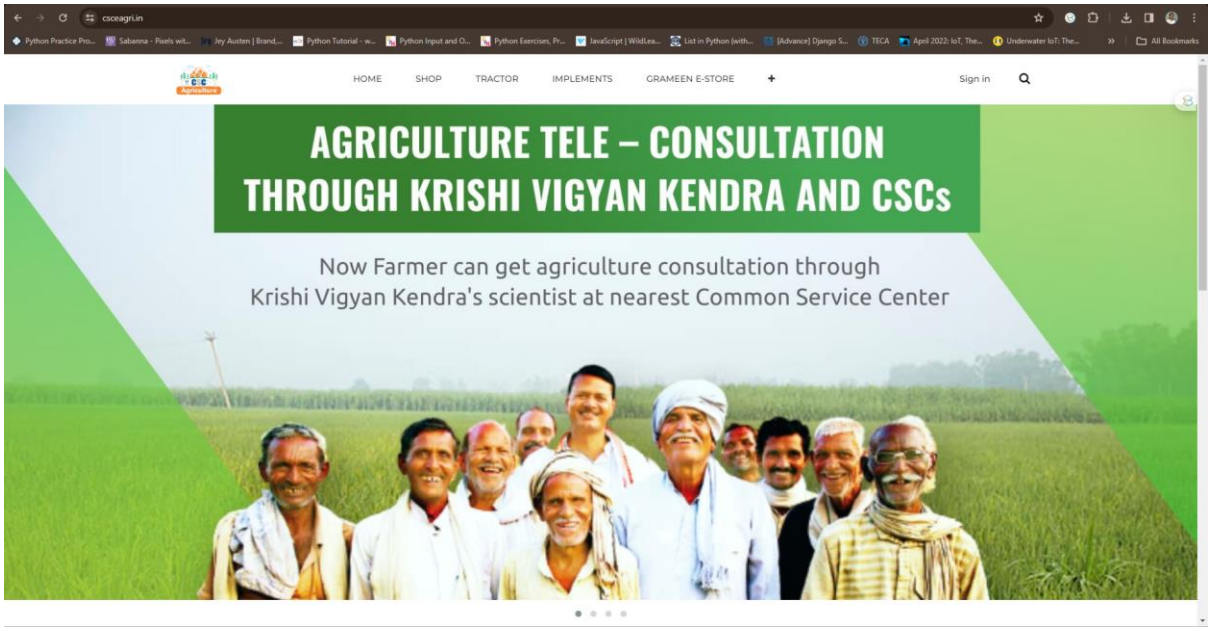
In this scenario, through last mile access to digital technology, Common Services Centers (CSC) can step in to empower farmers with access to agricultural information, farming techniques, agri-inputs, quality seeds, agriculture credit, markets and streamlined supply chains etc. On one hand, CSCs have been involved in disseminating government farmer welfare schemes like PM FasalBima Yojana, PM KisanMaan-Dhan Yojana, Kisan Credit Cards etc, while on the other initiatives like KisaneMart, IFFCO Bazar are providing a platform for farmers to avail quality seeds, products and sell their produce. The CSCs have been focusing on improving digital services to farmers with leveraging technology. The CSCs are offeringfollowing services at present to the farmers.

1. Agricultural Tele Consultation and e-Pashu Chikista
2. Soil Test Centres
3. CSC e-Agri
4. Kisan e-Mart
5. Information on Nursery and Seed Production
6. Farm Machinery on Rent (MOVR)
7. Protected Cultivation & Organic Farming
8. Kisan Credit Card (KCC)
9. Pradhan Mantri Fasal Bima Yojana (PMFBY)
10. Pradhan Mantri Kisan Maandhan Yojana (PMKMY)
11. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)
12. Banking Services

1.5.1 Agricultural Tele Consultation and e-Pashu Chikista

The sole purpose of the Agricultural Tele-Consultation service is to provide quick and best advisory services to the farmers in their regional language. Agriculture forms the backbone of our economy as it act as a source of livelihood for a large section of our population. Farmers form the basic unit of the agricultural community in India. Indian farmers have deep knowledge of agriculture practices and techniques given by their ancestors. However, these days many improved practices and techniques of agriculture are gaining popularity. But the major problems arise when it comes to the dissemination of these technologies. The root cause behind this is a lack of awareness, training, and education. This results in the exploitation of farmers at various levels. To help farmers solve such issues, Common Service Centre offers a very unique platform where farmers can avail advisory services by video conferencing from qualified Agriculture Scientists of the Krishi Vigyan Kendras (KVK). CSC has partnered with the Indian Council for Agricultural Research (ICAR) to provide agriculture related tele-consultations to farmers through KVK. The farmer simply needs to visit the nearby CSC centre and register himself for the consultation to get advisory on various agricultural aspects such as new and improved practices of farming, soil health, cultivation practices, application of fertilizers and pesticides, control of insect, pest and diseases of crops and irrigation. Weather forecast updates and agromet advisory services can be avail through scientists of Indian Meteorological Department (IMD).

Tele-health consultation for cattle health is provided through veterinary doctors on health conditions of animals. E Pashu Chikitsa is a platform offered by CSC which has helped farmers who are involved in Animal husbandry practices we have on-boarded Veterinary doctors on our platform. Farmers can connect with them via video calling. A farmer can visit his nearest CSC centre and seek advisory. Every district has a Veterinary Officer who may sometimes not be ably accessible to common farmers due to lack of time, distance, bad weather, etc. In such conditions, E Pashu Chikitsa comes into play where farmers can connect to Vet Doctors over video call and get advisory at a nominal cost. The VLE charges Rs.5 for using the facility to farmer.



Benefit:

- Capacity development of farmers with provision of proper knowledge
- Delivery of information about modern agricultural technologies to farmers
- Farmers can avail advisory from scientists at any point of time
- Advisory on disease or pest management can be availed by farmers and also weather advisories and marketing prices
- Provides information and guidance about organic farming practices
- Guides the farmers on soil and fertilizer management,

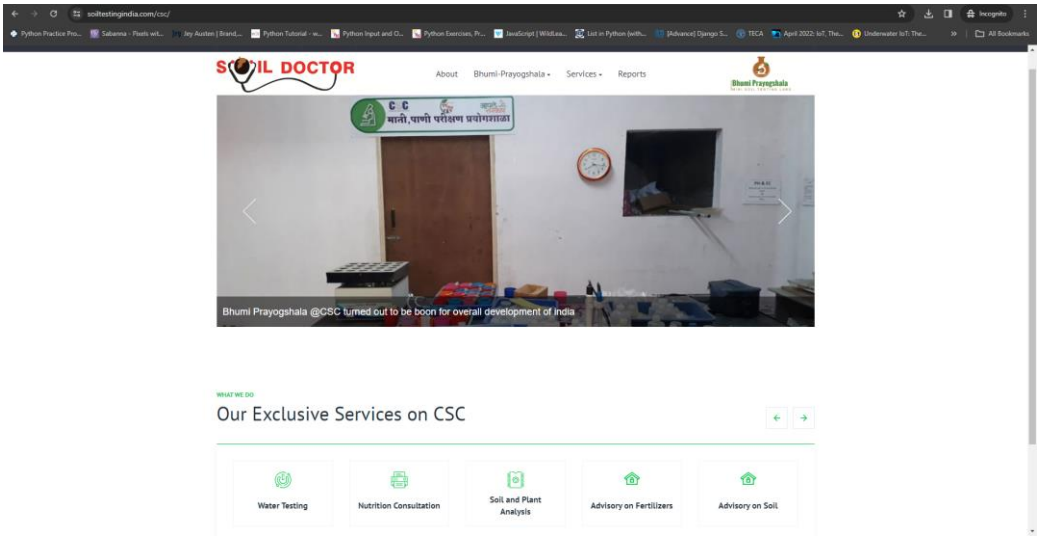
1.5.2 Soil Test Centres

Soil plays a major factor affecting crop production. Therefore to have optimum Crop Production healthy and productive soil is a must. Soil lab set facilities and macro and micro test facilities are available at CSC, providing soil testing kits through Bhumi Prayogshala, which analyse the soil samples of farmer's fields for various macro and micronutrients, acidity, basicity, Organic Carbon, etc. On the basis of reports generated, the necessary recommendation for nutrient application is provided. This helps in the need-based application of fertilizer. This further leads to cost-cutting and ultimately results in a reduction in the overall cost of crop production. This will help the farmer to sustain the fertility level of their soil and the production obtained in the upcoming years.

Benefits:

- Long term fertility
- Crop production

- Agricultural sustainability of Farmer's farm



1.5.3 CSC e-Agri

CSC e-Agri portal is an e-Commerce platform, which brings in all the commodities required by farmers from sowing to harvesting under one umbrella. Besides this, the commodities can be procured through IFFCO eBazar and Kisan eStore. The basic requirements that farmers have are agri inputs like seeds, fertilizers, agrochemicals, agri-implements, advisory services, banking facilities, including cattle feed too. For the supply of agricultural inputs and implements, CSC has partnered with brands like Amul, IFFCO, KRIBHCO, Bayer, Godrej, Agrovet, Ishved, Mahyco, Bhoomi Prayogshala, Kisan eStore, TATA Rallies, MTD, Andreas STIHL and Mahindra Tractors.

Products available:

- Subsidized and non-subsidized fertilizers
- Water soluble fertilizers
- Growth Promoters/Nutrients
- Bio-fertilizers
- Agro-chemicals
- Seeds
- Farm implements/Tractors
- Soil Testing Kits
- Cattle Feed

S.No.	Brand	Details of Brand
1	Amul	"AMUL CATTLE feed" a leading cattle feed brand AMUL , which sells cattle feed to FPOs and VLEs in bags sizes such as 10 kg, 25 kg,30 kg, 50 kg, 65 kg and 70 kgs. It promotes better cattle ` health, milk production and therefore increase Farmers' prosperity.
2	Bayer Crop Science	Bayer Crop Science is leading an organization in the field which sells with Agri inputs such as seeds (Paddy/ vegetables) and agrochemicals on demand.
3	Bhumi Prayogshala	It is mini soil testing laboratory which helps farmers get the soil samples tested and give reports. The FPO/VLEs can order purchase of Soil Testing Machines
4	Godrej Agrovet limited	Godrej Agrovet is a food and agri conglomerate, dedicated to improving the productivity of Indian farmers by innovating products and services that sustainably increase crop and livestock yields. The size of bag package is 50 Kg and 70 kg.
5	IFFCO	IFFCO is leading organization which deals with Agri inputs like fertilizers, subsidized in the State of Chattisgarh, Gujarat, MP, West Bengal , Telangana and Karnataka or non-subsidized in other states ?
6	IFFCO KISAN	IFFCO Kisan Balanced Cattle Feed contains necessary proteins, minerals, and vitamins, helping grow and maintain cattle and increase milk production. It's a leading cattle feed brand which sells cattle feed in sizes such as 10kg, 25kg,30kg, 50kg, 65kg and 70 kg.
7	Tata Rallis	Rallis is leading organisation which deals with Agri inputs such as agrochemicals and seeds
8	IshVed	IshVed is leading organisation which deals with Agri inputs/seeds such as Brinzal, Chilli, tomato, cabbage, Okra, onion,Water Melon, Musk Melon, cabbage, cauliflower, cumber, bottle gourd, bitter gourd, Ridge Gourd, Capsicum, Sponge Gourd etc and bio culture including tissue .
9	KRIBHCO	KRIBHCO is leading organisation which deals with Agri inputs such as seeds (Cottoin, Bajra) and Fertilizers subsidized and non subsidized in the State of Haryana, Punjab, Rajasthan, Maharashtra and MP . Seeds available are in the categories cotton and bajra.
10	MTD	A renowned brands that deals with gardening tools like Wheeled String Trimmer, Ride On Mower Zero Turn, Backpack BrushCutter, Gasoline Brush Cutter, Garden Lawn Mowers, Mini Ride On Mower, Walk Behind Push Mower, Chipper Shredder Vac
11	Andreas STIHL	A leading brands for agri implements selling Chainsaw, Lawn mowers, Leaf blowers
13	Mahyco	Mahyco is leading organisation which deals with Agri inputs such as seeds of tomato, potato, cabbage, onion, radish , carrot, cabbage, cauliflower , wheat , paddy, mustard etc and also Wheat and Mustard
14	IFFCO eBazar	It is a business to customer (B2C) model which deals with agri inputs like seed (vegetables seeds of all kinds) , Water Soluble fertilers (Zinc, Sulphar, Magnize, agnicium, Boran, etc) , bio fertilizers/ organic ,(azotobector, Azo- aspirlum, PsesudoMonas) , agro chemicals (isecticieds , pesticides, weedicides etc), Cattle Feed , Garden Tools, Spray pump, Nano Urea, Growth Promoters to customers without delivery charges.
15	Mahendra Tractors	An association of CSC with Mahendra tractors where VLEs on successful lead conversion (delivery of tractors) can earn a good commission (1% of the Value including CSC share). The target delivery of one tractor per district upto March,2023) .

1.5.4 Kisan e-Mart

CSC Kisan e-Mart is a unique trading platform for farm produce, launched by CSC SPV. The platform leverages technology to connect farmers with buyers through the Village Level Entrepreneurs of CSC. Farmers and buyers are registered on the Kisan e-Mart platform through a fool-proof verification process involving KYC. Once the farmer is registered, the VLE adds the stock of the farmer for sale, quoting a minimum price. The product is then sold for the quoted price or more, depending on the stock and quality. Kisan e-Mart piloted in five districts of Maharashtra and three districts of Bihar.

Benefits:

- The farmer will be paid the full amount of his farm produce without any deduction
- Farmers' agricultural produce will be bought on its embankment
- Farmers' agricultural produce will be priced at market rate.
- The farmer will be paid immediately.
- 0.80% of the total value of the goods will be paid as commission for trading VLE.

1.5.5 Information on Nursery and Seed Production

Nursery is a place where plants are propagated and grown to a desired size. Crop grown by nursery is quite early and fetch higher price in the market. Economically more profitable. The Nursery productions saves land and labor cost. Seed production requires favorable weather conditions as well as the absence of damaging insects. It is mainly done with great precision so that the next harvest is of high quality and quantity. The CSCs provides information on Nursery and Seed production.

1.5.6 Farm Machinery on Rent (MOVR)

Over the years mechanization of farming practices has taken place. Therefore for good production, it becomes a necessity for farmers to use machinery like Harrow, cultivators, threshers, rotavators, seed drills, etc. However, these types of machinery are very costly and unaffordable for small and Marginal farmers. That is where MOVR comes to the farmer's rescue. It is a service where small and marginal farmers can take costly machinery for rent. On the other hand, Farmers who own the machinery can earn by lending their machinery for rent.

1.5.7 Protected Cultivation & Organic Farming

Protected cultivation is a process of growing crops in a controlled environment. It is mainly done to produce exotic and off-season crops to make it available in the market. Organic farming is a production system, which avoids the use of synthetically compounded fertilizers, pesticides, growth regulators, genetically modified organism and livestock food additives. The CSCs provided information Training on Protected Cultivation & Organic Farming,

1.5.8 Kisan Credit Card

The Kisan Credit Card scheme is a Government of India scheme which provides farmers with timely access to credit. The Kisan Credit Card (KCC) scheme was launched in 1998 with the aim of providing short-term formal credit to farmers and was created by NABARD (National Bank for Agriculture and Rural Development). The KCC scheme was introduced to ensure that the credit requirements for farmers in the agriculture, fisheries and animal husbandry sector were being met. This was done by helping them avail short-term loans and provide them with a credit limit to purchase equipment and for their other expenses as well. CSCs provides services of registration of farmers for KCC scheme.

1.5.9 Pradhan Mantri Fasal Bima Yojana (PMFBY)

The Pradhan Mantri FasalBima Yojana (PMFBY) is a flagship scheme launched by the Government of India in 2016. The PMFBY scheme aims at protecting farmers' investment from natural adversity as well as ensuring the continued flow of capital within the agricultural economy. The scheme envisages coverage of a maximum number of farmers in the ambit of crop insurance. The scheme has been recently wherein it has been made voluntary for all

farmers. Earlier it was mandatory for loanee farmers who have availed of KCC and other seasonal agricultural operational loans. Subsequently, the role of CSCs will be very vital role in farmer enrolment and enhancing the outreach of the scheme.

1.5.10 Pradhan Mantri Kisan Maandhan Yojana (PMKMY)

The government of India has introduced a voluntary and contributory pension scheme for landholding Small & Marginal Farmers to provide them social security and a healthy and happy life age after they reach their old age. All Small and Marginal Farmers having cultivable landholding up to 2 hectares falling in the age group of 18 to 40 years, whose names appear in the land records of States/UTs as on 01.08.2019 are eligible to get benefit under the Scheme.

PMKMY is a contributory pension scheme where a monthly pension of Rs 3,000 will be provided to all eligible small and marginal landholding farmers, who make a monthly contribution of Rs. 55 to Rs. 200 till the age of 60 years. The CSCs provides services like Registration, Donation, Reprint, Revival and Death/Self Exit services to farmers.

1.5.11 Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

In December 2018, the Government launched Pradhan Mantri Kisan Samman Nidhi Yojana (PM-KISAN) scheme which has provided a direct cash benefit to more than 9.9 crore farmers. PM-KISAN provides income support of Rs. 6,000 per year to all small and medium land holding farmer families in three equal instalments directly into their bank accounts. The CSCs provides the registration of Farmers and also EKYC of farmers to benefit the scheme.

1.5.12 Banking Services to Farmers

In rural areas it is unfavourable to have a full-fledged Bank facilities. CSC has a tie up with major Banks of India, so farmers can open Bank accounts and provide all major facilities that bank provides such as debit, credit, loan sanctioning etc. This helps farmers to generate income and help to digital mode of banking. This also helps farmers to have easy transactions

on banking services. The Bnnk BC helps farmers to take agricultural loans from the banks to meet expenses on farming.

1.6 Need

Despite these advancements in offering rural communities IT-enabled agricultural and related services, there is a need for a comprehensive understanding of farmers' specific needs, the efficacy of current services, and the integration of stakeholders for improved service delivery. The farmers need a quick services on day-to-day farming issues such as availability of inputs, marketing opportunities, advisory support, and more particularly availing subsidies of various scheme offered by agri and allied sector, so the farmers could save lot of time and money. Hence, it is highly appropriate to study the various agriculture and allied sector services that can be offered through Common Service Centers as gateway to the farmers, by transforming these Common Service Centers in to Village Knowledge Centers (VKCs). The present study aims to assess the various needs of farmers, usefulness and accessibility of CSC services, and developing a standardized, integrated mechanism involving State Departments of Agriculture, State Agricultural Universities, Krishi Vigyan Kendras, and e-Governance Departments. The research helps to enhance the farmer-centric approach of CSCs, ensuring that the services are specific to various problems that farmers encounter across different locations.

2. RESEARCH METHODOLOGY

2.1. Objectives of the study

1. To study the I.T. enabled Agricultural and allied Services (ITeAS) that delivered through CSC to cater the needs of farmers at village level.
2. To study the satisfaction level of farmers on agricultural services available through CSCs and other needy agricultural services to be available at CSCs.
3. To study the training needs of Village Level Entrepreneur (VLE) to operate the agricultural services through CSCs.
4. To suggest a mechanism to deliver efficient I.T. enabled Agricultural Services (ITeAS) by VLEs to farmers through CSCs.

2.2 Methodology

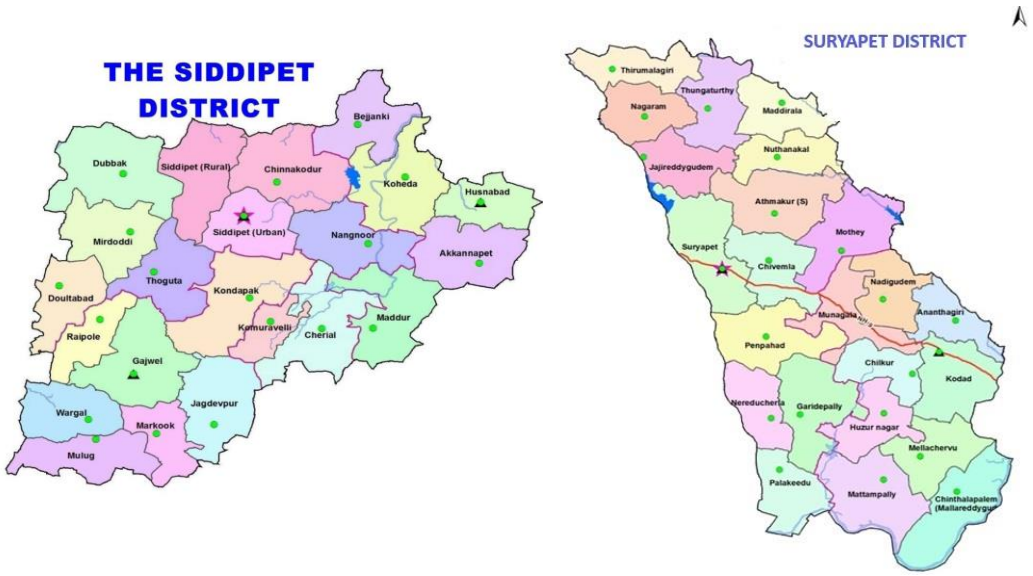
The Research Project is highly action and process oriented, and needs participatory approach to understand the agricultural services available through CSCs gateway and satisfaction level of farmers on the services. The agricultural services available across the country in the major CSCs. The Telangana state also implementing agricultural services through CSCs in Suryapet and Siddipet districts at present. This study confines to Siddipet and Suryapet districts of Telangana where CSCs are operationalized with agricultural services. Four mandals of Siddipet and Suryapet district are selected for the study purpose. A total of 120 famers covered as sample from these two districts. From each block 2 CSCs are randomly selected for the study. Ten farmers from each CSC taken as sample and interviewed and data collected in a semi-structure questionnaire. Thus the sample size is 120 (10 CSCs x 12 farmers = 120 farmers covered). MANAGE investigators interacted with farmers to understand their satisfaction levels and further information needs and also their willingness for payment of services.

The methodology will thus include:

a) Data collection using Structured Questionnaire.
b) The data also compiled from online resources as secondary sources for data collection.
c) Group discussions with farmers and CSC operators.
d) Discussions with the stake holders of service providers.

2.2. Sample Design

A representative sample drawn from the districts of Siddipet and Suryapet of Telangana State, where CSCs are operationalized and providing agricultural services to farmers. In Siddipet district comprises of 22 mandals/blocks and Suryapet district has 23 mandals/blocks. Each block has 8-10 CSCs established.



2.3. Sampling Technique

The researcher adopted simple random sampling technique for this study. A simple random sample is a randomly selected sample, which is a subset of a population. In this sampling method, each member of the population has an exactly equal chance of being selected that best represents the entire population being studied. To minimize sample selection bias and ensured that all the segments of the population are covered in the study.

2.4. Sample Size

The Siddipet district has 22 mandals/blocks. For the purpose of sample selection, two mandals selected viz. Bejjanki, Chinakoduru from Siddipet district and two blocks from Suryapet district viz. Nadigudem and Mujnagala. From each block 2/3 CSC were selected randomly and from each CSC area 12 farmers were selected for the study purpose. A total of 120 farmers from 4 blocks and 10 CSCs covered for the study (10 CSCs x 12 farmers = 120 farmers covered).

Table 2.1: Details of the Sample size selected from Telangana

S.No	District/Block	No. of CSC	No. of Farmers selected in each CSC area	Sample size
1	Suryapet/Nadgudem	2	12	24
2	Siddipet/Munagala	3	12	36
3	Siddipet/Bejjanki	2	12	24
4	Siddipet/Chinnakodur	3	12	36
	Total	10		120

2.5 Data Collection

The study is exploratory in nature and based on primary and secondary data.

