FINAL REPORT

Enhancing Agricultural Ecosystems in North-East India

Assessment of 56 FPOs in Assam

Prepared By

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June 2025

Contents

ACKNOWLEDGEMENTS

SELCO Foundation extends its sincere gratitude to **Samunnati** for their valuable expertise and dedicated efforts in conducting this study across Assam and supporting the preparation of this report.

We are grateful to the State Government Department(s), Partner Organisation(s), FPO Promotion Agencies/CBBOs, and other key stakeholders for their guidance, insights, and continued support throughout the study. Their perspectives and contributions have been instrumental in shaping the findings and recommendations presented in this report.

We would like to express our heartfelt appreciation to the Farmer Producer Organisations (FPOs), their Board of Directors, Chief Executive Officers, member farmers, and other ecosystem actors who generously shared their time, experiences, and perspectives. Their participation provided invaluable insights into the opportunities, challenges, and aspirations of the FPO ecosystem in Assam.

We also acknowledge the support of Implementing Partner/Facilitating Organisation and local stakeholders who facilitated field visits, stakeholder consultations, focus group discussions, and interactions with FPOs and farming communities. Their assistance enabled meaningful engagement and enriched the quality of this study.

This report is the result of collective effort, collaboration, and shared commitment from all individuals and institutions involved. We deeply appreciate their contributions and support.

This report is intended to serve as a resource for policymakers, development practitioners, FPO promotion agencies, financial institutions, market actors, and researchers working to strengthen the FPO ecosystem and enhance the livelihoods of small and marginal farmers in Assam and across the North Eastern Region. The insights presented aim to support evidence-based decision-making and contribute to the development of resilient, inclusive, and sustainable farmer-owned enterprises.

Executive Summary

This report presents a comprehensive assessment of fifty-six Farmer Producer Companies operating across Assam. Each company was studied in depth through interviews with board members and staff, analysis of governance documents and financial statements, and field visits to observe market operations. The evaluation focused on four core dimensions: the strength of leadership and institutional capacity, the effectiveness of governance processes, the health of financial management, and the depth of market linkages. Special recognition was given to companies that fully embedded sustainability practices, and penalty adjustments were applied where significant operational risks or negative trends were identified.

Across the sample, **many companies demonstrate exemplary commitment to good governance. Board meetings are convened regularly, minutes are maintained with care, and statutory requirements such as tax filings and registration renewals are met without delay. A majority of organizations invest in capacity building by offering regular training to directors and arranging exposure visits that bring new ideas and technologies back to their member farmers.** These practices have created a foundation of accountability, transparency, and continuous learning.

Nevertheless, the assessment also highlights persistent challenges. Profitability remains modest for most organizations, reflecting the constraints of small-scale aggregation and the need for stronger cost controls. Formal partnerships to secure inputs beyond seed such as fertilizer, crop protection products or machinery services are limited, leaving many producers reliant on informal or ad hoc arrangements. Although digital record-keeping is nearly universal, only a few companies leverage online platforms to engage their members or to track real-time market prices. Access to formal credit is uneven and often hampered by a lack of collateral or documented financial history.

Mature companies, those in operation for more than five years tend to lead in financial discipline and in building enduring buyer relationships. Yet several mid-life also rank among the top performers. Their success demonstrates that targeted investments in leadership training, in establishing clear governance procedures, and in forging a small number of key market partnerships can quickly yield significant improvements, regardless of an organization's age.

To illustrate these best practices, the final section of this summary highlights the twenty top-performing FPCs. These companies combine disciplined governance, proactive capacity development, prudent financial management, and strategic market engagement to deliver stronger outcomes for their members. Their achievements provide a clear roadmap for peers, for policymakers seeking to support collective farming models, and for development partners aiming to strengthen rural livelihoods throughout Assam.

Table of Top Twenty Farmer Producer Companies:-

Rank	Farmer Producer Company Name	District	CBBOs	Maturity Stage	Distinctive Strength
1	Bihpuria Pumpkin			Matured	Seamless integration of

	Producer Company		digital tools with buyer networks
2	Khowang Women Poultry Producer Company Limited	Matured	Women-led governance driving end-to-end value-chain services
3	Birjhora Farmer Producer Company Limited	Matured	Balanced excellence across leadership, governance, finance and markets
4	Manikpur Joha Rice Producer Company Limited	Matured	Rigorous governance frameworks and strong operational systems
5	Machkhowa Agro Fed Producer Company Limited	Matured	Robust financial management and on-time supplier payments
6	Tulungia Shine Farmer Producer Company	Matured	Consistent profitability and reliable delivery performance
7	Suntali Maize Producer Company Limited	Developing	Diversified revenue streams enhancing resilience
8	Naba Chandrapur Fed Agro Producer Company Limited	Developing	Rapid gains in financial discipline and market linkages
9	Matra Kara Krishi Farmers Producer Company Limited	