2.5.1 Primary Data

To study the objectives of the research problem, primary data collected through questionnaire method. The method of investigation through a survey on farmers visiting to CSC centers in Siddipet and Suryapet districts of Telangana state. The agricultural services offered by CSC and the satisfaction of farmers on the services collected using this instrument from selected farmers accessing the services of CSCs. The sample was drawn from 5 mandals/blocks and 10 CSCs centers operationalized in the district. Data collection included the following:

- A questionnaire method was employed on a sample selected from CSCs.
- Physical observations and discussions were held with farmers at CSCs to know the agricultural services and the satisfaction of farmers and the mechanisms to improve the citizen services.

2.5.2 Secondary Data

The secondary data gathered from various sources to support the analysis of primary data. The secondary data collected through the following:

- Annual reports and monthly reports of CSC agency, Government of India.
- Published literature such as books, Periodicals, articles and newspaper coverage on eGovernment, information communication technology.
- Research reports and publications
- Internet – web resources

2.6 Limitations of the Study

The study was confined to limited jurisdiction of Siddipet and Suryapet districts of Telangana state and also a selected representative sample drawn from CSC centers. Hence, the recommendations and suggestions will be mainly applicable to this context and may have limitation of the generalization to the whole population.

3. RESULTS AND DISCUSSION

This chapter discusses the analysis carried out on the information generated through primary data collected from the farmers and CSC operators (VLEs) from selected villages of Suryapet and Siddipet districts of Telangana state. This research study, which is related to agricultural services at Common Service Centers attempted to understand the (1) Access to agricultural information services by farmers, (2) The usage and awareness of agricultural services available at CSCs, (3) The quality of services and satisfaction of farmers from CSC agricultural services, (4) Expected agricultural services to be available at CSC. The study also focused on CSC operators known as Village Level Entrepreneur who is the functional link with farmers and agricultural services of CSCs and assessed the how present agricultural services helping farmers, effectiveness, the capacity building requirement, duration of the training and agricultural services needs to be available from CSCs to farmers. Towards achieving the aforesaid objective, this study used a questionnaires for farmers and also for CSC operators that captured the perceptions of the respondents on the above variables.

This study also set out to understand the demographic variables including Age, Gender, Education, farming experience, digital literacy, Frequency of Visits to CSC, the Source of agricultural information, and challenges in agricultural activities are significantly associated with the farmers' perception on the access to agricultural information services at CSC, their quality and satisfaction.

3.1 Demographic data analysis of farmers

The demographic data of farmers on Gender, Age group, Level of education, digital literacy, farming experience, land holding, annual income is analysed and presented in the following tables and graphs.

Gender: The farmer's gender was asked to know the classification of visitors to CSC by gender. The responses are presented in the following table 3.1.

Table 3.1: Gender-wise classification of farmers visiting CSCs

	Male	Female	Total
Gender	119	1	120
Total percentage	99.2	0.8	100

It is noticed from Table 3.1 that nearly all (99.2%) of the farmers visiting the CSCs are male, whereas only 0.8 per cent are female.

Age Group: The farmer's age group was asked to know the classification of visitors CSC by various age group. The responses are presented in the following table 3.2.

Table 3.2: Age-wise classification of farmers visiting to CSCs

	18-25 Years	26-45 Years	46-60 Years	Above 60 years	Total
Age Group	7	70	36	7	120
Total percentage	5.8	58.3	30	5.8	100

Above data shows that more than half (58.3%) of farmers visiting CSCs belong to the age group of 26-45 years, followed by 30 per cent in the 46-60 years age group. A smaller proportion of farmers are in the 18-25 years and above 60 years age groups, both accounting for 5.8 per cent each.

Level of Education: The farmer's education qualification was asked to know the classification of visitors to CSCs by level of education. The responses are presented in the following table 3.3.

Table 3.3: Classification of farmers on their education

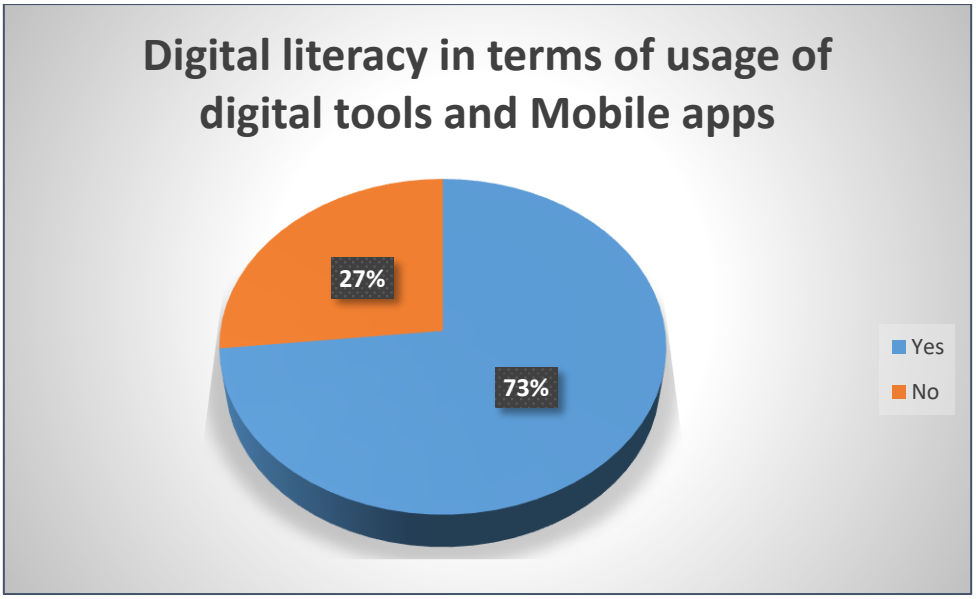
	Illiterate	Primary Education (up to 7th class)	Secondary Education (8th to 10th class)	Intermediate/ Diploma	Degree and above	Total
Level of Education of farmers	31	27	32	12	18	120
Total percentage	25.8	22.5	26.7	10	15	100

The data from Table 3.3 shows that nearly one-third (26.7%) of the farmers visiting CSCs have completed secondary education, followed by 25.8 per cent who are illiterate. A slightly smaller proportion (22.5%) have primary education, and 15 per cent hold a degree or higher qualification. A very less number (10%) of farmers have intermediate or diploma-level education.

Digital Literacy: The farmer's digital literacy in terms of use of digital tools and operating mobile apps was asked to farmer's awareness on digital literacy. The responses are presented in the following table 3.4.

Table 3.4: Farmer's digital literacy on usage of digital tools and mobile apps

	Yes	No	Total
Digital literacy in terms of usage of digital tools and Mobile apps	88	32	26.7
Total percentage	73.3	26.7	100



The results from Table 3.4 disclosed that the majority (73.3%) of farmers are digitally literate in terms of using digital tools and mobile apps, while 26.7 per cent of farmers are not familiar with these technologies.

Farming experience: The farmer's farming experience was asked to know the classification of farmers visiting to CSCs by farming experience. The responses are presented in the following table 3.5.

Table 3.5: Classification of farmers on the farming experience (in years)

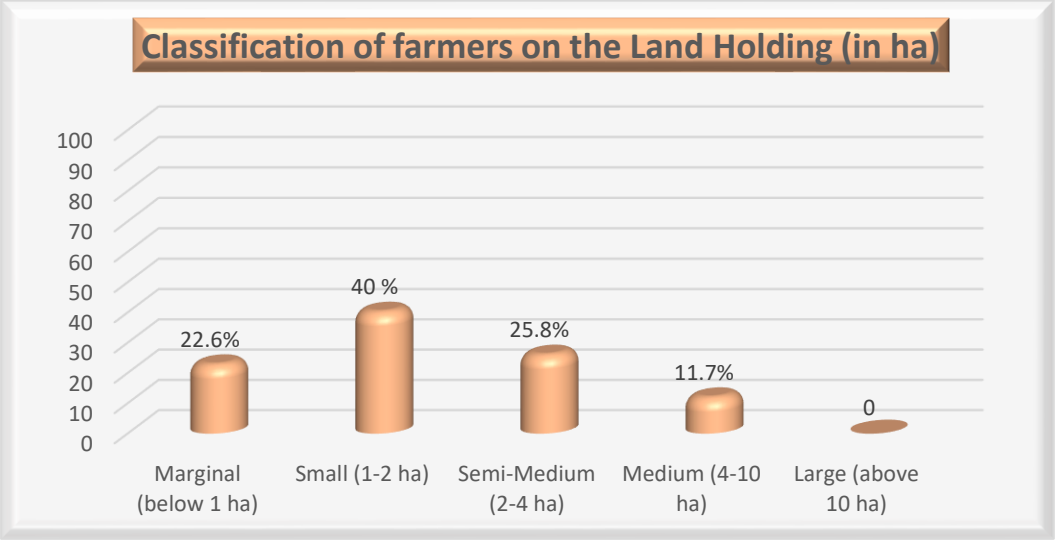
	Less than 5 years	5-10 years	11-20 years	More than 20 years	Total
Farming experience (in years)	6	35	57	22	100
Total percentage	5	29.2	47.5	18.3	100

Data with respect to Table 3.5 indicates that nearly half (47.5%) of the farmers have 11-20 years of farming experience, while 29.2 per cent have been farming for 5-10 years. A smaller proportion (18.3%) have more than 20 years of experience, and a very less number (5%) have less than 5 years of farming experience.

Land holding: The farmer's land holding size was asked to know the classification of farmers by their land holding (in ha). The responses are presented in the following table 3.6.

Table 3.6: Classification of farmers on the Land Holding (in ha)

	Marginal (below 1 ha)	Small (1-2 ha)	Semi-Medium (2-4 ha)	Medium (4-10 ha)	Large (above 10 ha)	Total
Land holding (in ha)	27	48	31	14	0	120
Total percentage	22.6	40	25.8	11.7	0	100



The findings from Table 3.6 reported that the largest proportion (40%) of farmers have small landholdings (1-2 ha), followed by 25.8 per cent who possess semi-medium landholdings (2-4 ha). Marginal farmers (below 1 ha) make up 22.6 per cent, while a very less number (11.7%) of farmers have medium-sized landholdings (4-10 ha). No farmers reported having large landholdings (above 10 ha).

Annual Income: The farmer's annual income was asked to know the classification of farmers by their annual income. The responses are presented in the following table 3.7.

Table 3.7: Classification of farmers on the type of agricultural activities engaged

	Less than 3 lakhs	3-5 lakhs	More than 5 lakhs	Total
Annual income (in Rupees)	72	35	13	120
Total percentage	60	29.16	10.83	100

The data with respect to Table 3.7 reveals that the majority (60%) of farmers have an annual income of less than 3 lakhs, while nearly one-third (29.16%) earn between 3-5 lakhs. A very less number (10.83%) of farmers have an annual income of more than 5 lakhs.

Type of agricultural activities: The farmer's engagement of various types of agricultural activities was asked to know the classification of farmers by their activities. The responses are presented in the following table 3.8.

Table 3.8: Classification of farmers' involvement in various types of agricultural activities

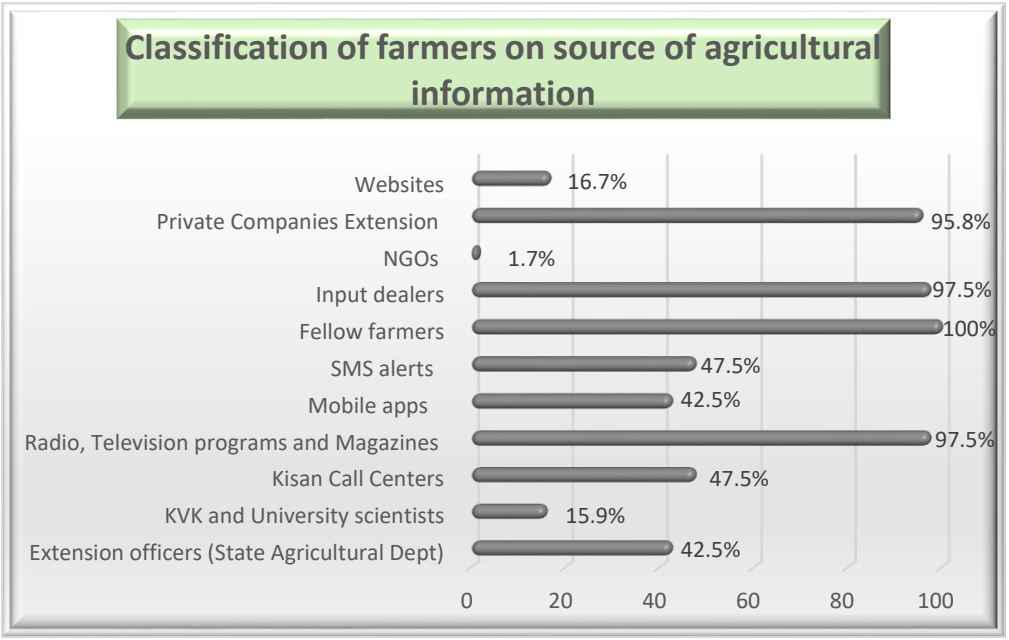
S.No.	Type of activities engaged by farmers	No. of farmers	Percentage
1.	Farming (Agriculture and Horticulture	120	100
2.	Livestock	48	40
3.	Fisheries	0	0

The findings from Table 3.8 indicate that all (100%) of the farmers are engaged in farming activities, including agriculture and horticulture. Additionally, a significant proportion (40%) of farmers are involved in livestock activities, while no farmers reported engagement in fisheries in our sample area.

Source of agricultural information: The farmer accessing information related agriculture and allied sector from various sources was asked to know the classification of farmers by source of information on agricultural activities. The responses are presented in the following table 3.9.

Table 3.9: Classification of farmers on source of agricultural information

S.No.	Source of agricultural information	No. of farmers	Percentage
1.	Extension officers (State Agricultural Dept)	51	42.5
2.	KVK and University scientists	19	15.9
3.	Kisan Call Centers	57	47.5
4.	Radio, Television programs and Magazines	117	97.5
5.	Mobile apps	51	42.5
6.	SMS alerts	57	47.5
7.	Fellow farmers	120	100
8.	Input dealers	117	97.5
9.	NGOs	2	1.7
10.	Private Companies Extension	115	95.8
11.	Websites	20	16.7



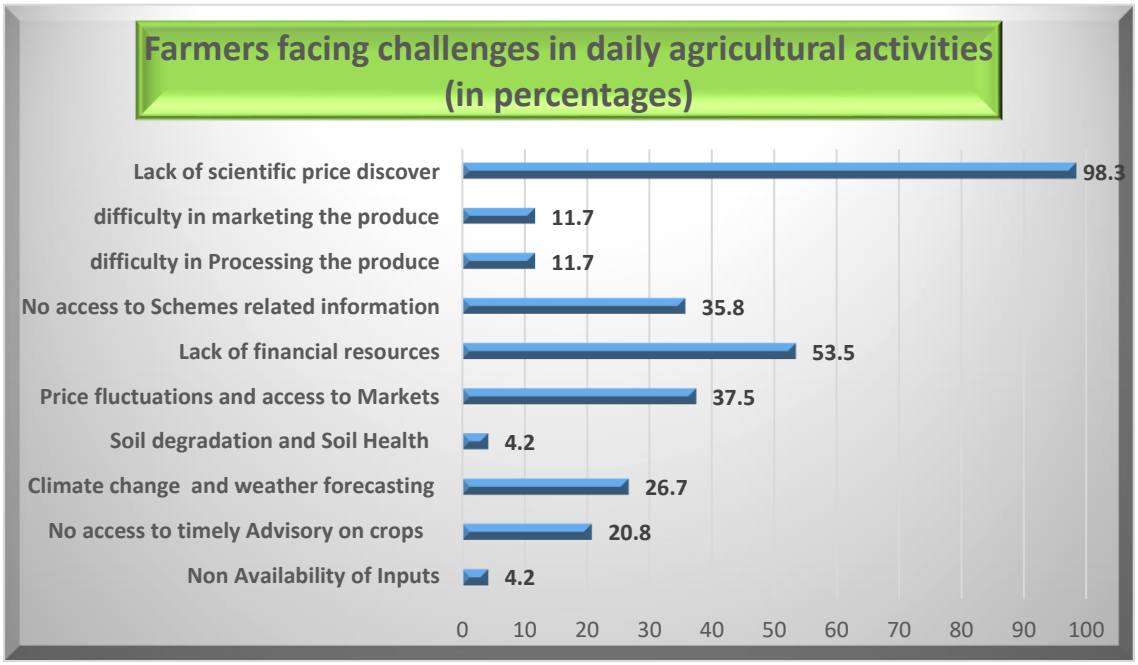
The data with respect to Table 3.9 shows that all farmers (100%) rely on fellow farmers as their source of agricultural information. Additionally, a very large number of farmers

(97.5%) utilize radio, television programs, and magazines for information, as well as input dealers (97.5%). Private companies' extension services are accessed by a significant proportion of farmers (95.8%). Kisan Call Centers are used by nearly half (47.5%), while extension officers from the State Agricultural Department are relied upon by 42.5 per cent of the farmers. Mobile apps also have a usage rate of 42.5 per cent. Other sources include KVK and university scientists (15.9%), websites (16.7%), and a very less number (1.7%) rely on NGOs for agricultural information.

Challenges in daily agricultural activities: The farmer challenges facing in daily agricultural activities was asked to know the classification of farmers by source of information on challenges. The responses are presented in the following table 3.10.

Table 3.10: Classification of farmers challenges facing in daily agricultural activities

S.No.	Challenges	No. of farmers	Percentage
1.	Non Availability of Inputs	5	4.2
2.	No access to timely Advisory on crops	25	20.8
3.	Climate change and weather forecasting	32	26.7
4.	Soil degradation and Soil Health	5	4.2
5.	Price fluctuations and access to Markets	45	37.5
6.	Lack of financial resources	64	53.5
7.	No access to Schemes related information	43	35.8
8.	difficulty in Processing the produce	14	11.7
9.	difficulty in marketing the produce	14	11.7
10.	Lack of scientific price discover	118	98.3



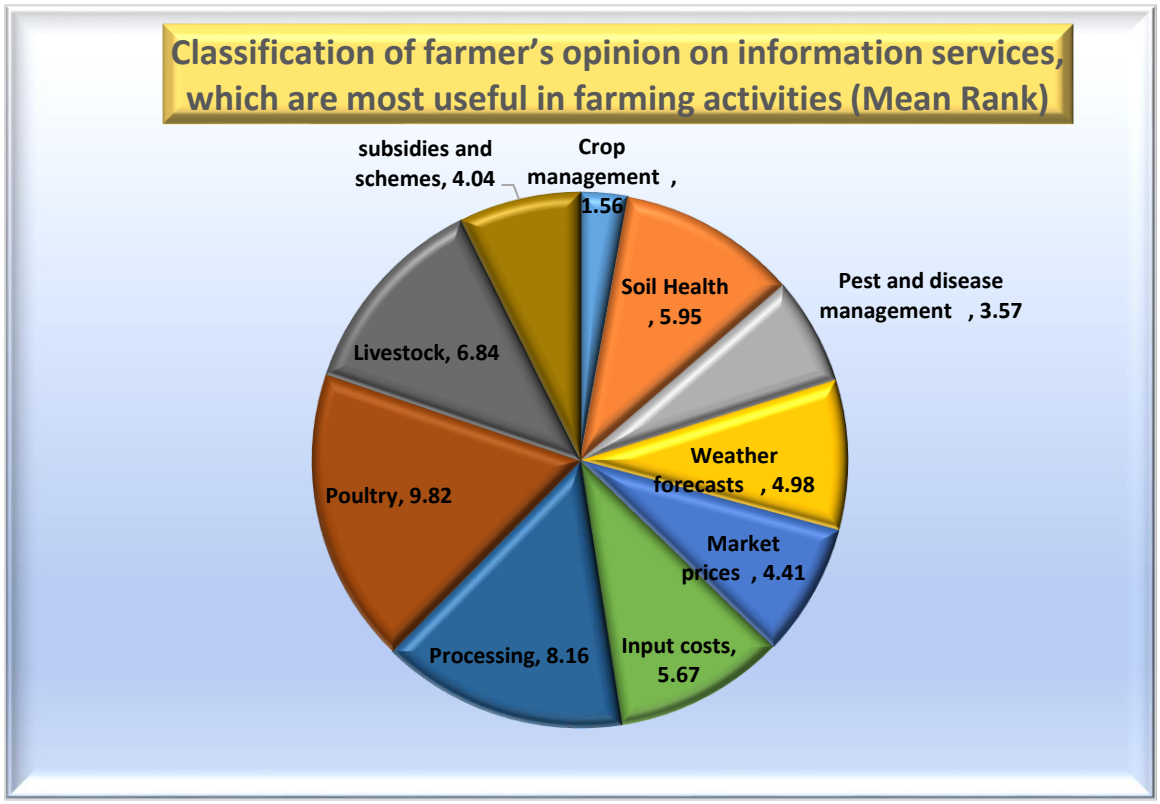
It is noticed from Table 3.10 that more than 50 per cent of farmers (53.5%) face challenges due to a lack of financial resources, followed by 37.5 per cent who experience difficulties related to price fluctuations and access to markets. Moreover, access to schemes and information is a challenge for 35.8 per cent of farmers, while climate change and weather forecasting affect more than one fourth (26.7%) of farmers. Additionally, 20.8 per cent of farmers do not have access to timely advisory on crops. A very less number (4.2%) face challenges related to the non-availability of inputs and soil degradation and soil health, while 11.7 per cent find difficulty in processing and marketing their produce. Finally, an overwhelming majority (98.3%) express concern regarding the lack of scientific price discovery.

Information most useful in farming: The farmer opinion on information services which is most useful in farming activities was asked to know the classification of farmers by most useful information on order of preference. The responses are presented in the following table 3.11.

Table 3.11: Classification of farmer's opinion on information services, which are most useful in farming activities (Order of Preference)

S.No.	Information services	Mean Rank	Rank
1.	Crop management	1.56	1
2.	Soil Health	5.95	7
3.	Pest and disease management	3.57	2
4.	Weather forecasts	4.98	5
5.	Market prices	4.41	4
6.	Input costs	5.67	6
7.	Processing	8.16	9
8.	Poultry	9.82	10
9.	Livestock	6.84	8
10.	subsidies and schemes	4.04	3

Kendall's W Value: 0.614
Chi-square value: 663.287
Df: 9



The results from Table 3.11 disclose the farmers' opinions on the information services that are most useful in farming activities. Crop management is ranked the highest with a mean rank of 1.56, indicating its significant importance to farmers. Following closely, pest and disease management holds the second rank with a mean rank of 3.57. Market prices are perceived as the fourth most useful information service, with a mean rank of 4.41, while weather forecasts are ranked fifth with a mean rank of 4.98. Other information services such as soil health, input costs, and livestock rank sixth, seventh, and eighth, respectively, with mean ranks of 5.67, 5.95, and 6.84. Processing and poultry are ranked lower, with mean ranks of 8.16 and 9.82, respectively. Lastly, subsidies and schemes are valued by farmers, securing the third rank with a mean rank of 4.04.

The Kendall's W value of 0.614 indicates a moderate level of agreement among farmers regarding the usefulness of these information services. The Chi-square value of 663.287 with 9 degrees of freedom further supports the significance of these rankings in the context of farmers' preferences for information services in their farming activities.

Frequency of Information: The frequency of information seeking by farmer was asked to know the classification of frequency of agricultural information. The responses are presented in the following table 3.12.

Table 3.12: Classification of frequency of agricultural information seeking by farmers

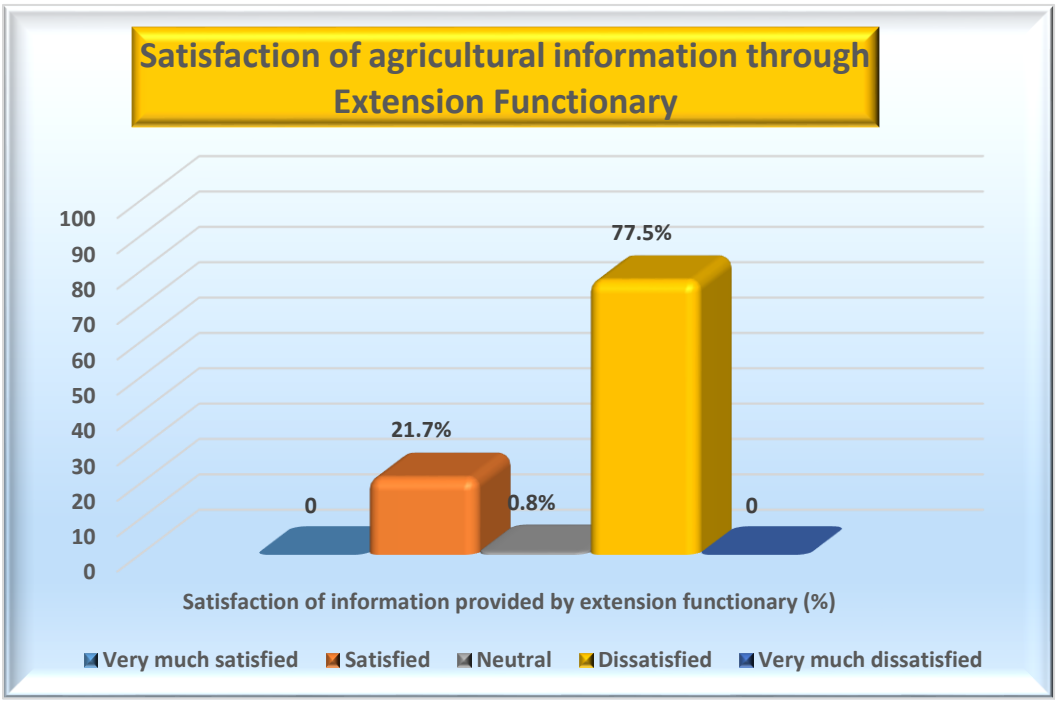
	Daily	Weekly	Monthly	Seasonally	Never
Frequency of agricultural information seeking by farmers	65	54	1	0	0
Total percentage	54.2	45.00	0.8	0	0

The findings from Table 3.12 reveal the frequency of agricultural information seeking by farmers. More than half (54.2%) of the farmers seek agricultural information on a daily basis, while a significant proportion (45.00%) do so on a weekly basis. Very few farmers, specifically 0.8 per cent, engage in seeking information monthly, and none of the farmers reported seasonal or never seeking agricultural information.

Satisfaction of information of extension functionary: The satisfaction of information provided by extension function by farmer was asked to know the classification of satisfaction level of farmers. The responses are presented in the following table 3.13.

Table 3.13: Satisfaction of agricultural information through Extension Functionary

	Very much satisfied	Satisfied	Neutral	Dissatisfied	Very much dissatisfied
Satisfaction of information provided by extension functionary	0	26	1	93	0
Total percentage	0	21.7	0.8	77.5	0



The data with respect to Table 3.13 illustrates the satisfaction levels of farmers regarding the agricultural information provided by extension functionaries. A significant majority of farmers (77.5 per cent) indicated dissatisfaction with the information provided by extension functionaries. Following this, 21.7 per cent expressed satisfaction with the information received. A negligible portion (0.8%) remained neutral about their satisfaction levels, and no farmers reported being very much satisfied or very much dissatisfied.

IT enable agricultural services delivered through CSC: Usage and Awareness

Awareness about CSCs: The farmer's awareness of availability of services in Common Services Centres was asked to know how many farmer's having awareness on Common Service Centres. The responses are presented in the following table 3.14.

Table 3.14: Farmer's awareness on Common Service Centres

	Yes	No	Total
Farmers awareness on Common Service Centres	120	0	120
Total percentage	100	100	100

The findings from Table 3.14 indicate the farmers' awareness of Common Service Centres. All farmers (100 %) reported being aware of the Common Service Centres, while none farmers indicated a lack of awareness.

Services availed from CSCs: The various services availed by famers from Common Services Centres was asked to know how many farmer's availed various services from Common Service Centres. The responses are presented in the following table 3.15.

Table 3.15: The services availed by farmers from Common Service Centres

	Utility bill payments	Recharge/ Xerox	Land Revenue records	Application for Govt. schemes	Information on Agricultural activities
The services availed by farmers from CSCs	76	86	58	120	43
Total percentage	63.3	71.7	48.3	100	35.83

The findings from Table 3.15 reveal the services availed by farmers from Common Service Centres (CSCs). The most utilized service is application for government schemes, with 100 per cent of farmers availing this service. Following this, 71.7 per cent of farmers used the

recharge/Xerox service, while 63.3 per cent availed utility bill payments. Additionally, 48.3 per cent of farmers accessed land revenue records, and 35.83 per cent sought information on agricultural activities.

How many times visit to CSCs: The farmers frequency of visit to Common Services Centres was asked to know how many times farmer will be visiting to CSC to avail services. The responses are presented in the following table 3.16.

Table 3.16: The frequency of farmer visiting to Common Service Centres

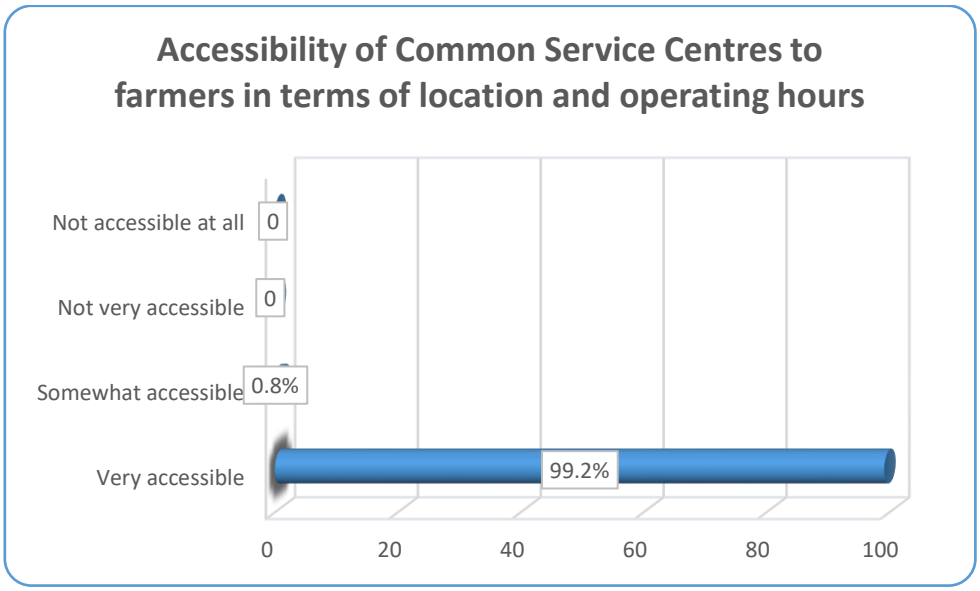
	Once	Twice	Thrice	More than three times	Total
The frequency of farmers visiting to CSCs to avail services	26	71	21	2	120
Total percentage	21.7	59.2	17.5	1.7	100

The data with respect to Table 3.16 illustrates the frequency of farmers visiting Common Service Centres (CSCs) to avail services. More than half of the farmers (59.2 %) visit the CSCs twice, followed by 21.7 per cent who visit once. Additionally, 17.5 per cent of farmers visit three times, while a small proportion (1.7 %) visit more than three times.

Accessibility of CSCs in terms of location and operating hours: The accessibility of Common Services Centres to farmers in terms location and operating hours was asked to know how CSCs are accessible to farmers to avail services. The responses are presented in the following table 3.17.

Table 3.17: Accessibility of Common Service Centres to farmers in terms of location and operating hours

	Very accessible	Somewhat accessible	Not very accessible	Not accessible at all	Total
Accessibility of Common Service Centres to farmers in terms of location and operating hours	119	1	0	0	120
Total percentage	99.2	0.8	0	0	100

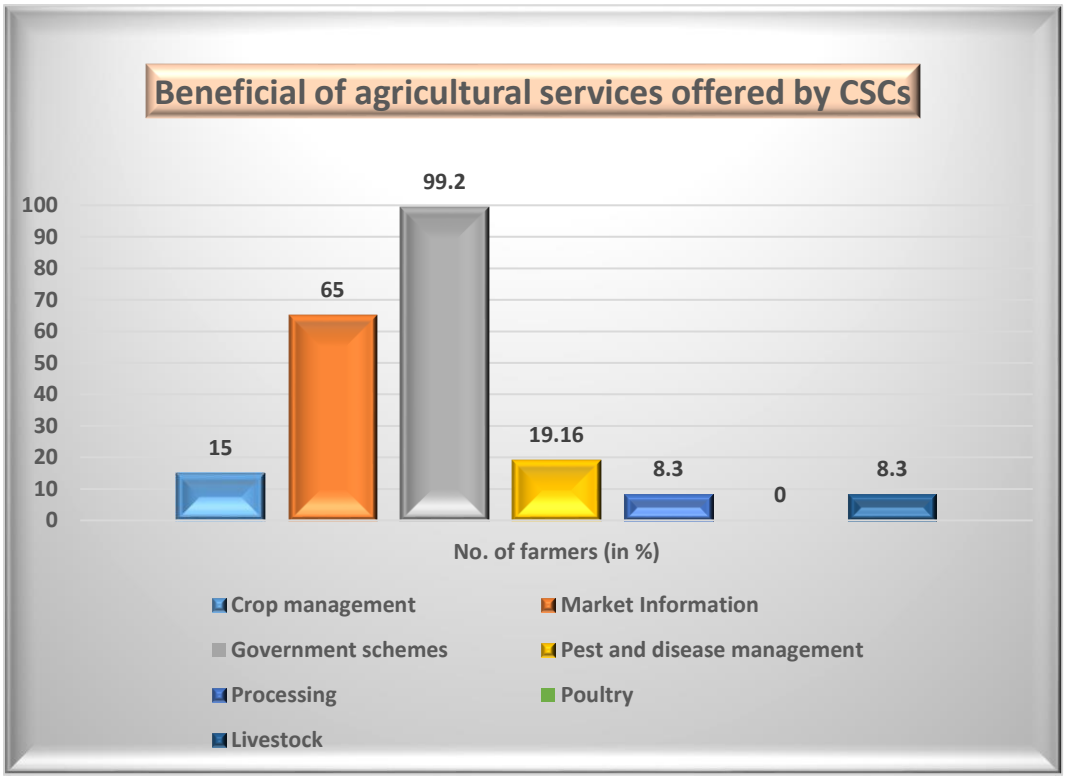


The findings from Table 3.17 indicate the accessibility of Common Service Centres (CSCs) to farmers in terms of location and operating hours. Nearly all the farmers (99.2 %) reported that the CSCs are very accessible, while a negligible portion (0.8 %) considered them somewhat accessible. No farmers indicated that the CSCs are not very accessible or not accessible at all.

Beneficial of agricultural services offered by CSC: The farmer opinion on beneficial of agricultural services offered by CSCs was asked to know the classification of services by most useful information. The responses are presented in the following table 3.17.

Table 3.18: Beneficial of agricultural services offered by CSCs

S.No.	Information services	No. of farmers	Percentage
1.	Crop management	18	15.0
2.	Market Information	78	65.0
3.	Government schemes	119	99.2
4.	Pest and disease management	23	19.16
5.	Processing	10	8.3
6.	Poultry	0	0
7.	Livestock	10	8.3



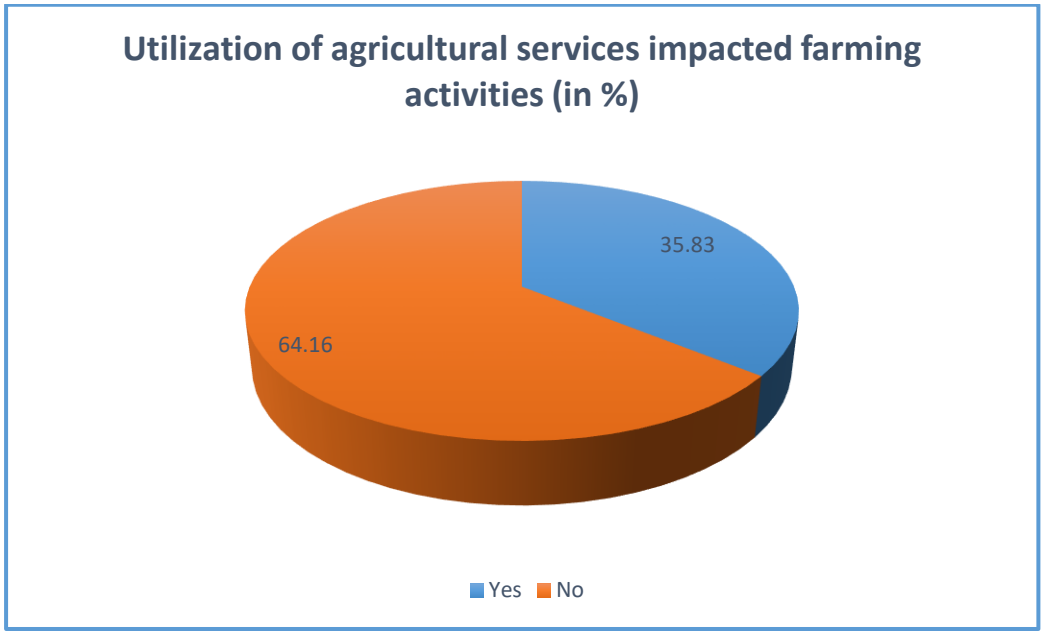
From the Table 3.18 illustrates the benefits of agricultural services offered by Common Service Centres (CSCs). The most beneficial service is related to government schemes, with a significant majority of farmers (99.2 %) availing this service. Following this, 65.0 per cent of farmers found market information to be beneficial. Crop management was beneficial for 15.0 per cent of farmers, while pest and disease management were useful for 19.16 per cent.

Additionally, 8.3 per cent of farmers availed processing services and livestock assistance, whereas no farmers reported finding poultry services beneficial.

Utilization of services positively impact in farming: The utilization of agricultural services positively impacted farming activities was asked to know how many farmer's opinion on the agricultural services helped in farming activities. The responses are presented in the following table 3.18.

Table 3.19: Utilization of agricultural services impacted farming activities

	Yes	No	Total
Utilization of agricultural services impacted farming activities	43	77	120
Total percentage	35.83	64.16	100



The results from Table 3.19 indicate the impact of utilizing agricultural services on farming activities. Two-third of the farmers (64.16%) reported that the utilization of agricultural services did not impact their farming activities, while a one third (35.83%) of them indicated that it had a positive impact.

Payment of service charges to CSCs: The payment of service charges by farmers to CSCs for availing services was asked to know how many farmers are paying the services charges to CSCs for availing agricultural services. The responses are presented in the following table 3.19.

Table 3.20: Payment of service charges to CSCs for availing agricultural services

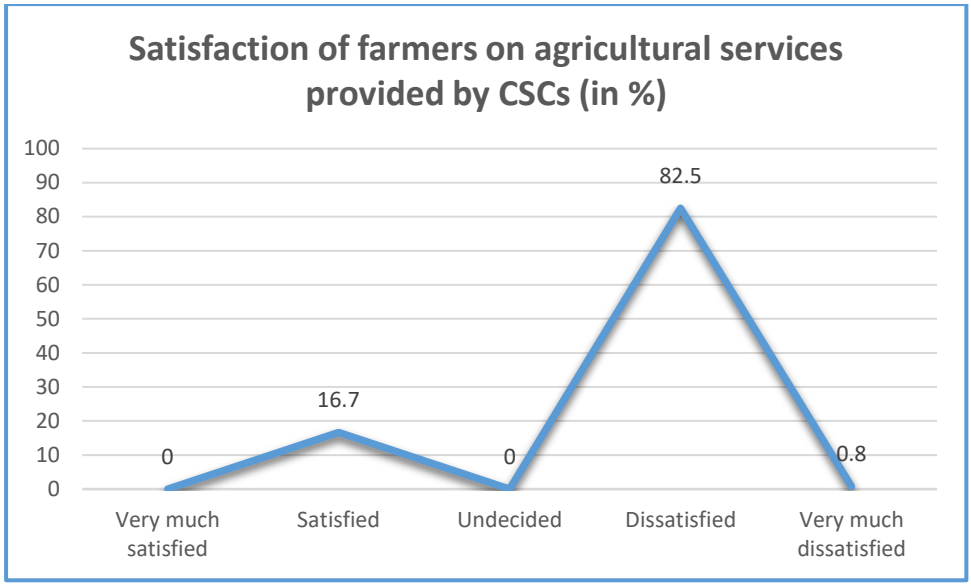
	Yes	No	Total
Payment of service charges to CSCs for availing agricultural services	120	0	120
Total percentage	100	0	100

The findings from Table 3.20 reveal the payment of service charges to Common Service Centres (CSCs) for availing agricultural services. All farmers (100%) reported making payments for the services, while no farmers indicated that they did not pay any service charges.

Satisfaction of agricultural services provided through CSCs: The satisfaction of agricultural services provided by CSCs to farmer was asked to know the classification of satisfaction level of farmers on agricultural services. The responses are presented in the following table 3.20.

Table 3.21: Satisfaction of farmers on agricultural services provided by CSCs

	Very much satisfied	Satisfied	Undecided	Dissatisfied	Very much dissatisfied
Satisfaction of farmers on agricultural services provided by CSCs	0	20	0	99	1
Total percentage	0	16.7	0	82.5	0.8



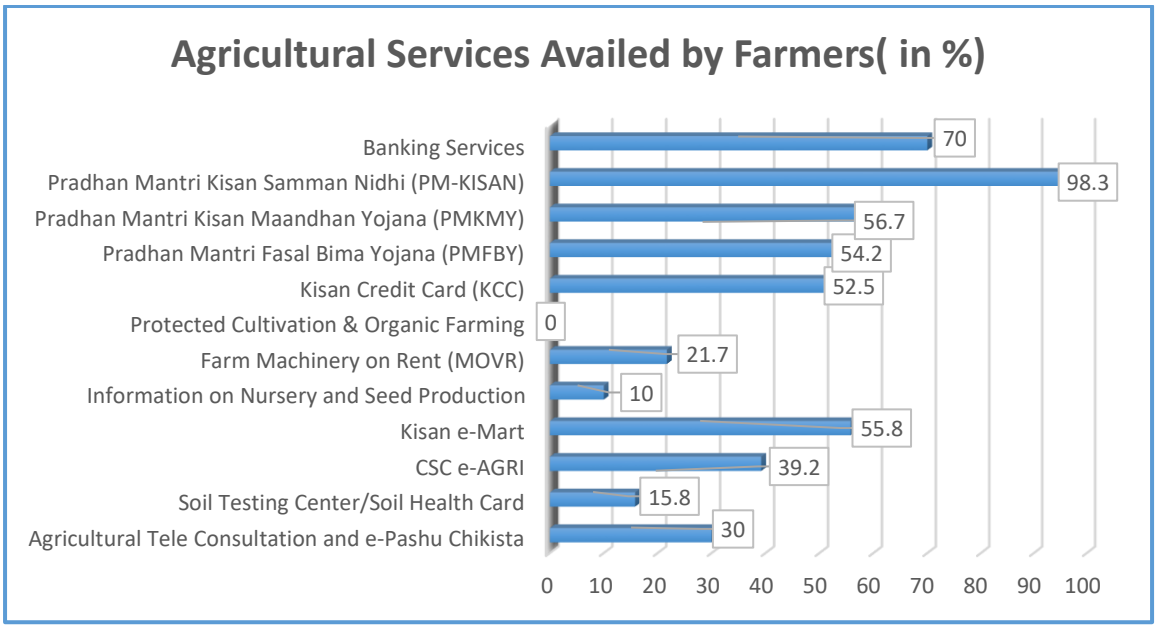
The findings from Table 3.21 present the satisfaction levels of farmers regarding the agricultural services provided by Common Service Centres (CSCs). A majority of farmers (82.5%) expressed dissatisfaction with the services, while 16.7 per cent were satisfied. No farmers reported being very much satisfied or undecided, and a small proportion (0.8%) indicated that they were very much dissatisfied.

Agricultural service-wise Satisfaction of agricultural services provided through CSCs: The satisfaction of agricultural service-wise provided by CSCs to farmer was asked to know the classification of satisfaction level of farmers on agricultural service-wise. The responses are presented in the following table 3.21.

Table 3.22: Agricultural service Availed by farmers from CSCs

Type of Service	Service Availed	
	Yes	Percentage
Agricultural Tele Consultation and e-Pashu Chikista	36	30.0
Soil Testing Center/Soil Health Card	19	15.8
CSC e-AGRI	47	39.2
Kisan e-Mart	67	55.8
Information on Nursery and Seed Production	12	10.0

Farm Machinery on Rent (MOVR)	26	21.7
Protected Cultivation & Organic Farming	0	0.0
Kisan Credit Card (KCC)	63	52.5
Pradhan Mantri Fasal Bima Yojana (PMFBY)	65	54.2
Pradhan Mantri Kisan Maandhan Yojana (PMKMY)	68	56.7
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	118	98.3
Banking Services	84	70.0



The findings from Table 3.22 illustrate the agricultural services availed by farmers from Common Service Centres (CSCs). A very large number of farmers (98.3%) reported utilizing the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme. The majority also accessed banking services (70.0 %), followed by Kisan e-Mart (55.8 per cent) and Pradhan Mantri Kisan Maandhan Yojana (PMKMY) (56.7 %). Additionally, 52.5 per cent of farmers availed the Kisan Credit Card (KCC), while 39.2 per cent accessed CSC e-AGRI. Other services such as Agricultural Tele Consultation and e-Pashu Chikista (30.0 %), Farm Machinery on Rent (21.7 %), and Soil Testing Center/Soil Health Card (15.8 %) had lower utilization rates. Very few farmers utilized information on nursery and seed production (10.0 %) and no farmers took the benefit of the protected cultivation and organic farming service from CSC.

Table 3.23: Agricultural service-wise usefulness and timely information of farmers on provided by CSCs

Type of Service	Information useful			Information Timely		
	Yes	No	Total	Yes	No	Total
Agricultural Tele Consultation and e-Pashu Chikista	33	87	120	29	91	120
Soil Testing Center/Soil Health Card	19	101	120	15	105	120
CSC e-AGRI	44	76	120	40	80	120
Kisan e-Mart	64	56	120	60	60	120
Information on Nursery and Seed Production	12	108	120	8	112	120
Farm Machinery on Rent (MOVR)	26	94	120	22	98	120
Protected Cultivation & Organic Farming	0	120	120	0	120	120
Kisan Credit Card (KCC)	59	61	120	52	68	120
Pradhan Mantri Fasal Bima Yojana (PMFBY)	65	55	120	61	59	120
Pradhan Mantri Kisan Maandhan Yojana (PMKMY)	65	55	120	61	59	120
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	118	2	120	118	2	120
Banking Services	80	40	120	75	45	120

The data with respect to Table 3.23 highlights the usefulness and timeliness of information provided by Common Service Centres (CSCs) for various agricultural services. It is reported that Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) was deemed useful by more than 98 per cent of farmers, with the same percentage indicating that the information was timely. The results from the above-mentioned table further disclose that Banking Services were considered useful by 70 per cent of farmers and timely by 75 per cent. Following this, Kisan e-Mart was useful for 64 per cent and timely for 60 per cent. The Pradhan Mantri Kisan Maandhan Yojana (PMKMY) received a positive response, being useful for 56.7 per cent and timely for 61 per cent.

In addition, Pradhan Mantri Fasal Bima Yojana (PMFBY) was perceived as useful by 54.2 per cent and timely by 61 per cent, while CSC e-AGRI was useful for 39.2 per cent and timely for 40 per cent of farmers. The service Agricultural Tele Consultation and e-Pashu Chikista was useful for 30 per cent and timely for 29 per cent. Moreover, the Kisan Credit Card (KCC) was regarded as useful by 52.5 per cent and timely by 52 per cent.

The findings also indicate that Farm Machinery on Rent (MOVR) was useful for 21.7 per cent of farmers and timely for 22 per cent. Soil Testing Center/Soil Health Card was useful for 15.8 per cent and timely for 15 per cent, whereas Information on Nursery and Seed Production had 10 per cent of farmers finding it useful and 8 per cent reporting timely information. Notably, Protected Cultivation & Organic Farming received no responses indicating usefulness or timeliness.

Table 3.24: Agricultural service-wise satisfaction information of farmers on provided by CSCs

Type of Service	Satisfaction of Service				
	Very Poor	Poor	Average	Good	Very Good
Agricultural Tele Consultation and e-Pashu Chikista	84 (70.0)	0 (0)	1 (0.8)	32 (26.7)	3 (2.5)
Soil Testing Center/Soil Health Card	101 (84.2)	0 (0)	1 (0.8)	14 (11.7)	4 (3.3)
CSC e-AGRI	73 (60.8)	0 (0)	1 (0.8)	43 (35.8)	3 (2.5)
Kisan e-Mart	53 (44.2)	1 (0.8)	1 (0.8)	62 (51.7)	3 (2.5)
Information on Nursery and Seed Production	108 (90.0)	0 (0)	1 (0.8)	8 (6.7))	3 (2.5)
Farm Machinery on Rent (MOVR)	94 (78.3)	0 (0)	2 (1.7)	22 (18.3)	2 (1.7)
Protected Cultivation & Organic Farming	120 (100)	0 (0)	0 (0)	0 (0)	0 (0)
Kisan Credit Card (KCC)	58 (48.3)	0 (0)	4 (3.3)	55 (45.8)	3 (2.5)
Pradhan Mantri Fasal Bima Yojana (PMFBY)	54 (45.0)	1 (0.8)	1 (0.8)	59 (49.2)	5 (4.2)
Pradhan Mantri Kisan Maandhan Yojana (PMKMY)	51 (42.5)	0 (0)	1 (0.8)	57 (47.5)	11 (9.2)
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	2 (1.7)	0 (0)	0 (0)	57 (47.5)	61 (50.8)
Banking Services	36 (30.0)	0 (0)	1 (0.8)	68 (56.7)	15 (12.5)

The results from the above table indicate that most farmers are dissatisfied with services such as Agricultural Tele Consultation and e-Pashu Chikista and the Soil Testing Center/Soil Health Card, with a very poor satisfaction rating of 70.0 per cent and 84.2 per cent, respectively. Only a small proportion of farmers rate these services as good or very good, highlighting the limited perceived effectiveness of these offerings.

For CSC e-AGRI services, while 35.8 percent of farmers rate it as good, 60.8 percent of farmers rate it as very poor, indicating mixed satisfaction. Similarly, Kisan e-Mart receives mixed feedback, with 44.2 percent of farmers rating it very poor and 51.7 percent of farmers rating it good. Information on Nursery and Seed Production also shows a high level of dissatisfaction, with 90 percent of farmers rating it very poor, and only 8.1 percent of farmers expressing satisfaction with this service.

In terms of Farm Machinery on Rent (MOVR), 78.3 percent of farmers report very poor satisfaction, while only 20 percent of farmers rate it as good or very good. Protected Cultivation and Organic Farming services have no positive satisfaction ratings, as all farmers rate it as very poor, indicating a need for substantial improvement in this area.

Regarding financial schemes, Kisan Credit Card (KCC) shows a divided satisfaction level, with 48.3 percent of farmers rating it very poor and 45.8 percent of farmers rating it good, while Pradhan Mantri Fasal Bima Yojana (PMFBY) receives a similar response, with slightly more farmers rating it good (49.2%) than very poor (45%). Pradhan Mantri Kisan Maandhan Yojana (PMKMY) also reflects mixed satisfaction, as 42.5 percent of farmers rate it very poor, while 47.5 percent of farmers rate it good and 9.2 percent rated as very good.

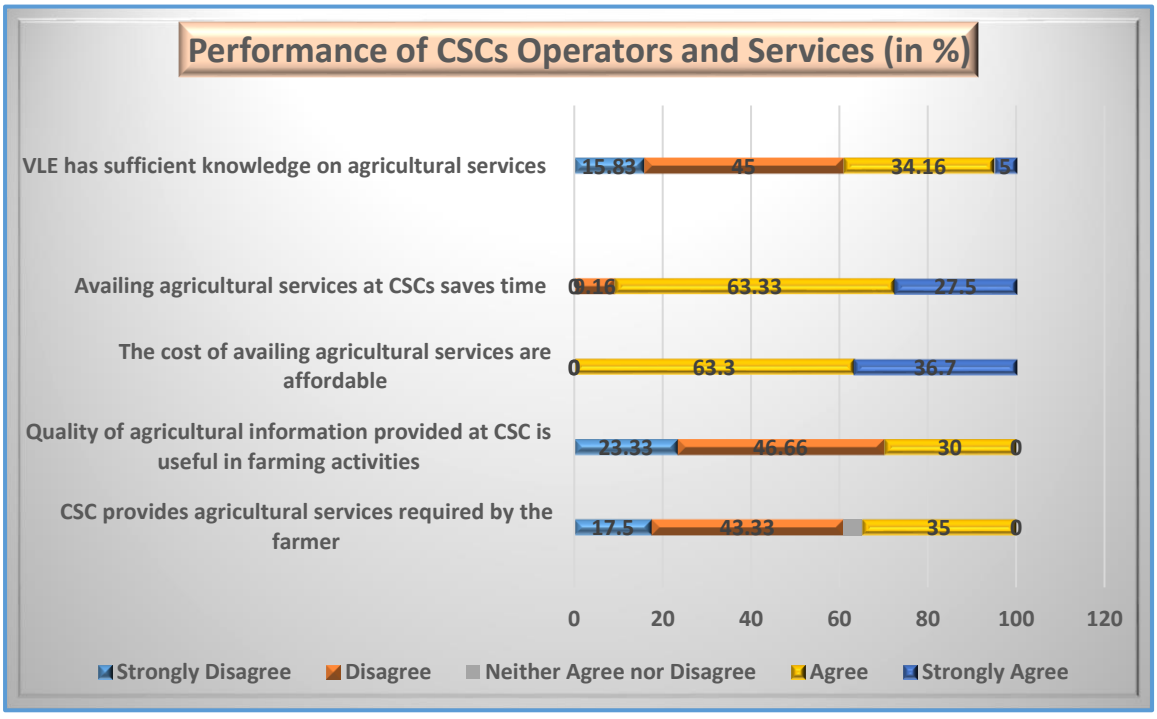
The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) service is rated highly, with 47.5 percent of farmers marking it as good and 50.8 percent rated as very good, reflecting substantial satisfaction. Banking Services also see relatively higher satisfaction levels, with 56.7 percent of farmers rating them good and 12.5 rated as very good, though 30 percent of farmers still rate them very poor.

Performance of CSC operators (VLEs) and services: The performance of CSC operators (VLEs) and services by farmers assessed on farmers need, quality, cost, time and knowledge on VLEs was asked to know the performance of CSC operators and services in terms of

availability of services, quality of services, cost, time saving and the knowledge of operators. The responses are presented in the following table 3.24.

Table 3.25: Performance of CSCs operators and services

Performance indicator	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
CSC provides agricultural **services required** by the farmer	21 (17.5)	52 (43.33)	5 (4.16)	42 (35)	0 (0)
Quality of agricultural information provided at CSC is useful in farming activities	28 (23.33)	56 (46.66)	0 (0)	36 (30)	0 (0)
The **cost** of availing agricultural services are affordable	0 (0)	0 (0)	0 (0)	76 (63.3)	44 (36.7)
Availing agricultural services at CSCs **saves time**	0 (0)	11 (9.16)	0 (0)	76 (63.33)	33 (27.5)
VLE has sufficient **knowledge** on agricultural services	19 (15.83)	54 (45)	0 (0)	41 (34.16)	6 (5)

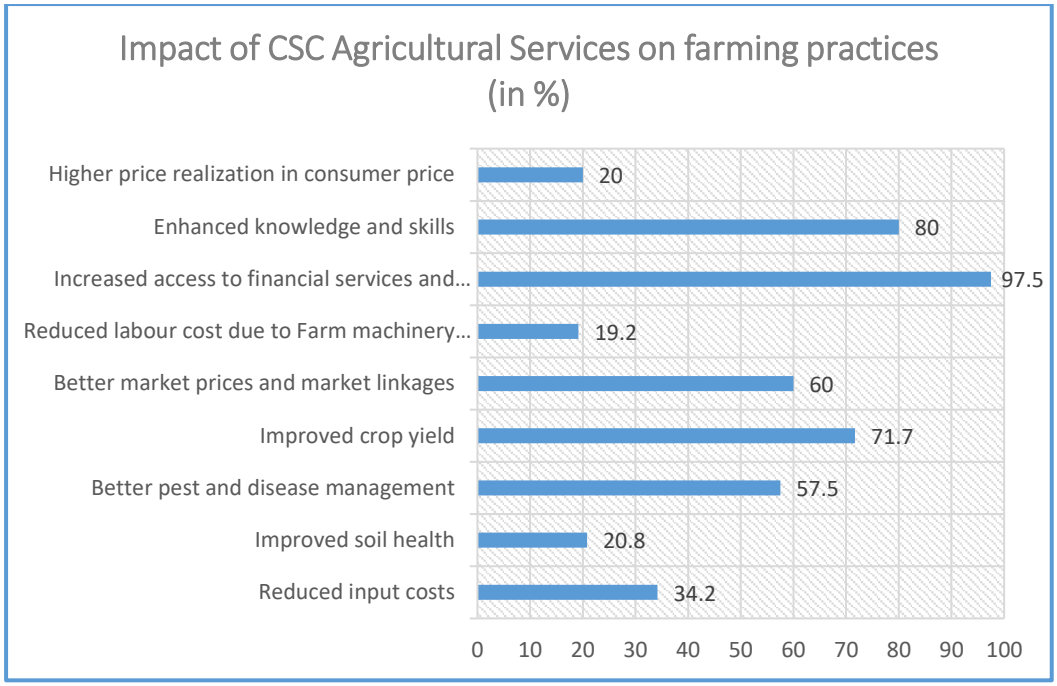


The results from Table 3.25 highlight the performance of Common Service Centre (CSC) operators in providing agricultural services. A significant portion of respondents (43.33%) disagreed that CSCs offer the necessary services for farmers, while 35 per cent expressed agreement. Regarding the quality of information, 46.66 per cent found it lacking, with only 30 per cent considering it useful for farming activities. However, the affordability of these services was viewed positively, with 63.3 per cent agreeing that costs are manageable. Additionally, 63.33 per cent of respondents indicated that using CSC services saves time, with 27.5 per cent strongly agreeing. Opinions on the knowledge of Village Level Entrepreneurs (VLEs) were mixed; 45 per cent disagreed that VLEs possess sufficient knowledge about agricultural services, while 34.16 per cent agreed. Overall, these findings suggest a need for improvement in both the perception of CSC services and the knowledge of VLEs, despite positive feedback on affordability and time efficiency.

Impact of CSC agricultural services on farming practices: The impact of agricultural services provided by CSCs on farming practices was asked to know the how CSCs are taking part in helping farming in farming practices. The responses are presented in the following table 3.26.

Table 3.26: Impact of CSCs agricultural services on farming practices

Area	Yes	Percentage
Reduced input costs	41	34.2
Improved soil health	25	20.8
Better pest and disease management	22	57.5
Improved crop yield	25	71.7
Better market prices and market linkages	44	60.0
Reduced labour cost due to Farm machinery service	23	19.2
Increased access to financial services and subsidies	117	97.5
Enhanced knowledge and skills	30	80.0
Higher price realization in consumer price	24	20.0



The findings from Table 3.26 reveal that very large number (97.5 %) of farmers reported increased access to financial services and subsidies, followed by 80 per cent of farmers acknowledging enhanced knowledge and skills. Improved crop yield was noted by 71.7 per cent of respondents, while better market prices and market linkages were identified by 60 per cent of farmers. Better pest and disease management was highlighted by 57.5 per cent of respondents.

Additionally, reduced input costs were reported by 34.2 per cent of farmers, followed by improvements in soil health noted by 20.8 per cent. The reduced labour costs due to farm machinery services were cited by 19.2 per cent of farmers, while higher price realization in consumer prices was reported by 20 per cent of respondents.

Information services on agriculture and allied sector to be expected from CSCs: The farmers are asked to indicate what type of services are expected from Common Service Centers on Agriculture, Horticulture, Animal Husbandry, Fisheries etc. The farmers interest, sector-wise are shown in the following table 3.27

Table 3.27: Farmers interested on agricultural services, sector-wise to be available in CSCs

Area/Type of Service	No. of Responses	Percentage
AGRICULTURE		
1) Advisory Services		
a) Land preparation	120	100
b) Crop selection, varieties, sowing time	120	100
c) Soil testing and Soil Health Card	120	100
d) Weed management	120	100
e) Irrigation scheduling	120	100
f) Pest and Disease management	120	100
g) Weather related information	120	100
2) Farm Inputs		
a) Quality seeds	120	100
b) Planting material	120	100
c) Fertilizer availability	120	100
d) Pesticides availability	120	100
3) Farm Machinery and hiring service	120	100
4) Marketing		
a) Marketing and price forecast	120	100
b) Logistics	120	100
c) Quality assurance	120	100
d) Traceability	120	100
5) Processing and Post-harvesting technologies		
a) Drying, Grading and storage	120	100
b) Post-harvesting technologies	120	100
6) Government Schemes and subsidies of State and Central Government	120	100
7) Insurance	120	100
8) Credit and finance	120	100

9) Drones Hiring Service	120	100
10) Mobile Apps in Farming	120	100
11) IoT devices	120	100
12) Trainings and demonstration	120	100

Area/Type of Service	No. of Responses	Percentage
HORTICULTURE		
13) **Horticultural schemes and subsidies** information such as Horticulture Crops, Greenhouse Construction, Drip Irrigation, Polyhouse, Fruit Crop Plantation. Online application forms for subsidy claims etc.	120	100
14) **Marketing linkages** between horticultural producers and traders	120	100

Area/Type of Service	No. of Responses	Percentage
ANIMAL HUSBANDRY		
15) Veterinary Doctors fixed day visits to farmers place. Animal Health Card issuance	48	40
16) Subsidies and loans for purchase of cattle, sheep, Goat, poultry etc.	48	40
17) Availability of animal feed and price etc.	48	40

Area/Type of Service	No. of Responses	Percentage
FISHERIES		
18) Water Quality Management Service	35	29.16
19) Fingerlings Supply	35	29.16
20) Feed Supply and Nutrition Management service	35	29.16
21) Disease management and Advisory service	35	29.16
22) Aquaculture Equipment Supply	35	29.16
23) Financial Services and Subsidy Information	35	29.16
24) Market Linkage and Sales Assistance	35	29.16

The findings from Table 3.27 indicated that farmers expressed unanimous interest (100%) in various agricultural services to be available in Common Service Centres (CSCs). These services included advisory services such as land preparation, crop selection, soil testing, weed management, irrigation scheduling, and pest and disease management. Additionally, farmers also showed equal interest in farm inputs like quality seeds, planting material, fertilizer availability, and pesticides availability, all at 100 per cent. Furthermore, services related to farm machinery and hiring, marketing (including price forecasts, logistics, quality assurance, and traceability), processing and post-harvesting technologies, government schemes and subsidies, insurance, credit and finance, drones hiring services, mobile apps in farming, IoT devices, and trainings and demonstrations also received 100 per cent interest from the farmers.

The farmers exhibited complete interest (100%) in horticultural services to be provided at Common Service Centres (CSCs). This included information on horticultural schemes and subsidies such as horticulture crops, greenhouse construction, drip irrigation, polyhouse, and fruit crop plantation, along with online application forms for subsidy claims. Additionally, there was unanimous interest (100%) in marketing linkages between horticultural producers and traders.

The findings highlighted the farmers' interest (40%) in animal husbandry services available at Common Service Centres (CSCs). Specifically, farmers expressed a desire for veterinary doctors to make fixed-day visits to their locations and for the issuance of Animal Health Cards. Additionally, there was notable interest (40%) in subsidies and loans for purchasing livestock, including cattle, sheep, goats, and poultry. Furthermore, farmers indicated a need (40%) for information on the availability and pricing of animal feed.

The results further indicated farmers' interest in fisheries services available at Common Service Centres (CSCs), with each service attracting a response rate of 29.16 per cent. This includes services such as water quality management, fingerling supply, feed supply and nutrition management, disease management and advisory services, aquaculture equipment supply, financial services and subsidy information, as well as market linkage and sales assistance.

The charges for availing agricultural services at CSCs: The charges are willing to pay by farmers to avail agricultural services at CSCs was asked to know the how much the farmers can pay for agricultural services. The responses are presented in the following table 3.28.

Table 3.28: Charges willing to pay by farmers to avail agricultural services at CSCs

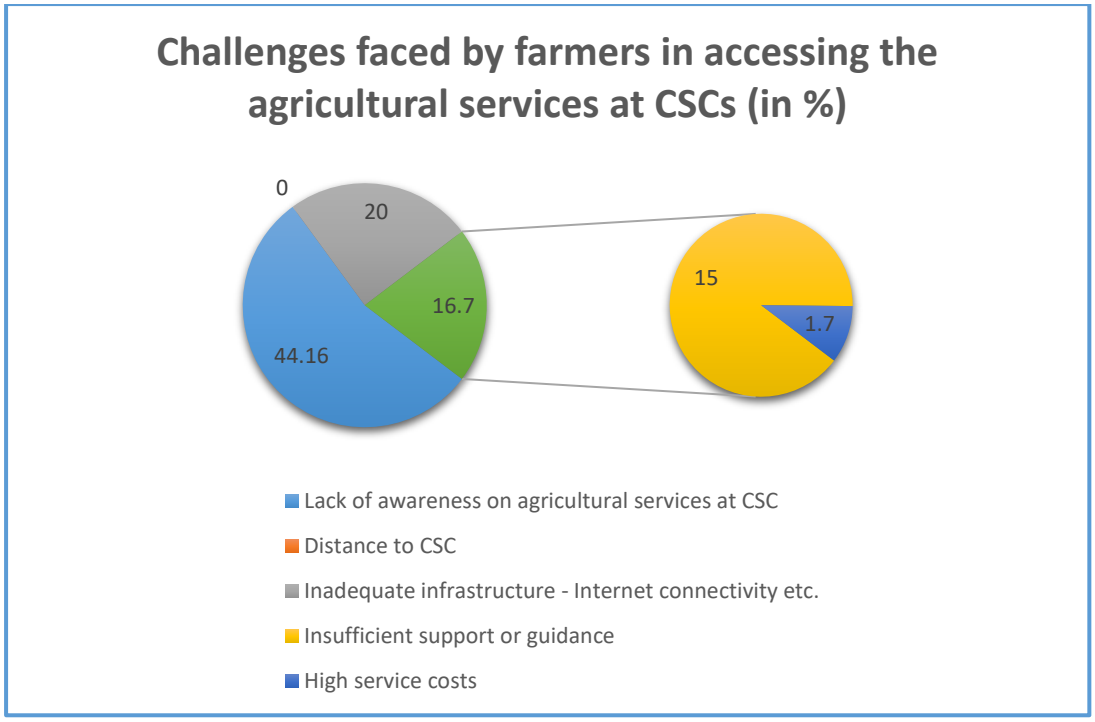
	Rs.25	Rs.50	Rs.75	Rs.100	Total
Charges willing to pay by farmers to avail agricultural services at CSCs	17	101	2	0	120
Total percentage	14.2	84.2	1.7	0	100

The results from Table 3.28 indicate that the majority of farmers, accounting for 84.2 per cent, are willing to pay Rs. 50 for agricultural services at Common Service Centres (CSCs), followed by 14.2 per cent who are willing to pay Rs. 25. Additionally, very less number (1.7 %) of farmers expressed a willingness to pay Rs. 75, while no farmers indicated a willingness to pay Rs. 100.

Challenges faced in accessing the agricultural services at CSCs: The challenged faced y farmers to access the agricultural services at CSCs was asked to know the major challenged faced by the farmers to access the agricultural services at CSCs. The responses are presented in the following table 3.29.

Table 3.29: Challenges faced by farmers in accessing the agricultural services at CSCs

Area	Yes	Percentage
Lack of awareness on agricultural services at CSC	63	44.16
Distance to CSC	0	0
Inadequate infrastructure - Internet connectivity etc.	24	20.0
Insufficient support or guidance	18	15.0
High service costs	02	1.7



The results from Table 3.29 reveal that nearly half (44.16 %) of farmers face challenges due to a lack of awareness regarding agricultural services at Common Service Centres (CSCs), followed by 20.0 per cent who experience challenges related to inadequate infrastructure, such as internet connectivity. Additionally, 15.0 per cent of farmers reported insufficient support or guidance, while very less number (1.7 %) identified high service costs as a challenge. Notably, no farmers reported challenges related to the distance to CSCs.

3.2 The data analysis on the CSC operators

This chapter also discusses the analysis carried out on the information generated through primary data collected from the CSC operators called as Village Level Entrepreneurs (VLEs) servicing in four blocks / mandals of Suryapet and Siddipet districts of Telangana state, covering two blocks in each district. The research study is to assess the effectiveness of agricultural services provided at Common Service Centers and it attempted to understand the views of CSCs operators (CLEs) (1) agricultural services offered by CSCs to farmers, (2) The operators opinion on agricultural services, training requirements, duration of training, challenges faced by operators (3) The ease of implementation, acceptability to farmers and ease of use by farmers on CSC agricultural services, (4) Expected agricultural services to be

available at CSC. This study also set out to understand the demographic variables of VLEs that includes Age, Gender, Education, annual income from CSCs.

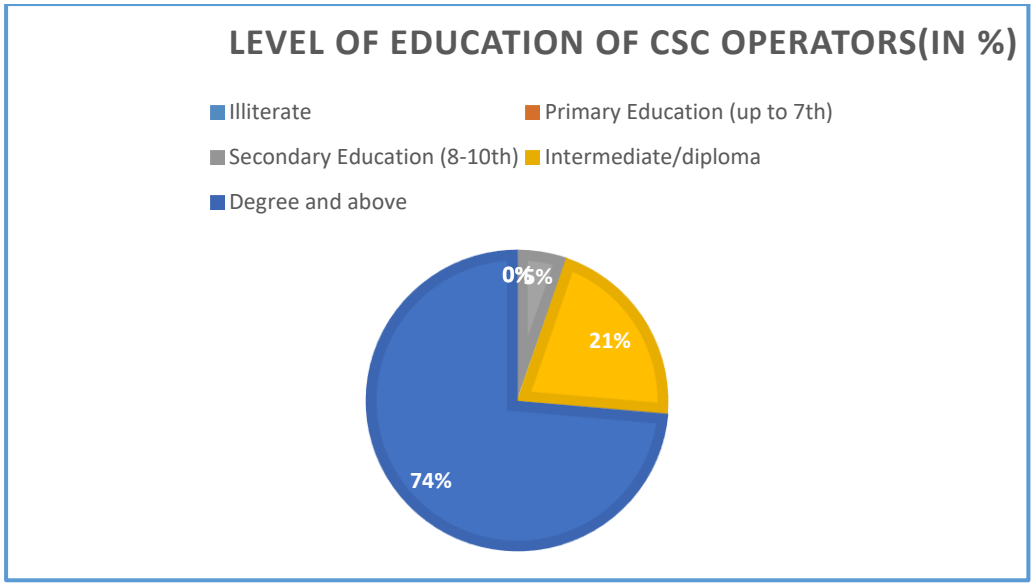
3.2.1 Demographic data analysis of CSC operators

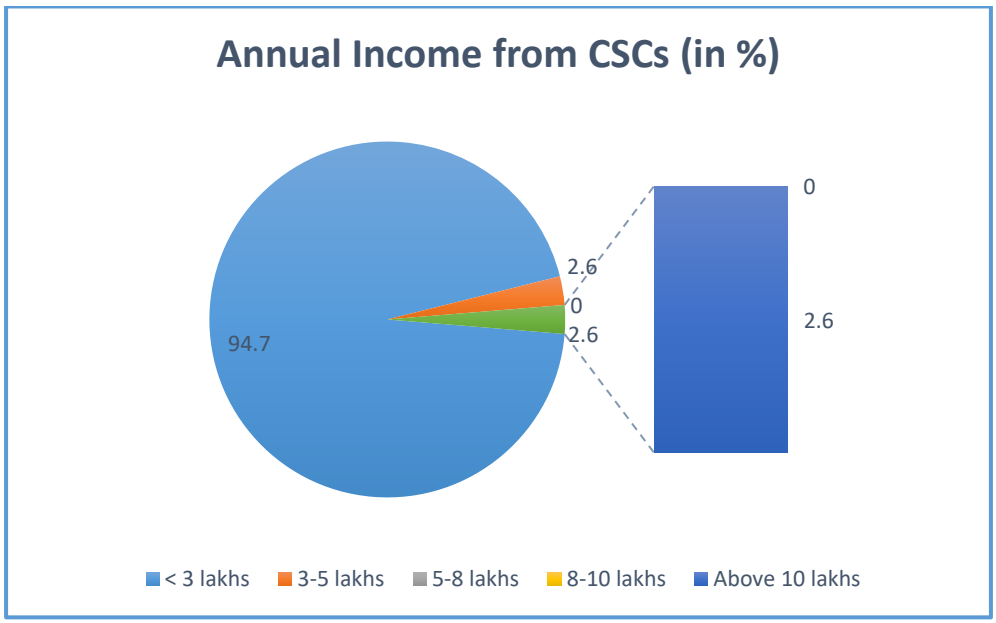
The demographic data of CSC operators on Gender, Age group, Level of education, annual income from CSC is analysed and presented in the following tables and graphs.

Table 3.30: Socio-Economic profile of CSC Operators (VLEs)

N = 38

Characteristic	Category	No. of Farmers	Percentage
Gender	Male	34	89.5
	Female	4	10.5
Age (in Years)	18-25	3	7.9
	26-45	33	86.8
	46-60	2	5.3
	Above 60	0	0
Level of Education	Illiterate	0	0
	Primary Education (up to 7^{th})	0	0
	Secondary Education (8-10^{th})	2	5.3
	Intermediate/diploma	8	21.1
	Degree and above	28	73.7
Annual Income from CSCs	< 3 lakhs	36	94.7
	3-5 lakhs	1	2.6
	5-8 lakhs	0	0
	8-10 lakhs	0	0
	Above 10 lakhs	1	2.6





The results of the Table 3.30 gender distribution revealed that the majority of the respondents (89.5%) were male, while a smaller portion (10.5%) were female. This indicates a clear male dominance in farming activities among the surveyed group. The data on age distribution shows that most of the respondents (86.8%) belonged to the age group of 26-45 years, followed by 7.9 per cent of farmers in the 18-25 years category. A smaller percentage (5.3%) were aged between 46-60 years. Notably, there were no respondents above the age of 60.

In terms of education, the majority of the respondents (73.7%) were highly educated, possessing a degree or higher qualification. A smaller proportion (21.1%) had an intermediate

or diploma-level education, while only 5.3 per cent had secondary-level education. No respondents were found to be illiterate or with primary-level education.

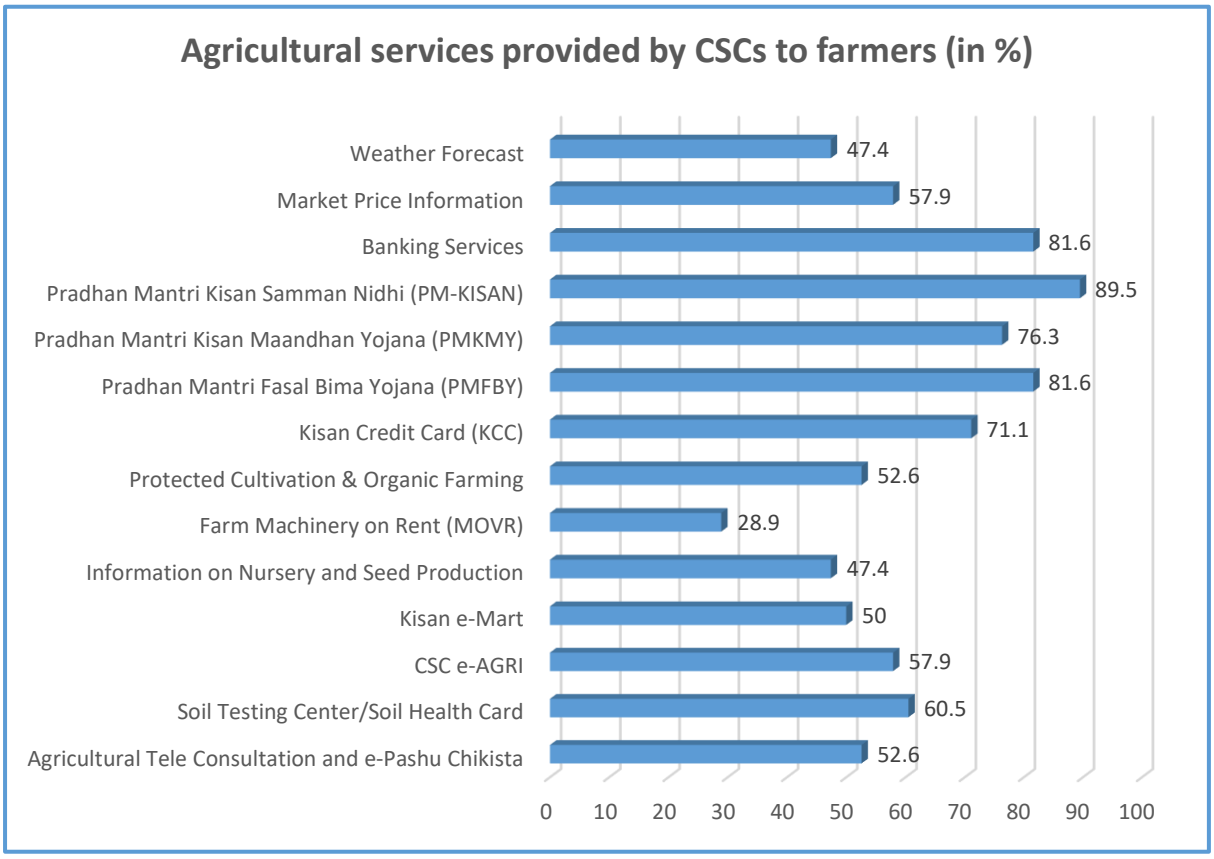
The income data shows that a vast majority (94.7%) of respondents reported an annual income of less than ₹3 lakhs from CSCs, with only 2.6per cent earning between ₹3-5 lakhs and another 2.6 per cent earning above ₹10 lakhs. There were no respondents with annual incomes between ₹5-10 lakhs, indicating a generally low-income range for most participants.

Agricultural services provided by CSCs: The type agricultural services provided by CSCs to farmers was asked to know the how many types agricultural services available for farmers from CSCs. The responses are presented in the following table 3.31.

Table 3.31: Agricultural services provided by CSCs to farmers

N=38

Type of Service	No. of VLEs providing services	Percentage
Agricultural Tele Consultation and e-Pashu Chikista	20	52.6
Soil Testing Center/Soil Health Card	23	60.5
CSC e-AGRI	22	57.9
Kisan e-Mart	19	50.0
Information on Nursery and Seed Production	18	47.4
Farm Machinery on Rent (MOVR)	11	28.9
Protected Cultivation & Organic Farming	20	52.6
Kisan Credit Card (KCC)	27	71.1
Pradhan Mantri Fasal Bima Yojana (PMFBY)	31	81.6
Pradhan Mantri Kisan Maandhan Yojana (PMKMY)	29	76.3
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	34	89.5
Banking Services	31	81.6
Market Price Information	22	57.9
Weather Forecast	18	47.4



The results of the Table 3.31 show that the most widely provided service by Village Level Entrepreneurs (VLEs) is Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), with 89.5 per cent of VLEs offering this service. Pradhan Mantri Fasal Bima Yojana (PMFBY) and banking services are also widely available, each being provided by 81.6 per cent of VLEs. Pradhan Mantri Kisan Maandhan Yojana (PMKMY) is offered by 76.3 per cent, while Kisan Credit Card (KCC) services are available through 71.1 per cent of VLEs.

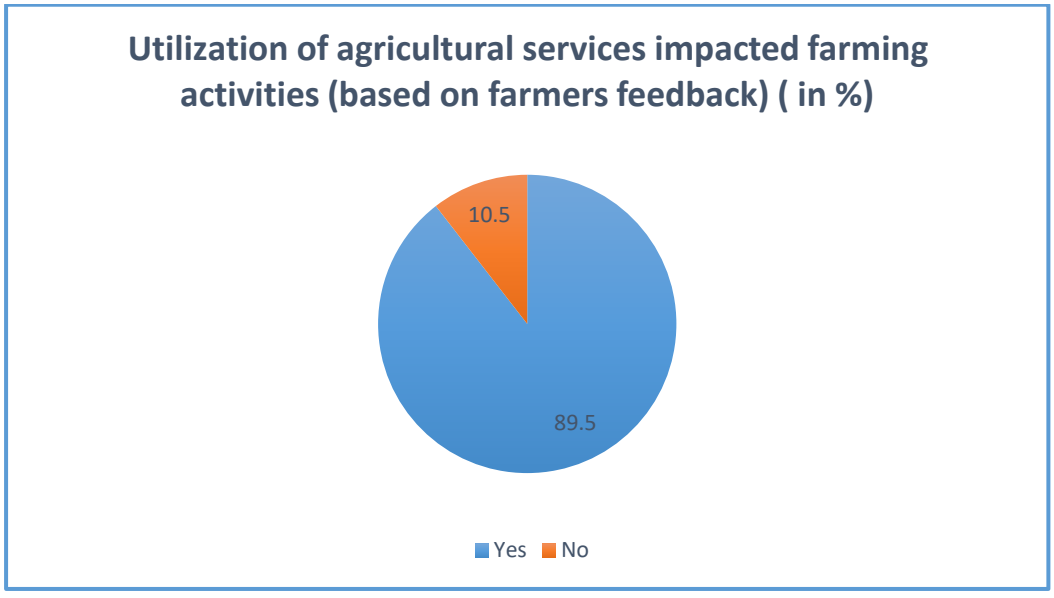
Soil Testing Center/Soil Health Card services are provided by 60.5 per cent of VLEs, and 57.9 per cent offer both CSC e-AGRI and market price information services. Agricultural tele consultation and e-Pashu Chikista, as well as protected cultivation & organic farming services, are provided by 52.6 per cent of VLEs. Half of the respondents (50.0%) offer Kisan e-Mart services.

A lower percentage of VLEs (47.4%) provide weather forecasts and information on nursery and seed production. Farm machinery on rent (MOVR) is the least provided service, with only 28.9 per cent of VLEs offering it.

Based on farmer's feedback, utilization of services positively impacted in farming: The utilization of agricultural services positively impacted farming activities, based on farmer's feedback was asked to know the utilization of agricultural services helped in the farming activities or not, based on farmers feedback. The responses are presented in the following table 3.32.

Table 3.32: Based on farmer's feedback, utilization of agricultural services impacted farming activities

	Yes	No	Total
Utilization of agricultural services impacted farming activities (based on farmers feedback)	34	4	38
Total percentage	89.5	10.5	100



Based on the feedback from farmers, the utilization of agricultural services had a significant impact on farming activities. The results of the Table 3.32 show that A total of 89.5 per cent of respondents reported that the services positively impacted their farming activities, while 10.5 per cent indicated no impact.

Collecting charges for agricultural services: The CSC operators are collecting charges for agricultural services from farmers was asked to whether CSCs operators collecting services charges towards the agricultural services provided at CSCs. The responses are presented in the following table 3.33.

Table 3.33: Collecting service charges by CSCs for providing agricultural services

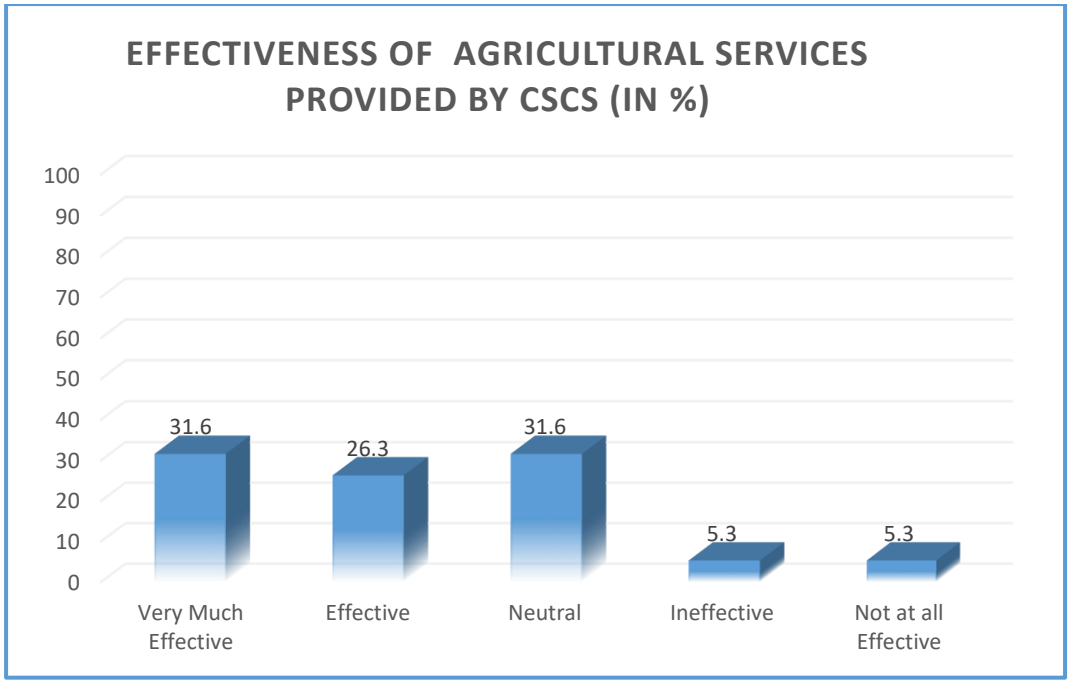
	Yes	No	Total
Collecting service charges by CSCs for providing agricultural services	24	14	38
Total percentage	63.2	36.8	100

The results of the Table 3.33 show that 63.2 per cent of CSCs (24 out of 38) are collecting service charges for providing agricultural services, while 36.8 per cent (14 out of 38) do not charge for these services.

Effectiveness of agricultural services provided through CSCs: The effectiveness of agricultural services provided by CSCs to farmer was asked to know the classification of effectiveness of farmers on agricultural services. The responses are presented in the following table 3.34.

Table 3.34: Effectiveness of agricultural services provided by CSCs

	Very Much Effective	Effective	Neutral	Ineffective	Not at all Effective
Effectiveness of agricultural services provided by CSCs	12	10	12	2	2
Total percentage	31.6	26.3	31.6	5.3	5.3



The results in Table 3.34 show that the highest percentage of respondents, 31.6 per cent, rated the agricultural services provided by CSCs as either "Very Much Effective" or "Neutral" (12 respondents each). Following this, 26.3 per cent (10 respondents) found the services "Effective". A smaller percentage, 5.3 per cent, rated the services as either "Ineffective" or "Not at all Effective". This indicates that while a majority of respondents viewed the services favourably, a significant portion remained neutral, with a small percentage expressing dissatisfaction.

Training received by CSCs operators (VLEs): Any training on agricultural services received by CSCs operators was asked to know the CSCs operators capacity building on agricultural services operated through CSCs. The responses are presented in the following table 3.35.

Table 3.35: Training received by CSCs operators (VLEs) on agricultural services

	Yes	No	Total
Training received by CSCs operators on agricultural services	14	24	38
Total percentage	36.8	63.2	100

The results in Table 3.35 reveal that only 36.8 per cent of CSC operators (VLEs) have received training on agricultural services, while the majority, 63.2 per cent, have not received any such training. This indicates a considerable gap in the provision of training, which could affect the operators' ability to effectively deliver agricultural services to farmers.

Frequency of training on agricultural services to VLEs: The frequency of training on agricultural services to operators CSC team was asked to know the classification of capacity building activity to VLEs. The responses are presented in the following table 3.36.

Table 3.36: Frequency of training on agricultural services to VLEs by CSCs

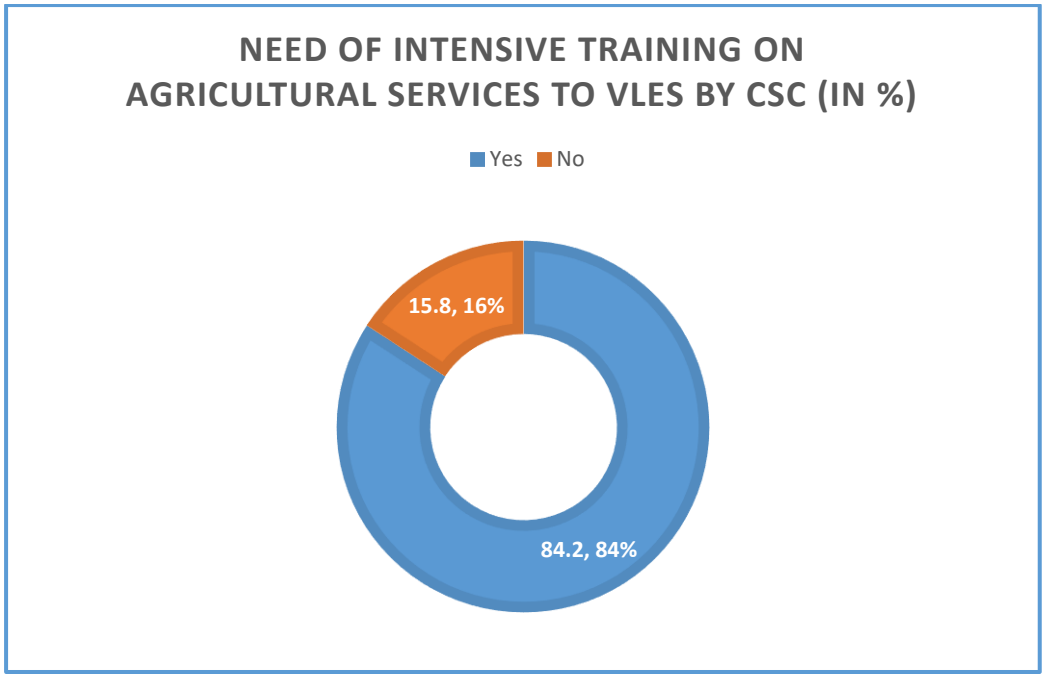
	Monthly	Quarterly	Yearly	Never
Frequency of training on agricultural services to VLEs by CSC	7	8	7	15
Total percentage	18.4	21.1	18.4	42.1

The results of Table 3.36 indicate that Training sessions were reported as never being received by a significant portion of respondents, with 42.1 per cent indicating this lack of training. Monthly training was conducted for 18.4 per cent of respondents, while yearly training was also reported by 18.4 per cent. Quarterly training sessions were received by 21.1 per cent of respondents.

Need intensive training on agricultural services: CSCs operators need intensive training on agricultural services was asked to know the CSCs operators need capacity building on agricultural services operated through CSCs. The responses are presented in the following table 3.37.

Table 3.37: Need of intensive training on agricultural services to VLEs

	Yes	No	Total
Need of intensive training on agricultural services to VLEs by CSC	32	6	38
Total percentage	84.2	15.8	100

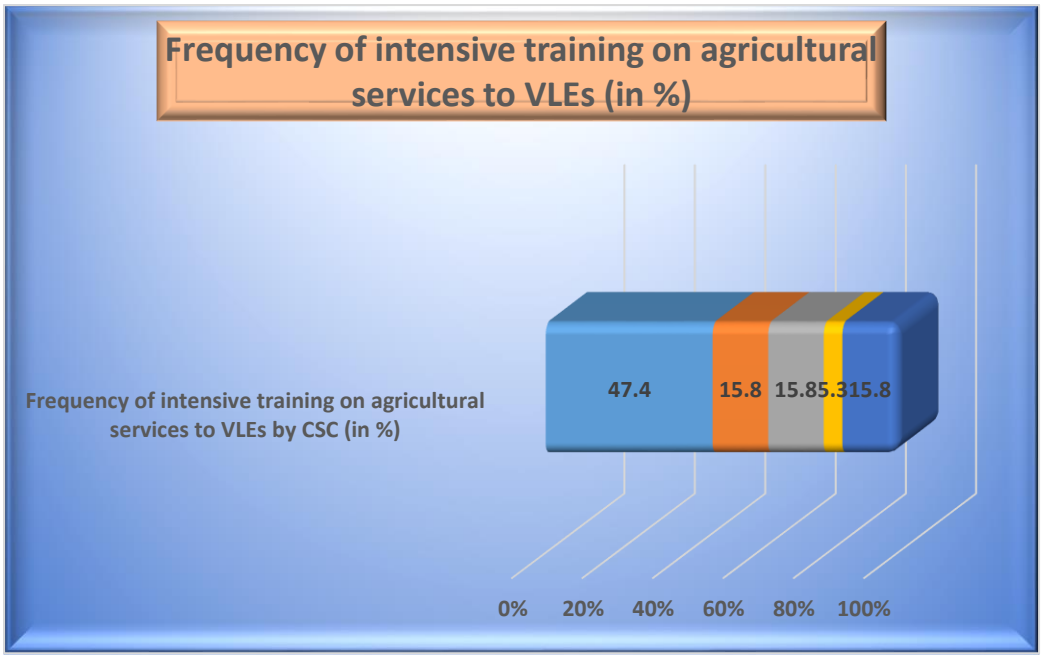


The data in Table 3.37 shows the need for intensive training on agricultural services for Village Level Entrepreneurs (VLEs). A significant majority, 84.2 per cent, expressed the need for such training, while 15.8 per cent did not.

Frequency of intensive training need on agricultural services to VLEs: The frequency of intensive training on agricultural services to operators by CSC team was asked to know the classification of capacity building activity to VLEs requirement. The responses are presented in the following table 3.38.

Table 3.38: Frequency of intensive training need on agricultural services to VLEs

	One Week	Two Weeks	One Months	Two Months	Not Interested
Frequency of intensive training on agricultural services to VLEs by CSC	18	6	6	2	6
Total percentage	47.4	15.8	15.8	5.3	15.8



The data in Table 3.38 presents the frequency of the need for intensive training on agricultural services for Village Level Entrepreneurs (VLEs). A significant proportion, 47.4 per cent, preferred a one-week training program, making it the most popular option. A smaller percentage, 15.8 per cent, favored either two weeks or one month of training, while another 15.8 per cent were not interested in the training. Only 5.3 per cent expressed a preference for a two-month training program. This suggests that most VLEs favour shorter, more intensive training durations.

Using any digital tools and mobile apps: CSCs operators are using digital tools and mobile app to provide agricultural services to farmers was asked to know the awareness of digital tools and mobiles available for agricultural information services to farmers by CSCs operators. The responses are presented in the following table 3.39.

Table 3.39: Using any digital tools and mobile apps on agricultural services by VLEs

	Yes	No	Total
Using any digital tools and mobile apps on agricultural services by VLEs	20	18	38
Total percentage	52.6	47.4	100

The data in Table 3.39 shows the usage of digital tools and mobile apps for agricultural services by Village Level Entrepreneurs (VLEs). Of the total respondents, 52.6 per cent reported using digital tools and mobile apps, while 47.4 per cent did not.

Promotion of agricultural services by VLEs: The various channels of promotion of agricultural services available at CSCs in farming community was asked to know that what are the various promotion channels being used by CSC VLEs on agricultural services availability. The responses are presented in the following table 3.40.

Table 3.40: Promotion of various channels on agricultural services available at CSCs

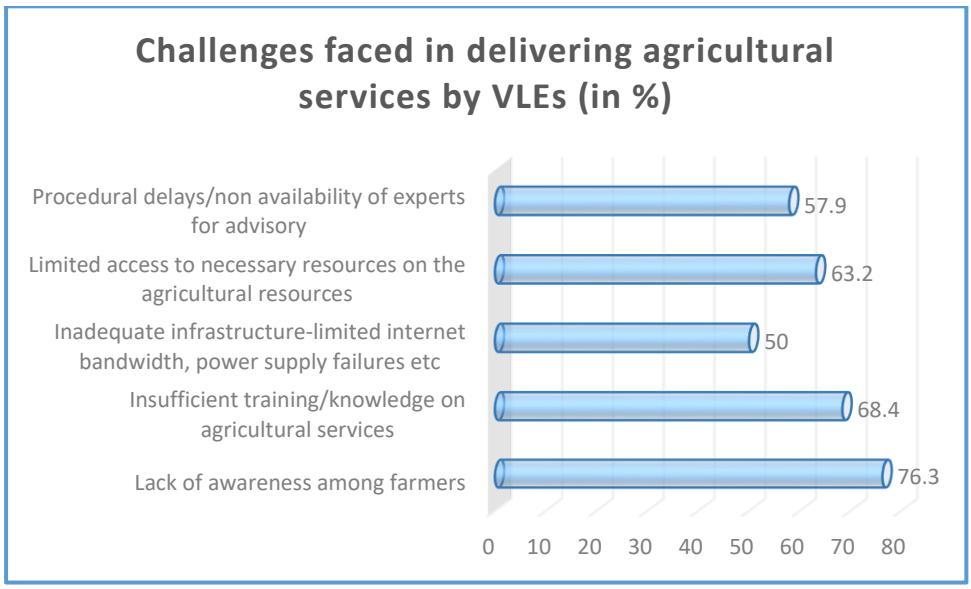
Type of channel	No. of Responses	Percentage
Community meeting	27	71.1
When farmers visit for other services	28	73.7
Flyers and Posters	21	55.3
SMS alerts	21	55.3

The data in Table 3.40 illustrates the various channels used to promote agricultural services at Common Service Centers (CSCs). The most commonly used method, with 73.7 per cent of responses, is promoting services when farmers visit for other purposes. Community meetings are also a widely used approach, with 71.1 per cent of VLEs relying on them. Flyers, posters, and SMS alerts are each utilized by 55.3 per cent of VLEs to inform farmers about available services.

Challenges faced in delivering agricultural services by VLEs: The various challenges faced in delivering agricultural services by VLEs at CSCs was asked to know the what are the various challenges being faced in delivering agricultural services. The responses are presented in the following table 3.41.

Table 3.41: Challenges faced in delivering agricultural services by VLEs

Challenges	No. of Responses	Percentage
Lack of awareness among farmers	29	76.3
Insufficient training/knowledge on agricultural services	26	68.4
Inadequate infrastructure-limited internet bandwidth, power supply failures etc	19	50.0
Limited access to necessary resources on the agricultural resources	24	63.2
Procedural delays/non availability of experts for advisory	22	57.9



The data in Table 3.41 highlights the challenges faced by Village Level Entrepreneurs (VLEs) in delivering agricultural services. The most frequently cited challenge is the lack of awareness among farmers, reported by 76.3 per cent of respondents. Insufficient training or knowledge on agricultural services is another significant issue, affecting 68.4per cent of VLEs. Inadequate infrastructure, such as limited internet bandwidth and power supply failures, was mentioned by 50.0per cent of respondents. Additionally, limited access to necessary agricultural resources was a challenge for 63.2 per cent of VLEs, while procedural delays or

unavailability of experts for advisory impacted 57.9 per cent. These challenges reflect various barriers that hinder the effective delivery of agricultural services.

Ranking of agricultural services based on Ease of implementation, Acceptability and Use by VLEs: The satisfaction of agricultural service-wise in terms of ease of implementation, acceptability and use by farmers ranking by VLEs on scale 1-5 was asked to know the classification of satisfaction level by VLEs on agricultural service-wise. The responses are presented in the following table 3.42.

Table 3.42: Agricultural service-wise Ease of Implementation, Acceptability and Usefulness by farmers provided by CSCs

Type of Service	Ease of Implementation			Acceptability			Ease of Use		
	Score	Mean	Rank	Score	Mean	Rank	Score	Mean	Rank
Agricultural Tele Consultation and e-Pashu Chikista	100	2.63	8	95	2.50	10	103	2.71	8
Soil Testing Center/Soil Health Card	101	2.66	7	100	2.63	6	102	2.68	9
CSC e-AGRI	101	2.66	7	96	2.53	9	104	2.74	7
Kisan e-Mart	104	2.74	5	94	2.47	12	106	2.79	5
Information on Nursery and Seed Production	100	2.63	8	100	2.63	6	101	2.66	10
Farm Machinery on Rent (MOVR)	103	2.71	6	97	2.55	8	112	2.95	3
Protected Cultivation & Organic Farming	103	2.71	6	98	2.58	7	105	2.76	6
Kisan Credit Card (KCC)	109	2.87	4	108	2.84	3	109	2.87	4
Pradhan Mantri Fasal Bima Yojana (PMFBY)	114	3.00	2	116	3.05	1	118	3.11	1
Pradhan Mantri Kisan Maandhan Yojana (PMKMY)	111	2.92	3	111	2.92	2	116	3.05	2
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	115	3.03	1	103	2.71	5	116	3.05	2
Banking Services	114	3.00	2	107	2.82	4	118	3.11	1
Market price information	109	2.87	4	100	2.63		112	2.95	3
Weather forecast	108	2.84	5	108	2.84	3	108	2.84	5

The data in Table 3.42 presents the ease of implementation, acceptability, and usefulness of various agricultural services provided by Common Service Centers (CSCs), as perceived by farmers.

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) service ranks highest in ease of implementation with a mean score of 3.03, followed closely by 'Pradhan Mantri Fasal Bima Yojana (PMFBY)' (3.00) and 'Banking Services' (3.00).

In terms of 'acceptability', 'Pradhan Mantri Fasal Bima Yojana (PMFBY)' service leads with a score of 3.05, followed by 'Pradhan Mantri Kisan Maandhan Yojana (PMKMY)' (2.92) and 'Kisan Credit Card (KCC)' (2.84).

For 'ease of use', 'Pradhan Mantri Fasal Bima Yojana (PMFBY)' service and 'Banking Services' both scored the highest at 3.11, indicating they are considered most user-friendly by farmers. 'Farm Machinery on Rent (MOVR)' follows closely with a score of 2.95.

Other services, such as 'CSC e-AGRI', 'Soil Testing Center/Soil Health Card', and 'Agricultural Tele Consultation and e-Pashu Chikista', generally show moderate performance across all three categories, while 'Weather Forecast' and 'Market Price Information' score moderately in ease of use and acceptability but slightly lower in ease of implementation. This data provides insights into which services farmers find most accessible, acceptable, and useful, highlighting areas for improvement, especially in terms of ease of implementation for some services.

Information services on agriculture and allied sector to be made available at CSCs: The operators of CSCs are asked to indicate what type of services are expected at Common Service Centers on Agriculture, Horticulture, Animal Husbandry, Fisheries etc. The operators interest, sector-wise are shown in the following table 3.26

Table 3.43: Agricultural services, sector-wise to be available in CSCs

Area/Type of Service	No. of Responses	Percentage
AGRICULTURE		
1) Advisory Services		
a) Land preparation	28	73.7
b) Crop selection, varieties, sowing time	25	65.8
c) Soil testing and Soil Health Card	29	76.3
d) Weed management	23	60.5

e) Irrigation scheduling	25	65.8
f) Pest and Disease management	27	71.1
g) Weather related information	25	65.8
2) Farm Inputs		
a) Quality seeds	31	81.6
b) Planting material	29	76.3
c) Fertilizer availability	28	73.7
d) Pesticides availability	25	65.8
3) Farm Machinery and hiring service	28	73.7
4) Marketing		
a) Marketing and price forecast	24	63.2
b) Logistics	24	63.2
c) Quality assurance	23	60.5
d) Traceability	24	63.2
5) Processing and Post-harvesting technologies		
a) Drying, Grading and storage	25	65.8
b) Post-harvesting technologies	25	65.8
6) Government Schemes and subsidies of State and Central Government	29	76.3
7) Insurance	31	81.6
8) Credit and finance	28	73.7
9) Drones Hiring Service	28	73.7
10) Mobile Apps in Farming	30	78.9
11) IoT devices	30	78.9
12) Trainings and demonstration	28	73.7

Area/Type of Service	No. of Responses	Percentage
HORTICULTURE		
13) **Horticultural schemes and subsidies** information such as Horticulture Crops, Greenhouse Construction, Drip Irrigation, Polyhouse, Fruit Crop Plantation. Online application forms for subsidy claims etc.	28	73.7
14) **Marketing linkages** between horticultural producers and traders	27	71.1

Area/Type of Service	No. of Responses	Percentage
ANIMAL HUSBANDRY		
15) Veterinary Doctors fixed day visits to farmers place. Animal Health Card issuance	29	76.3
16) Subsidies and loans for purchase of cattle, sheep, Goat, poultry etc.	28	73.7
17) Availability of animal feed and price etc.	28	73.7

Area/Type of Service	No. of Responses	Percentage
FISHERIES		
18) Water Quality Management Service	26	68.4
19) Fingerlings Supply	24	63.2
20) Feed Supply and Nutrition Management service	27	71.1
21) Disease management and Advisory service	24	63.2
22) Aquaculture Equipment Supply	26	68.4
23) Financial Services and Subsidy Information	24	63.2
24) Market Linkage and Sales Assistance	24	63.2

The results of Table 3.43 illustrate the sector-wise availability of agricultural services that respondents believe should be offered in Common Service Centres (CSCs). In the advisory services category, the most requested service is soil testing and soil health cards, with 76.3 per cent of respondents indicating its importance. This is followed by pest and disease management at 71.1 per cent and land preparation at 73.7 per cent. Other advisory services, such as weed

management and irrigation scheduling, received support from 60.5 per cent and 65.8 per cent of respondents, respectively.

For farm inputs, quality seeds received the highest support, with 81.6 per cent advocating for its availability. Planting material and fertilizer availability were also highlighted, receiving support from 76.3 per cent and 73.7 per cent of respondents, respectively.

In terms of farm machinery and hiring services, 73.7 per cent indicated a need for these services. The marketing services category showed equal support for marketing and price forecasting and logistics, with both receiving 63.2 per cent. Quality assurance received support from 60.5 per cent of respondents.

For processing and post-harvesting technologies, drying, grading, and storage, as well as post-harvesting technologies, were each supported by 65.8 per cent of respondents. Awareness of state and central government schemes was also deemed important by 76.3 per cent.

Insurance services were a priority, with 81.6 per cent advocating for their inclusion. Credit and finance services received support from 73.7 per cent, while drones hiring services were highlighted by 73.7 per cent of respondents as well.

Both mobile applications and IoT devices received considerable support, with 78.9 per cent. Finally, trainings and demonstrations were deemed important by 73.7 per cent of respondents.

The results for the horticulture services indicate a strong demand for various types of support in Common Service Centres (CSCs). The most requested service is information on horticultural schemes and subsidies, including details on horticulture crops, greenhouse construction, drip irrigation, polyhouse, and fruit crop plantation. This service received support from 73.7 per cent of respondents. Additionally, there is significant interest in marketing linkages between horticultural producers and traders, with 71.1 per cent of respondents advocating for this service. These findings highlight the importance of providing comprehensive information and support for horticultural activities within CSCs to enhance the productivity and market access of horticultural producers.

The results for animal husbandry services demonstrate a significant demand for various types of support in Common Service Centres (CSCs). The most requested service is the fixed-

day visits of veterinary doctors to farmers' places, along with the issuance of animal health cards, which received support from 76.3 per cent of respondents. Additionally, there is considerable interest in subsidies and loans for the purchase of cattle, sheep, goats, and poultry, with 73.7 per cent of respondents advocating for this service. Furthermore, the availability of animal feed and information on prices also garnered support from 73.7 per cent of respondents. These findings highlight the critical need for accessible veterinary services, financial support, and information on animal feed to enhance animal husbandry practices among farmers.

The findings for fisheries services also shows a significant demand for various types of services support in Common Service Centres. The water quality management service is one of the most requested, receiving support from 68.4 per cent of respondents. Additionally, disease management and advisory services were supported by 63.2 per cent of respondents, along with fingerling supply and financial services and subsidy information, which also received 63.2 per cent support. Furthermore, market linkage and sales assistance were highlighted by 63.2 per cent of respondents.

These findings reflect the critical need for comprehensive support services in Agriculture to enhance production, sustainability, and market access for farmers.

4. CONCLUSION AND RECOMMENDATIONS

The study reveals a significant opportunity for transforming Common Service Centers (CSCs) into Village Knowledge Centers (VKCs) for effective delivery of agricultural extension services and to minimise the gap between agricultural information services and farmers. The study highlighted the vital role of farmers and VLEs in accessing and utilizing these services, revealing significant demographic insights, preferences, and levels of satisfaction. Although farmers are aware of available services at CSCs, challenges such as limited services, inadequate training of VLEs, accessibility issues, and varying levels of satisfaction persist, hindering their full potential. The study also indicates that there is a strong demand for increased and diversified agricultural services, emphasizing the importance of strengthening the support provided to farmers. The overwhelming interest in specific services ranging from advisory services to financial assistance and advanced technological applications, reflects the essential needs of the agricultural community. It is crucial for government, CSCs, and agricultural institutions to address these identified gaps through targeted interventions, enhance the capacity of VLEs with intensive training, and implement effective communication strategies to better inform farmers of the resources at their disposal. The insights garnered from this study can serve as a roadmap for the improvement of agricultural services by developing a more responsive and accessible agricultural service ecosystem, ultimately aiming to enhance productivity, promote sustainable farming practices, and secure the livelihoods of farmers in the country.

4.1 Enhanced Role of CSCs as VKCs

The transformation of Common Service Centers (CSCs) into Village Knowledge Centers (VKCs) offers a promising opportunity to bridge the agricultural information and service gaps for farmers. CSCs, currently valuable resources, can have a more profound impact with improvements and availability of agricultural services, particularly in agricultural extension services, by providing timely and relevant information on farming practices, subsidies, market prices, weather, farm inputs, farm machinery, value addition, weather information. And, also the information services of allied sector on horticultural schemes and subsidies, market-

linkages, livestock, fisheries will make the CSCs more powerful in serving VKCs for farming community in the country.

4.2 Farmers' Engagement and CSCs Service Utilization

The study outlines a distinct profile of farmers currently utilizing CSCs. Notably, the demographic breakdown shows that CSC users are predominantly male, with female participation remaining limited. This disparity highlights a key area for improvement; by promoting inclusivity, CSCs could extend the benefits of agricultural and government services to female farmers, who are underrepresented despite their significant role in rural economies. Expanding service access for women could enhance agricultural productivity and contribute to rural development.

Further analysis reveals that the majority of CSC users fall within the 26-45 age range, representing middle-aged, digitally literate, and educated farmers. This demographic is well-suited to benefit from the technologically oriented advisory services provided by CSCs, suggesting that digital literacy is a crucial factor in service adoption. However, the potential to extend services to less digitally literate farmers could be explored, possibly through targeted educational programs and hands-on assistance to bridge the digital divide, thereby ensuring broader engagement across diverse age groups and education levels.

The data also emphasizes that most CSC users are small and semi-medium landholders with modest incomes, which indicates the economically constrained circumstances of this farming community. For these small-scale farmers, CSCs offer vital access to subsidized services and essential information on government schemes, both of which are indispensable for enhancing economic stability and farming productivity. Given the limited resources of this demographic, CSCs' role in delivering cost-effective support is of paramount importance.

However, despite the potential advantages, satisfaction levels with the extension services provided through CSCs are low. A large number of farmers still rely on informal sources, such as advice from fellow farmers or radio broadcasts, which indicates a disconnect between the CSC services offered and the practical information needs of farmers. Satisfaction with government extension functionaries is also low, suggesting that the services may not be sufficiently relevant or effective in addressing the immediate agricultural challenges faced by farmers. Addressing the information services gap by tailoring CSC offerings to better align

with real-world farming issues and linking with officials from department of agriculture, ATMA and KVK could improve the overall impact of these centers.

The findings reveal that financial constraints, market access challenges, and price volatility significantly impact over half of the farmers, while one third face obstacles in accessing schemes and critical agricultural information. Climate-related issues affect more than one fourth, and nearly one fifth lack timely crop advisory. The pressing concern about scientific price discovery underscores the need for transparent, fair market mechanisms to strengthen farmers' resilience and productivity.

4.3 Service Gaps and Satisfaction Levels

The prioritization of information services by farmers reflects their practical needs, with crop management and pest and disease control being the most essential, followed by information on subsidies, market prices, and weather forecasts. Farmers' reliance on these services highlights areas where information can significantly enhance decision-making and productivity. A moderate level of agreement among farmers on these priorities emphasizes that a well-rounded approach is essential, integrating financial support, market transparency, and targeted advisory services. Such improvements could empower farmers to navigate contemporary agricultural challenges, improve productivity, and ensure equitable market access, thus fostering sustainable rural development.

While general awareness of and accessibility to CSCs is high, certain agricultural services particularly those related to pest management and market information remain underutilized. While farmers frequently turn to CSCs for government schemes, there is comparatively less engagement with the agricultural advisory services available. This imbalance suggests the need for targeted promotional efforts and educational programs to increase awareness about these agricultural resources, enabling farmers to maximize the benefits that CSCs can provide.

The scheme Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is highly utilized and valued by farmers, with most finding it both useful and timely. Banking services, Kisan e-Mart, and the Pradhan Mantri Kisan Maandhan Yojana (PMKMY) also receive positive responses regarding utility and timeliness. Conversely, agricultural advisory services, such as teleconsultations and soil health testing, show significant dissatisfaction, with high ratings of

poor satisfaction due to perceived ineffectiveness. Additionally, low usage and limited satisfaction with services like Farm Machinery on Rent and protected cultivation indicate areas where CSCs could enhance support. Financial services, notably the KCC and PMFBY schemes, reflect mixed satisfaction levels, while banking services enjoy a relatively higher approval rate, signalling key areas for improvement in CSC agricultural service offerings.

The findings reveal that while farmers express high satisfaction with financial and support schemes like PM-KISAN, Banking Services, Kisan e-Mart, PMKMY, and PMFBY, they show significant dissatisfaction with advisory services. Protected Cultivation & Organic Farming had no positive ratings, and services such as Agricultural Tele Consultation and Soil Testing Center received predominantly very poor ratings, indicating areas needing substantial improvement to better meet farmers' needs through CSCs.

The findings indicate that while there is some agreement among farmers regarding the affordability and time-saving benefits of agricultural services provided by Common Service Centres (CSCs), concerns remain about the quality of information and the adequacy of services offered. A notable percentage of farmers expressed dissatisfaction with the knowledge of Village Level Entrepreneurs (VLEs), highlighting a critical area for improvement. To enhance the effectiveness of CSCs, it is essential to address these gaps in service provision and ensure that VLEs are equipped with the necessary expertise to meet farmers' needs effectively.

The results highlight that farmers derive significant benefits from CSC services, including increased access to financial resources and enhanced knowledge and skills. Additionally, many farmers report improvements in crop yield and market access, alongside better pest and disease management. This indicates a strong interest in expanding the range of services offered by CSCs in agriculture, horticulture, animal husbandry, and fisheries to meet diverse farmer needs.

Farmers are interested in accessing a wide range of agricultural services through CSCs, spanning agriculture, horticulture, animal husbandry, and fisheries. However, the impact of these services on agricultural activities remains limited, with farmers reporting unmet needs in key areas.

4.4 Challenges in Agricultural Support by CSCs

Farmers face significant challenges primarily due to a lack of awareness regarding the agricultural services offered at Common Service Centres (CSCs), coupled with inadequate infrastructure, especially in internet connectivity. Although issues like insufficient support and high service costs are less frequently cited, the absence of distance-related concerns indicates that accessibility is not a major barrier. To enhance the effectiveness of CSCs, it is essential to address these awareness and infrastructure gaps. Additionally, financial constraints and market-related issues, such as ineffective price discovery mechanisms, hinder farmers' economic resilience. A successful transition to Village Knowledge Centres (VKCs) will require the timely provision of market information and price advisory services, enabling farmers to make informed decisions and improve their market access.

4.5 Role of Village Level Entrepreneurs

The data collected from Village Level Entrepreneurs (VLEs) provides additional insights into the current CSC setup and its potential for expansion into VKCs. Most VLEs are well-educated, primarily male, and between 26-45 years old, yet their incomes remain modest, reflecting limited financial incentives under the current model. This finding underscores the need to establish sustainable revenue streams or support mechanisms to sustain VLE engagement and dedication.

VLEs offer a variety of services, with high engagement in government programs such as PM-KISAN and PMFBY. However, there is notably less involvement in operational services like farm machinery rentals, indicating possible gaps in addressing farmers' specific needs. This variation in service delivery suggests that although VLEs are willing to provide assistance, they may lack the necessary resources or specialized knowledge to effectively deliver certain types of

CSC Operator as DAESI Dealer

Mr. Naskutla Sampath, from the village of Shanigaram, processing degree qualification and over five years of experience in the agricultural field. He initially worked in marketing for two years across four districts in Telangana. Later, he became VLE of Common Service Centres (CSCs) and offering citizen services including agricultural services. He also collaborated with Indian Farmers Fertilizer Cooperative Limited (IFFCO) for providing input supply to farmers and also providing drone services for farmers with help of IFFCO scheme, covering up to 8,000 to 10,000 acres in Siddipet districts. On average, these drone services cover about 20–25 acres daily, assisting farmers with crop spraying and other agricultural needs. Mr. Sampath was holding a certificate in Diploma in Agricultural Extension Services for Input Dealers (DAESI) program. The programs organized by International Fertilizer Development Center (IFDC), have further strengthened his expertise in agricultural support and services.

services. The preference expressed by VLEs for short, focused training sessions indicates a practical approach to improving their service delivery capabilities. Regular, accessible training sessions could help bridge existing knowledge gaps and equip VLEs to better serve their communities. VLEs often lack specific agricultural expertise, affecting service quality. Only 36.8% of VLEs reported receiving agricultural training, which indicates a considerable gap in the knowledge needed to effectively assist farmers. Regular, practical training for VLEs, focusing on agriculture-specific topics and digital tools, could significantly enhance their ability to meet farmer's needs.

Challenges also arise from infrastructure limitations and procedural barriers that reduce the effectiveness of CSC services. Poor internet connectivity and delays in arranging expert consultations significantly hinder VLEs' ability to support farmers. Addressing these infrastructure challenges is crucial for enabling VLEs to meet the needs of their local communities more effectively. Enhanced connectivity, simplified processes, and efficient access to expert advice would enable VLEs to provide timely, accurate information and services, thereby improving the overall efficacy of VKCs.

Sector-specific analysis reveals that VLEs recognize the importance of CSCs evolving into VKCs to address diverse agricultural needs. There is strong demand for expanded advisory services, high-quality inputs, accessible machinery, and support in areas such as insurance and credit access. Services for horticulture and animal husbandry also emerge as priorities, with particular emphasis on veterinary support, animal feed provision, and access to horticultural information. These insights demonstrate that VLEs are aware of the varied and complex needs of farmers and understand the potential impact of a more comprehensive suite of services.

4.6 Expanding Agricultural Services

Farmers expressed interest in a broader range of agricultural services through CSCs, including horticulture, animal husbandry, and fisheries support. The report suggests that VKCs should expand to include these services to meet the diverse needs of rural farmers. VLEs also highlighted the importance of services like veterinary support, market linkage, and access to affordable farm machinery

4.7 Towards an Integrated Approach: Building Resilient Village Knowledge Centers

Overall, the findings suggest a compelling vision for CSCs to evolve into VKCs, thereby bridging critical knowledge and service gaps for rural farmers. To successfully transform CSCs into effective VKCs, service options expanded, VLEs equipped with practical continuous training, digital tools support for agricultural operations to be in-built into CSC frame work and infrastructure challenges must be addressed. Such steps would empower VLEs to support rural farmers more comprehensively, fostering a more resilient and responsive agricultural extension network.

This transformation promises to cultivate a knowledgeable, empowered farming community that is better equipped to navigate modern agricultural challenges. By leveraging VKCs as center of information, advisory support, and resource access, rural development initiatives can achieve sustainable, long-term impact, ultimately making VKCs indispensable resources for advancing rural resilience and prosperity.

VISTAAR Project

(Virtually Integrated Systems to Access Agricultural Resources)

The VISTAAR project is an initiative of Ministry of Agriculture and Farmers Welfare (MoA&FW), Government of India. VISTAAR is Artificial Intelligence based digital initiative to transform the Indian Agricultural ecosystem. The project is build on open network architecture and VISTAAR data grid, Digital Public Infrastructure (DPI) and enables farmers, extension personnel working in agriculture and allied sector, agricultural researchers, and policymakers to share data and access agricultural advisory services seamlessly.

The key feature of VISTAAR is its AI-driven interface, Chatbot, which provides localized, real-time agricultural advice to farmers. It offers personalized guidance on crop management, pest control, market prices, schemes of central, state, value addition and weather forecast, alerts through platforms like mobile app-chatbot. The interactive voice responses in-built with the bot in their regional languages through the Bhashini plug-in support. The farmers can interact with VISTAAR chatbot application using voice, text and AI enable chatbot provides the advisory in their local language in the form voice, text and supported with suitable videos of the advisory.

VISTAAR app also supports for the capacity building of extension personnel on various emerging modules in agriculture and allied sector. This focuses on empowering farmers and extension workers with accurate, timely advisories in agriculture and allied sector. With contributions from various stakeholders, VISTAAR aspires to enhance agricultural productivity and ultimately serves as a scalable agricultural extension service model for country by digital agricultural transformation.

In nutshell, the study underscores the importance of targeted improvements in CSC operations, with recommendations that span service diversification, enhanced VLE training, and infrastructure upgrades. By addressing these areas, CSCs have the potential to evolve into VKCs that better serve rural farming communities in the country, thereby strengthening agricultural productivity and rural livelihoods.

4.8 Recommendations

1. **Strengthen Partnerships with Agricultural Institutions**: Collaborate with State Agricultural Universities (SAUs), Krishi Vigyan Kendras (KVKs), and departmental officials to offer expert advice and specialized knowledge through CSCs, enhancing their role as Village Knowledge Centers for rural communities. A continuous support from KVK and department is very essential to strengthen the VLEs for mainstreaming the agricultural extension services through CSCs.
2. **Diversify Agricultural Services:** Expand CSC services to cover a broader range of agricultural needs, including support for horticulture, livestock management, fisheries and establish fixed-day veterinary services and offer access to quality seeds, fertilizers, and farm machinery rentals for comprehensive support to address the diverse needs of rural farmers. Integrate market access services and price forecasting tools to help farmers make informed decisions about selling their produce. At present there are only 12 services are available at CSCs and out which particularly schemes related services are working effectively. Need to focus on all agricultural services to be made available and effectively implemented through CSCs. Annexure-I shows the list of services recommended by the both farmers and VLEs at CSCs.
3. **Practical Training for VLEs:** Organize hands-on, practical agriculture focused training sessions for Village Level Entrepreneurs (VLEs) that focus on real-world challenges they face and to improve their ability to deliver relevant agricultural advice and support farmers. Include mentorship programs with experienced district level KVK scientists and departmental officers that will guide VLEs on best practices in service delivery. Ensure VLEs receive periodic training on critical agricultural services, such as agricultural schemes, soil health management, pest control, crop advisory, inputs and efficient water usage. Such training could be scheduled quarterly to keep VLEs updated on best practices.
4. **Expert Consultation Networks:** Create a network of agricultural experts who can provide regular consultations via phone or online platforms. Facilitate access to these experts through the CSCs to ensure farmers receive timely and relevant advice.
5. **Introduce Digital Tools for CSCs**: Introducing digital tools such as mobile applications and IoT devices for weather, pest and crop management to enhance productivity and efficiency. Leverage Mobile Apps and IoT Devices can improve decision-making and enhance productivity by providing real-time information. Provide drone services at CSCs

for precision agriculture, including pesticide spraying and crop monitoring, to improve productivity while reducing costs. This technology has been shown to increase efficiency and can be a valuable addition to CSC services. Implementation of VISTAAR application needs to be part of CSC agricultural services, to strengthen the CSCs with resource rich in agricultural information that will benefit farming community.

6. **Align CSCs to FPOs:** The CSCs should be made aligned with FPOs, so that the services needed by the farmers in that FPOs will be effectively met. It is a win-win situation for CSCs, FPOs, and Farmers as everyone gets the benefits from this.
7. **DAESI Certified holder as VLE:** The trained certified holder of DAESI dealer is a good choice for running CSCs as VLE. The training under DAESI programme not only equip certain knowledge on agricultural practices and also has business knowledge on selling inputs. The DAESI VLE can collaborate with IFFCO like institution to sell the quality inputs to farmer and provide the services needed by the farmers effectively.
8. **Soil Testing Kits with CSCs:** The CSCs are equipped with Soil Testing Kits to test the soil samples of farmers and update the information online through CSC-Agricultural portal for recommendations and generating soil health cards, on periodically. The CSCs working at block-level and major gram panchayati shall have these kits.
9. **Market Access Workshops:** Host regular workshops focused on market access and price discovery. Invite local market experts to educate farmers on pricing mechanisms, market trends, and negotiation skills, enabling them to sell their produce more effectively. Offer marketing platforms for real-time market prices and crop management information, helping farmers make informed decisions and improve profitability.
10. **Streamline Access to Financial and Government Services**: Simplify the application process for government schemes, financial products, and insurance at CSCs, providing farmers with clear guidance and support.
11. **Establish Farmer Feedback Channels:** Create simple, accessible channels for farmers to provide feedback on services received, such as suggestion boxes or regular community meetings. This feedback loop can help refine services and ensure CSCs are meeting local needs effectively
12. **Continuous Impact Assessment:** Establish a simple framework for ongoing evaluation of the services provided by CSCs. Involve farmers in the assessment process to identify areas for improvement and track progress, ensuring that the services evolve to better address their

challenges. This can involve both VLEs and farmers in monitoring service efficacy and making adjustments as needed.

13. **Enhance Awareness and Outreach**: Launch grassroots awareness campaigns that leverage local leaders and community networks to educate farmers, both male and female about available services at CSCs. Use simple language with focused community meetings and posters and relatable examples to ensure clear communication and engagement at CSCs will improve access to agricultural services. Women-centric programs could encourage inclusivity and improve agricultural productivity within this demographic.
14. **Infrastructure Improvement:** Collaborate with local governments and private network providers for enhancing internet connectivity and basic infrastructure at CSCs. Consider using stable internet solutions for remote areas to ensure uninterrupted access to services.

4.9 Implementation Plan

4.9.1 Village Knowledge Center (VKC) Model

The **Village Knowledge Center (VKC) Model** builds on the existing infrastructure and operational framework of Common Service Centers (CSCs), transforming them into agricultural-focused knowledge hubs, in addition to other services. The VKC model is designed to provide integrated, technology-driven, and farmer-centric services that address key agricultural challenges in the country.

4.9.2 Core Components of the VKC Model

4.9.3 Service Framework

VKCs will deliver a mix of **agricultural**, **financial**, **technological**, and **capacity-building services** tailored to the needs of rural farmers. Key services include:

- **Agricultural Advisory**: Real-time crop management guidance, pest control, and weather forecasts.
- **Soil Testing and Analysis**: On-site soil testing kits with expert recommendations integrated with National Soil Health Card.
- **Market Information and Linkages**: Digital platforms providing real-time price updates, e-marketplace integration, and buyer-seller connections.

- **Financial Services**: Simplified access to crop insurance, credit schemes, and government subsidies.
- **Technology Access**: IoT devices for monitoring, precision farming tools, and mobile-based advisory apps.
- **Capacity Building**: Training programs for digital literacy, sustainable practices, and advanced farming techniques.

4.9.4 Infrastructure and Technology Integration

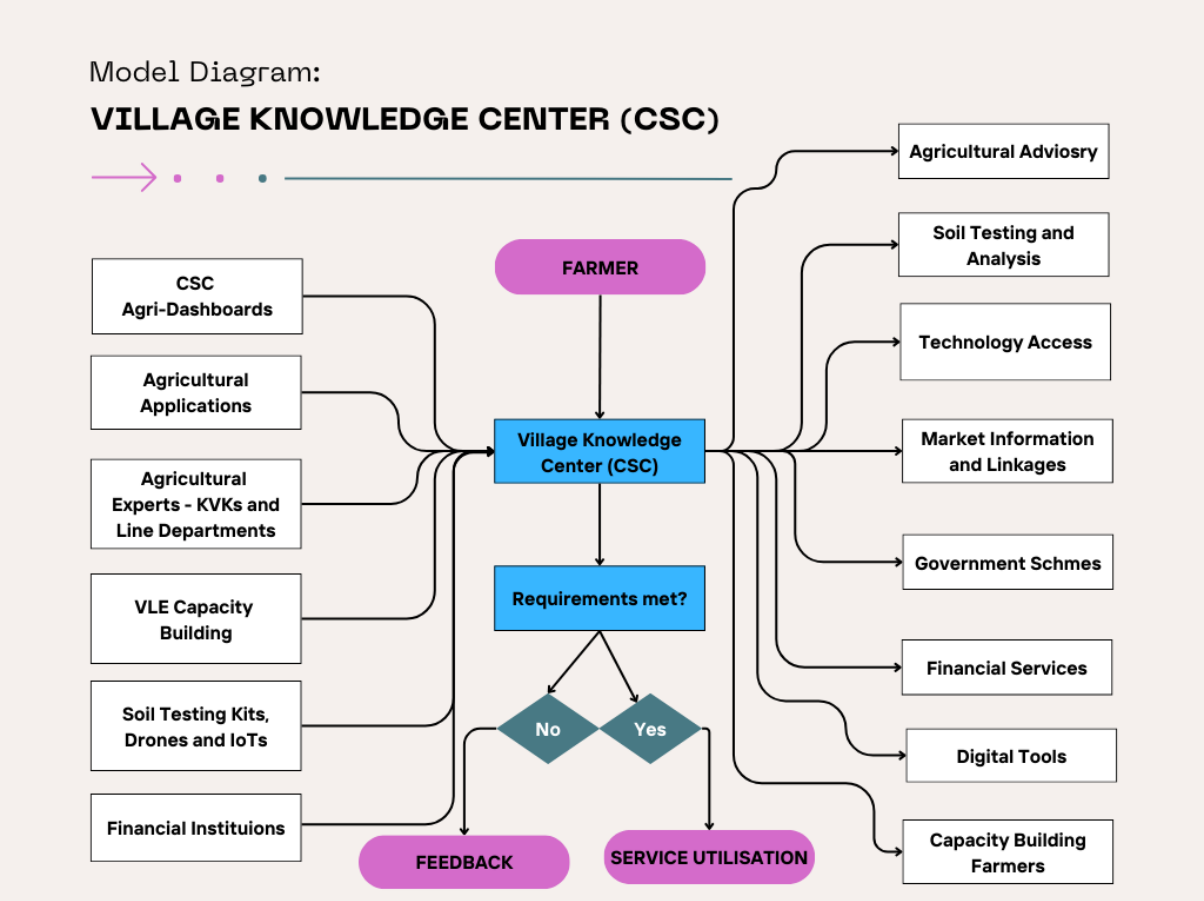
The VKC model leverages existing CSC infrastructure while incorporating targeted upgrades to meet agricultural service needs. VKCs will utilize advanced digital tools and platforms to enhance service delivery:

- **Connectivity**: Reliable internet access and backup power systems for uninterrupted operations.
- **Digital Tools**: Soil testing kits, drones, and IoT-enabled crop monitoring devices.
- **Physical Space**: Dedicated kiosks for advisory services, training, and community interactions.
- **Mobile Applications**: Apps for advisory services, weather updates, and subsidy tracking.
- **AI and IoT Systems**: Precision farming tools for pest monitoring, irrigation scheduling, and yield optimization.
- **Data Dashboards**: Centralized platforms for real-time data on crop health, market prices, and farmer feedback.

4.9.5 Human Resources and Capacity Building

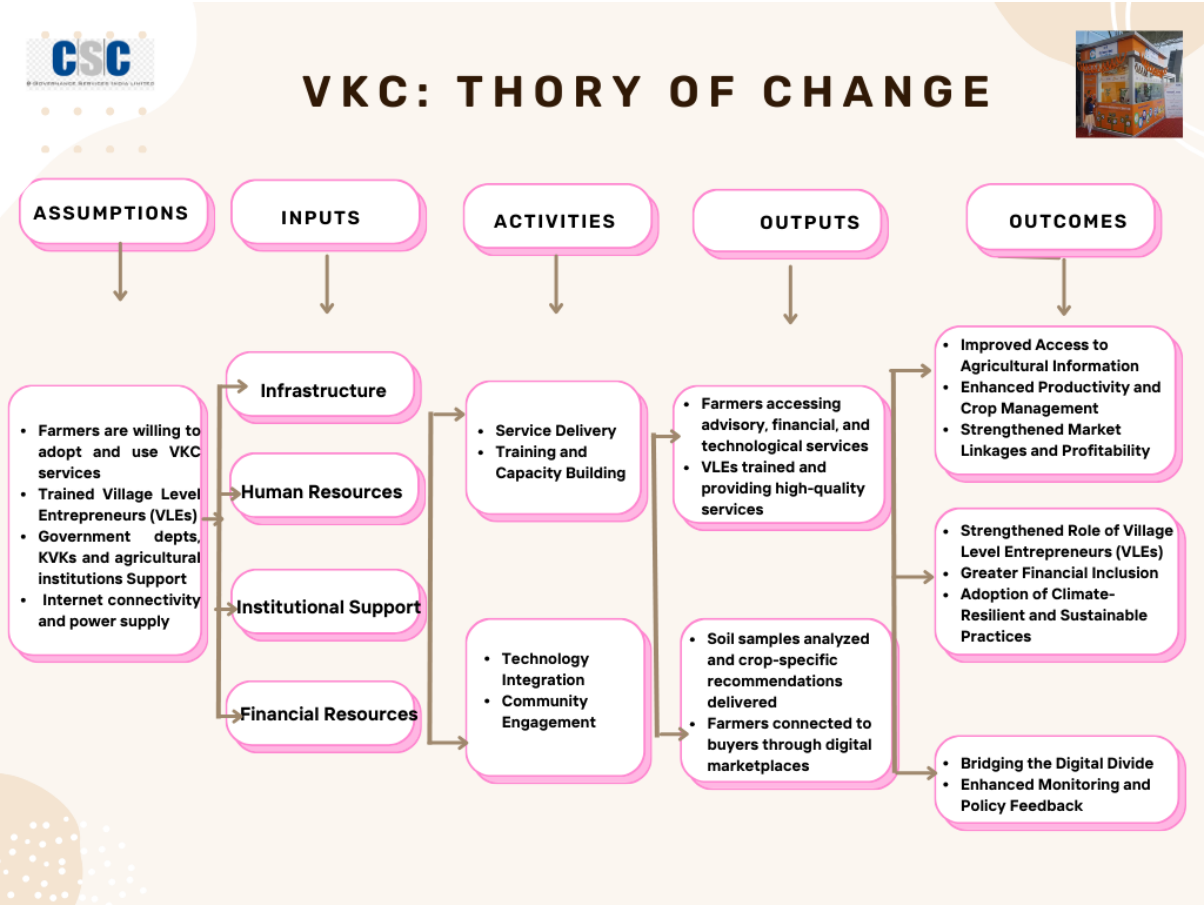
- **Village Level Entrepreneurs (VLEs)**: Trained to deliver specialized agricultural services, including crop management and financial advisory.
- **Agricultural Experts**: Accessible through teleconsultations to provide advanced guidance.

MODEL VILLAGE KNOWLEDGE CENTER (CSC)



4.9.6 Operational Framework of VKC

The VKC model operates on a clear Theory of Change that links assumptions, inputs, activities, outputs, and outcomes. The Theory of Change diagram presented below:



The theory of change diagram illustrates the pathway through which the accessibility of Common Service Centres (CSCs) positively impacts farmers, highlighting key inputs, activities, outputs, outcomes, and the ultimate impact. **Inputs** include strategically located CSCs and extended operating hours, ensuring that these centres are conveniently accessible to farmers. These inputs support **activities** such as delivering agricultural services, providing technical support, and offering access to critical resources like market prices, weather forecasts, and crop insurance. The resulting **outputs** are increased farmer visits to CSCs and wider adoption of services, indicating their relevance and usability. As farmers leverage these services, **outcomes** such as improved access to agricultural information, higher utilization of farming technologies, and enhanced operational efficiency are observed. Ultimately, this leads to the **impact** of sustainable agricultural development, improved productivity, and better livelihoods for farmers. This structured progression underscores how targeted accessibility measures drive meaningful and measurable improvements in agricultural practices and outcomes.

***

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5. **http://cscagriadvisory.in/**
6. **https://cscspv.in/index.html**

6. ANNEXURES

Annexure-I

Recommended Agricultural Services at CSCs

S.No.	Area	Type of Service	Service description
1.	Advisory Services	a) Land preparation,	Land preparation for seasonal crops and selection of varieties
		b) Crop selection, varieties, sowing time	Selection of crops and varieties based on soil, its fertility, sowing time
		c) Soil testing and Soil Health Card	Soil testing services to provide customized fertilizer recommendations. Issue of Soil Health Card
		d) Weed management	Weed Management, herbicides availability
		e) Irrigation scheduling	Irrigation schedule for the crop. Efficient irrigation systems like drip or sprinkler irrigation to optimize water use.
		f) Pest and Disease management	Integrated pest management (IPM) practices. Knowledge and training on identifying and managing pests and diseases.
		g) Weather related information	IMD forecast weather for next 3 days and alerts, Agromet Bulletins for the blocks and advisory
2.	Farm Inputs	a) Quality seeds	Access to high-quality, high-yielding, and disease-resistant seeds.
		b) Planting material	Availability of planting material for various crops and plants.
		c) Fertilizer availability	Adequate supply of fertilizers to ensure soil fertility
		d) Pesticides availability	Availability of effective pesticide, herbicides and it usage
3.	Farm Machinery	a)Farm Machinery and hiring service	Access to modern and appropriate agricultural machinery and tools. List of custom hiring centers close to farmers area for hiring
4.	Marketing	a) Marketing and price forecast	Real-time information on market prices, demand, and trends. MSP Platforms for direct sales to consumers or bulk buyers.
		b) Logistics	Providing logistics services to the farmers for transportation of inputs and farm produce
		c) Quality assurance	Providing quality assaying and assurance services on the farm produce and certification.
		d) Traceability	Providing traceability services for farm produce to the traders and end consumers

5.	Processing and Post-harvesting technologies	a) Drying, Grading and storage	Storage facilities to reduce post-harvest losses. Details of cold storage facilities available nearby the farmers location, and charges etc.
		b) Post-harvesting technologies	Post harvesting technologies and value-addition including processing
6.	Government Schemes and Subsidies	a) Government Schemes and subsidies of State and Central Government	Access to government scheme subsidies and grants provided by the Central sector schemes and State Level schemes.
7.	Insurance	a) Insurance	Crop insurance notified for crops and insurance policy details, claims etc. Crop loss assessment during cyclones, droughts, pest & diseases etc. Providing insurance cover for farm machinery.
8.	Banking and finances	Credit and finance	Affordable credit and loans for purchasing inputs, machinery, and infrastructure. Information on KCC.
9.	Drone services	Drones Hiring Service	Drone hiring services for fertilizer, pesticide applications, crop survey and crop health monitoring etc.
10.	Mobile Apps/Technologies	Mobile Apps in Farming	Mobile apps providing weather forecasts, market prices, and farming tips.
11.	IoT devices	IoT devices	Devices for Real-time crop health monitoring, Irrigation schedule etc
12.	Training and Demonstrations	Trainings and demonstration	Training in modern farming techniques and best practices.
B. HORTICULTURE			
13.	Schemes and subsidies information	Horticultural schemes and subsidies information	Horticultural schemes and subsidies information such as Horticulture Crops, Greenhouse Construction, Drip Irrigation, Polyhouse, Fruit Crop Plantation. Online application forms for subsidy claims etc.
14.	Marketing linkages	Marketing linkages between horticultural producers and traders	Marketing linkages between horticultural producers and traders
C. ANIMAL HUSBANDRY			
15	Veterinary Clinics	Veterinary Doctors fixed day visits to farmers place. Animal Health Card issuance	Veterinary Doctors fixed day visits to farmers place. Animal Health Card issuance etc.
16	Schemes and subsidies in Animal husbandry	Subsidies and loans for purchase of cattle, sheep, Goat, poulty etc.	Subsidies and loans for purchase of cattle, sheep, Goat, poulty etc.
17	Animal Feed information	Availability of animal feed and price etc.	Availability of animal feed and price details etc.

D. FISHERIES			
18	Water Quality Management Service	Water Quality Management Service	Regular monitoring and management of water quality parameters such as pH, dissolved oxygen, ammonia, and temperature to ensure a healthy environment for fish growth and prevent diseases.
19	Fingerlings Supply	Fingerlings Supply	Provision of high-quality fingerlings of various fish species, ensuring optimal growth rates and survival rates in local conditions
20	Feed Supply and Nutrition Management service	Feed Supply and Nutrition Management service	Supply of nutritionally balanced fish feed and guidance on feeding schedules and quantities to optimize fish growth and minimize feed waste
21	Disease management and Advisory service	Disease management and Advisory service	On-site diagnostic services for identifying fish diseases, along with recommendations for treatment protocols and the supply of necessary medications or treatments.
22	Aquaculture Equipment Supply	Aquaculture Equipment Supply	Details about essential equipment such as aerators, nets, pumps, and tanks, along with installation and maintenance services
23	Financial Services and Subsidy Information	Financial Services and Subsidy Information	Assistance in accessing loans, insurance, and government subsidies for fish farming projects, along with guidance on financial management
24	Market Linkage and Sales Assistance	Market Linkage and Sales Assistance	Support in connecting fish farmers with buyers, establishing supply chains, and accessing local and regional markets to sell their produce at competitive prices

Annexure-II

Contents of the VLE Training Module

Basic knowledge on Agriculture and Allied sectors

Duration: 10 Days (30 Sessions)

S.No.	Topic	No. of Sessions
A.	**Crop Production (8 Sessions)**	
1.	Agro-ecological situations, their relevance to Agricultural Production Systems	1
2.	Land preparation, Rainfed Farming and Watershed Management	1
3.	Seed – Seed Treatment, Seed Test, Seed Production Technologies, Seed Certification process	1
4.	Water Management - Irrigation Techniques and their Management, Micro Irrigation–Drips & Sprinklers	1
5.	Farm Mechanization – Need, Farm Implements and Equipment, Repairing, Maintenance and Custom hiring	1
6.	Package of Practices on Predominant Crops of the local area under Cereals, Pulses and Oilseeds	2
7.	Post-Harvest Technologies	1
B.	**Soil Health Management (3 Sessions)**	
8.	Soil types, Soil sampling, Soil testing, Macro and Micro Nutrient Deficiency Identification and Corrective measures - advisory	1
9.	Fertilizers, Manures, Bio-fertilizers – Types, Recommended doses, Time and Methods of application, Integrated Nutrient Management, Organic Farming	1
10.	Problematic soils and their Management	1
C.	**Crop Protection (6 Sessions)**	
11.	Important Pests and Diseases of local crops - Causes, Symptoms and Control measures	2
12.	Classification of Pesticides, New Generation pesticides, Compatibility	1
13.	Integrated Pest and Disease Management, Identification of useful and harmful insects	1
14.	Weed Management–Types, Identification & Management	1
15.	Acts, Rules and Regulations related to Agricultural Inputs – Seed Act, Insecticide Act and Fertilizer Act	1
D.	**Basic knowledge on Allied sectors and Other (9 Sessions)**	
16.	Horticulture – Package of practices of major Fruits, Vegetables and Flowers of local situation	2
17.	Animal Husbandry	1
18.	Fisheries	1
19.	Government Schemes: Flagship Programmes of GoI and respective States in Agriculture & Allied sectors	2
20.	Rural Credit and Crop Insurance	1

21.	IT enabled Agricultural Extension Advisory	2
E.	**Practical Sessions (4 Visits)**	
22.	Visit - Soil Testing Lab	1
23.	Visit – Farm implements and Machinery	1
24.	Visit – Progressive farmers field	1
25.	Visit – Market yard (APMC)	1

Annexure-III

Budget for the VLE Capacity Building Programme

(The budget required for training a batch of 40 VLEs per programme - 10 days)

S. No	Activity	Cost Norms (Rs.)	Remarks
1	Honorarium to Resource Persons	30,000.00	Honorarium for the resource persons @ Rs.1000/- per session of 90 minutes. Total of 30 sessions @3 sessions/day
2	Refreshment cost (Lunch, Breakfast, Dinner and session Teas)	1,35,000.00	An amount of Rs.300/- per day per trainee towards refreshment for total number of trainees attended + 5 members (supporting staff and faculty) for all the 10 days of the program.
3	Hiring of Vehicle for Resource Persons	20,000.00	Rs. 2000/- per day for 10 days.
4	Hiring of Vehicles for Field Visits	20,000.00	Rs. 10,000/- per day for 2 visits.
5	Stationery and study material	20,000.00	Rs.500/- per VLE towards photocopying of study material, including printed books to programme etc.
6	Sub Total	**2,25,000**	
7	Institutional charges @15%	33,750	Institutional charges to KVKs
8	**Total** **Rounded to Rs.**	**(2,58,750)** **2,60,000**	 @ Rs.6,500/- per VLE.

Annexure-IV

State-wise Summary of CSC established State-wise, Districts, Development Blocks, and Gram Panchayats

S.No	State/UT	No. of Districts	No. of Develop-ment Blocks	No. of GPs	No. of Rural CSCs (Mar'23)	CSC Local Name	% of coverag e of GPs
1	Andaman And Nicobar Islands	3	7	70	62	eDweep	88
2	Andhra Pradesh	26	668	13,310	8125	Rajiv Citizen Service Centre	100
3	Arunachal Pradesh	25	129	2,108	165	Common Services Centres	100
4	Assam	35	240	2,225	11311	Arunodoy Kendra	100
5	Bihar	38	534	8,053	51118	Vasudha	100
6	Chandigarh				8	Gram Sampark Centres	
7	Chhattisgarh	29	146	11,643	14574	Grameen Choice Centres	100
8	Delhi				179	Jeevan Centres	
9	Goa	2	12	191	163	Lok Seva Kendras	85
10	Gujarat	33	250	14,618	12347	e-Gram	84
11	Haryana	22	143	6,225	13259	e-Disha	100
12	Himachal Pradesh	12	90	3,615	4731	Lok Mitra Kendra	100
13	Jammu And Kashmir	20	287	4,291	6154	Khidmat Centre	100
14	Jharkhand	24	264	4,345	17611	Pragya Kendra	100
15	Karnataka	31	237	5,953	4792	Nemmadi Kendra	
16	Kerala	14	152	941	6242	Akshaya Centres	100
17	Ladakh	2	31	193	79	Khidmat Centre	
18	Lakshadweep	1	10	10	14	Aashraya	100
19	Madhya Pradesh	52	313	23,011	33104	Nagrik Suvidha Kendra	100
20	Maharashtra	34	352	27,861	43718	Maha e Seva Kendra	100
21	Manipur	16	70	3,812	779	Common Service Centres	20
22	Meghalaya	12	54	6,814	948	Rainbow Centres	14
23	Mizoram	11	28	841	355	Mizoram Online Centres	42
24	Nagaland	12	74	1,298	362	Nagaland One	28
25	Odisha	30	314	6,794	16166	Common Services Centre	100
26	Puducherry	4	6	108	160	Common Services Centre	100
27	Punjab	23	153	13,239	7463	Gram Suvidha	56
28	Rajasthan	33	362	11,207	16590	e-Mitra	100
29	Sikkim	6	34	199	94	Common Services Centre	47

30	Tamil Nadu	37	388	12,525	10033	People's Computer Centre	80
31	Telangana	33	594	12,768	4713	Mee Seva Centre	37
32	The Dadra And Nagar Haveli And Daman And Diu	3	3	38	82	Common Services Centre	100
33	Tripura	8	58	1,176	1695	e-Pariseva Kendra	100
34	Uttarakhand	13	95	7,795	6856	e-Uttara	88
35	Uttar Pradesh	75	826	57,702	93985	Jan Seva Kendra	100
36	West Bengal	22	345	3,339	21913	Tathya Mitra Kendra	100
	Total	**741**	**7,269**	**2,68,318**	**4,09,949**		

Source: 1. Panchayat Development Portal Index (https://pdi.gov.in/MDV/Public/State-wise-Summary.aspx)
2. CSC Annual Report 2023-24.

Transforming Common Service Centers into Village Knowledge Centers (VKCs) for effective delivery of Agricultural Extension Services to Farmers

QUESTIONNAIRE TO FARMERS

Part A:

QUESTIONNAIRE IDENTITY DETAILS			
S.No:		State:	Telangana
District:	Siddipet / Suryapet	Mandal:	
Village:		CSC Name:	

Part B: By Farmer:

PROFILE OF FARMER		
1.	Name of the Farmer	
2.	Gender	a) Male b) Female
3.	Age (in years)	a) 18 – 25 b) 26 – 45 c) 46 – 60 d) Above 60
4.	Level of education of Farmer	a) Illiterate b) Primary Education (up to 7th class) c) Secondary education (8th to 10th class) d) Intermediate education/diploma e) Degree and above
5.	Do you have digital literacy (Can able to use digital tools and operate mobile apps etc.)	a) Yes b) No
6.	Mobile Number	
FARMING DETAILS		
7.	Farming experience in years	a) Less than 5 years b) 5 – 10 years c) 11-20 years d) More than 20 years
8.	Land holding (in ha)	a) Marginal (below 1 ha) b) Small (1- 2 ha) c) Semi-Medium (2-4 ha) d) Medium (4 – 10 ha) e) Large (above 10 ha)
9.		a) < 3 lakhs

	Annual Income (from farming and also from other sources)	b) 3-5 lakhs c) >5 lakhs

Access to Agriculture Information Services by Farmers:

10.	What type of agricultural activities do you engage in?	a) Farming (Agriculture, Horticulture etc) b) Livestock c) Fisheries d) Others
11.	How do you currently access information related to agriculture and allied sector activities?	a) Extension officers (State Agricultural Dept) b) KVK and University scientists c) Kisan Call Centers d) Radio, Television programs and Magazines e) Mobile apps f) SMS alerts g) Fellow farmers h) Input dealers i) NGOs j) Private Companies Extension k) Websites
12.	Are you facing any challenges in your daily agricultural activities (please tick)	a) Non Availability of Inputs b) No access to timely Advisory on crops c) Climate change and weather forecasting d) Soil degradation and Soil Health e) Price fluctuations and access to Markets f) Lack of financial resources g) No access to Schemes related information h) difficulty in Processing the produce i) difficulty in marketing the produce j) Lack of scientific price discover
13.	What information services do you find most useful for your farming practices? (Order of preference)	a) Crop management b) Soil Health c) Pest and disease management d) Weather forecasts e) Market prices f) Input costs g) Processing h) Poultry i) Livestock j) subsidies and schemes

14.	How frequently do you seek information related to crop management, pest control and other agricultural practices?	a) Daily b) Weekly c) Monthly d) Seasonally e) Never
15.	How satisfied are you with the current availability of agricultural information through extension functionary?	a) Very much Satisfied b) Satisfied c) Neutral d) Dissatisfied e) Very much Dissatisfied

IT enabled Agricultural and allied services (ITeAS) delivered through CSC

16. Usage and Awareness

1.	Are you aware of Common Service Centres (If Yes, answer below questions)	a) Yes b) No
2	What services do you avail from CSC?	a) Utility bill payments b) Recharge/Xerox c) Land Revenue records d) Application for Government Schemes e) Information on Agricultural activities
3	How many times you will visit CSC in a month for availing services	a) Once b) Twice c) Thrice d) More than 3 times
4	How accessible is the CSC for you in terms of location and operating hours?	a) Very accessible b) Somewhat accessible c) Not very accessible d) Not accessible at all
5	Are there any specific services offered by CSC that you find beneficial? (Pease tick mark that apply)	a) Crop advisory services b) Market information services c) Government schemes d) Pest and disease management e) Processing f) Poultry g) Livestock h) None

6	Did the utilization of services positively impacted your agricultural activities?	a) Yes b) No
7	Are you paying for any services at Common Service Center:	a) Yes b) No
8	How satisfied are you with IT enabled Agricultural services provided through CSC?	a) Very much satisfied b) Satisfied c) Undecided d) Dissatisfied e) Very much Dissatisfied

17. SATISFACTION OF SERVICES AVAILED AT CSC BY FARMERS

S.No.	Type of Service	Service Availed	Information useful	Information timely	Satisfaction of Service				
		(Yes/No)	(Y/N)	(Y/N)	Very Poor	Poor	Average	Good	Very Good
1.	Agricultural Tele Consultation and e-Pashu Chikista								
2.	Soil Testing Center/Soil Health Card								
3.	CSC e-AGRI								
4.	Kisan e-Mart								
5.	Information on Nursery and Seed Production								
6.	Farm Machinery on Rent (MOVR)								
7.	Protected Cultivation & Organic Farming								
8.	Kisan Credit Card (KCC)								
9.	Pradhan Mantri Fasal Bima Yojana (PMFBY)								
10.	Pradhan Mantri Kisan Maandhan Yojana (PMKMY)								
11.	Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)								
12	Banking Services								

18. CSC Village Level Entrepreneur (VLE) and Services

(Please rate the performance on the following parameters on the basis of your experience with CSC)

S.No	Services Provided	Strongly Disagree	Disagree	Neither Agree nor disagree	Agree	Strongly Agree
1.	CSC provides agricultural services information required by the farmer					
2.	Quality of agricultural information provided at CSC is useful in farming activities					
3.	The cost of availing agricultural services are affordable					
4.	Availing agricultural services at CSCs saves time					
5.	VLE has sufficient knowledge on agricultural services					

19. How the CSC services impacted your farming practices?

S.No.	Area	Please tick that apply
1.	Reduced input costs	
2.	Improved soil health	
3.	Better pest and disease management	
4.	Improved crop yield	
5.	Better market prices and market linkages	
6.	Reduced labour cost due to Farm machinery service	
7.	Increased access to financial services and subsidies	
8.	Enhanced knowledge and skills	
9.	Higher price realization in consumer price	

20. INFORMATION SERVICES ON AGRICULTURE AND ALLIED SECTOR TO BE EXPECTED FROM CSC

S.No.	Area	Type of Service	Service description	Tick
A. **AGRICULTURE**				
1.	Advisory Services	a) Land preparation,	Land preparation for seasonal crops and selection of varieties	
		b) Crop selection, varieties, sowing time	Selection of crops and varieties based on soil, its fertility, sowing time	
		c) Soil testing and Soil Health Card	Soil testing services to provide customized fertilizer recommendations. Issue of Soil Health Card	
		d) Weed management	Weed Management, herbicides availability	
		e) Irrigation scheduling	Irrigation schedule for the crop. Efficient irrigation systems like drip or	

			sprinkler irrigation to optimize water use.	
		f) Pest and Disease management	Integrated pest management (IPM) practices. Knowledge and training on identifying and managing pests and diseases.	
		g) Weather related information	IMD forecast weather for next 3 days and alerts, Agromet Bulletins for the blocks and advisory	

2.	Farm Inputs	a) Quality seeds	Access to high-quality, high-yielding, and disease-resistant seeds.	
		b) Planting material	Availability of planting material for various crops and plants.	
		c) Fertilizer availability	Adequate supply of fertilizers to ensure soil fertility	
		d) Pesticides availability	Availability of effective pesticide, herbicides and it usage	
3.	Farm Machinery	a)Farm Machinery and hiring service	Access to modern and appropriate agricultural machinery and tools. List of custom hiring centers close to farmers area for hiring	
4.	Marketing	a) Marketing and price forecast	Real-time information on market prices, demand, and trends. MSP Platforms for direct sales to consumers or bulk buyers.	
		b) Logistics	Providing logistics services to the farmers for transportation of inputs and farm produce	
		c) Quality assurance	Providing quality assaying and assurance services on the farm produce and certification.	
		d) Traceability	Providing traceability services for farm produce to the traders and end consumers	
5.	Processing and Post-harvesting technologies	a) Drying, Grading and storage	Storage facilities to reduce post-harvest losses. Details of cold storage facilities available nearby the farmers location, and charges etc.	
		b) Post-harvesting technologies	Post harvesting technologies and value-addition including processing	
6.	Government Schemes and Subsidies	a) Government Schemes and subsidies of State and Central Government	Access to government scheme subsidies and grants provided by the Central sector schemes and State Level schemes.	
7.	Insurance	a) Insurance	Crop insurance notified for crops and insurance policy details, claims etc. Crop loss assessment during cyclones,	

			droughts, pest & diseases etc. Providing insurance cover for farm machinery.	
8.	Banking and finances	Credit and finance	Affordable credit and loans for purchasing inputs, machinery, and infrastructure. Information on KCC.	
9.	Drone services	Drones Hiring Service	Drone hiring services for fertilizer, pesticide applications, crop survey and crop health monitoring etc.	
10.	Mobile Apps/Technologies	Mobile Apps in Farming	Mobile apps providing weather forecasts, market prices, and farming tips.	
11.	IoT devices	IoT devices	Devices for Real-time crop health monitoring, Irrigation schedule etc	
12.	Training and Demonstrations	Trainings and demonstration	Training in modern farming techniques and best practices.	

B. HORTICULTURE			Tick
13.	Schemes and subsidies information	Horticultural schemes and subsidies information such as Horticulture Crops, Greenhouse Construction, Drip Irrigation, Polyhouse, Fruit Crop Plantation. Online application forms for subsidy claims etc.	
14.	Marketing linkages	Marketing linkages between horticultural producers and traders	
C. ANIMAL HUSBANDRY			
15	Veterinary Clinics	Veterinary Doctors fixed day visits to farmers place. Animal Health Card issuance	
16	Schemes and subsidies in Animal husbandry	Subsidies and loans for purchase of cattle, sheep, Goat, poulty etc.	
17	Animal Feed information	Availability of animal feed and price etc.	
D. FISHERIES			
18	Water Quality Management Service	Regular monitoring and management of water quality parameters such as pH, dissolved oxygen, ammonia, and temperature to ensure a healthy environment for fish growth and prevent diseases.	
19	Fingerlings Supply	Provision of high-quality fingerlings of various fish species, ensuring optimal growth rates and survival rates in local conditions	
20	Feed Supply and Nutrition Management service	Supply of nutritionally balanced fish feed and guidance on feeding schedules and quantities to optimize fish growth and minimize feed waste	
21	Disease management and Advisory service	On-site diagnostic services for identifying fish diseases, along with recommendations for treatment protocols and the supply of necessary medications or treatments.	

22	Aquaculture Equipment Supply	Details about essential equipment such as aerators, nets, pumps, and tanks, along with installation and maintenance services	
23	Financial Services and Subsidy Information	Assistance in accessing loans, insurance, and government subsidies for fish farming projects, along with guidance on financial management	
24	Market Linkage and Sales Assistance	Support in connecting fish farmers with buyers, establishing supply chains, and accessing local and regional markets to sell their produce at competitive prices	

21. How much you can pay to avail agricultural services at Common Service Center.

a) Rs. 25
b) Rs. 75
b) Rs. 50
d) Rs. 100

22. What challenges, if any, have you faced in accessing or using the IT-enabled Agricultural and Allied Services at CSC?

S.No.	Area	Please tick that apply
1.	Lack of awareness on agricultural services at CSC	
2.	Distance to CSC	
3.	Inadequate infrastructure - Internet connectivity etc.	
4.	Insufficient support or guidance	
5.	High service costs	

23. Suggestions to improve the information service delivery offered at CSC.

1.	
2.	

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Transforming Common Service Centers into Village Knowledge Centers (VKCs) for effective delivery of Agricultural Extension Services to Farmers

QUESTIONNAIRE TO CSC OPERATORS (VLES)

Part A:

QUESTIONNAIRE IDENTITY DETAILS			
S.No:		State:	Telangana
District:		Mandal:	
Village:		CSC Name:	

Part B: By CSC Operator (VLE):

PROFILE OF CSC OPERATOR/VLE		
1.	Name of the Operator/VLE	
2.	Gender	a) Male b) Female
3.	Age (in years)	a) 18 – 25 b) 26 – 45 c) 46 – 60 d) Above 60
4.	Level of education	a) Illiterate b) Primary Education (up to 7th class) c) Secondary education (8th to 10th class) d) Intermediate education / diploma e) Degree and above
5.	Mobile Number	
6.	Email ID	
7.	Annual Income from CSCs	a) < 3 lakhs b) 3-5 lakhs c) 5-8 lakhs d) 8- 10 lakhs e) Above 10 lakhs
8.	What type of Agricultural Services do you offer from CSC to farmers?	a) Advisory through Agricultural Tele Consultation and e-Pashu Chikista b) Soil Testing and Soil Health Cards c) CSC e-AGRI –E-Commerce for Agricultural produce d) Kisan e-Mart – Input Supply e) Information on Nursery and Seed Production f) Farm Machinery on Rent (MOVR)

		g) Protected Cultivation & Organic Farming h) Kisan Credit Card (KCC) i) Pradhan Mantri Fasal Bima Yojana (PMFBY) – Crop Insurance j) Pradhan Mantri Kisan Maandhan Yojana (PMKMY) k) Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) – Direct benefit Transfer services l) Banking Services m) Market price Information n) Weather Forecasts
9.	The utilization of Agricultural Services positively impacted agricultural activities, based on farmer's feedback?	a) Yes b) No
10.	Are you charging for Agricultural Services at Common Service Center?	a) Yes b) No
11.	How effective do you think the current Agricultural Services are helping farmers?	a) More Effective b) Effective c) Neutral d) Ineffective e) Not at all Effective
12.	Do you received any training on Agricultural Services?	a) Yes b) No
13.	How often do you participate in training programs related to agricultural services?	a) Monthly b) Quarterly c) Yearly d) Never
14.	Do you need intensive training on Agricultural Services?	a) Yes b) No
15.	Training period required (in case YES for above question)	a) One Week b) Two Weeks c) One Month d) Two Months
16.	Are you using any digital tools or mobile apps to provide agricultural services? If yes, please specify	a) Yes b) No If Yes please specify _____
17.	How do you promote available agriculture services with farmers in villages?	a) Community meetings b) When farmers visit for other services c) Flyers and Posters d) SMS alerts
18.	What are the main challenges you face in delivering agricultural services?	a) Lack of awareness among farmers b) Insufficient training or knowledge on agricultural services c) Inadequate infrastructure - limited internet bandwidth, power supply failures etc

		d) Limited access to necessary resources on the agricultural services e) Procedural delays/non availability of experts for advisory

19. Rank schemes based on Ease of Implementation, Acceptability and Use ((1 = worst/5= best)

Type of Service	Ease of Implementation (Rank 1-5)	Acceptability to Farmers (Rank 1-5)	Ease of use by farmers (Rank 1-5)
a) Advisory through Agricultural Tele Consultation and e-Pashu Chikista			
b) Soil Testing and Soil Health Cards			
c) CSC e-AGRI –E-Commerce for Agricultural produce			
d) Kisan e-Mart – Input Supply			
e) Information on Nursery and Seed Production			
f) Farm Machinery on Rent (MOVR)			
g) Protected Cultivation & Organic Farming			
h) Kisan Credit Card (KCC)			
i) Pradhan Mantri Fasal Bima Yojana (PMFBY) – Crop Insurance			
j) Pradhan Mantri Kisan Maandhan Yojana (PMKMY)			
k) Pradhan Mantri Kisan Samman Nidhi (PM KISAN) – Direct benefit Transfer services			
l) Banking Services			
m) Market price Information			
n) Weather Forecasts			

20. INFORMATION SERVICES ON AGRICULTURE AND ALLIED SECTOR TO BE EXPECTED FROM CSC

S.No.	Area	Type of Service	Service description	Tick
A. **AGRICULTURE**				
1.	Advisory Services	a) Land preparation,	Land preparation for seasonal crops and selection of varieties	
		b) Crop selection, varieties, sowing time	Selection of crops and varieties based on soil, its fertility, sowing time	
		c) Soil testing and Soil Health Card	Soil testing services to provide customized fertilizer recommendations. Issue of Soil Health Card	
		d) Weed management	Weed Management, herbicides availability	

		e) Irrigation scheduling	Irrigation schedule for the crop. Efficient irrigation systems like drip or sprinkler irrigation to optimize water use.	
		f) Pest and Disease management	Integrated pest management (IPM) practices. Knowledge and training on identifying and managing pests and diseases.	
		g) Weather related information	IMD forecast weather for next 3 days and alerts, Agromet Bulletins for the blocks and advisory	

2.	Farm Inputs	a) Quality seeds	Access to high-quality, high-yielding, and disease-resistant seeds.	
		b) Planting material	Availability of planting material for various crops and plants.	
		c) Fertilizer availability	Adequate supply of fertilizers to ensure soil fertility	
		d) Pesticides availability	Availability of effective pesticide, herbicides and it usage	
3.	Farm Machinery	a)Farm Machinery and hiring service	Access to modern and appropriate agricultural machinery and tools. List of custom hiring centers close to farmers area for hiring	
4.	Marketing	a) Marketing and price forecast	Real-time information on market prices, demand, and trends. MSP Platforms for direct sales to consumers or bulk buyers.	
		b) Logistics	Providing logistics services to the farmers for transportation of inputs and farm produce	
		c) Quality assurance	Providing quality assaying and assurance services on the farm produce and certification.	
		d) Traceability	Providing traceability services for farm produce to the traders and end consumers	
5.	Processing and Post-harvesting technologies	a) Drying, Grading and storage	Storage facilities to reduce post-harvest losses. Details of cold storage facilities available nearby the farmers location, and charges etc.	
		b) Post-harvesting technologies	Post harvesting technologies and value-addition including processing	
6.	Government Schemes and Subsidies	a) Government Schemes and subsidies of State and Central Government	Access to government scheme subsidies and grants provided by the Central sector schemes and State Level schemes.	

7.	Insurance	a) Insurance	Crop insurance notified for crops and insurance policy details, claims etc. Crop loss assessment during cyclones, droughts, pest & diseases etc. Providing insurance cover for farm machinery.	
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21. What additional services do you think should be introduced to better support farmers?

A. _____

B. _____

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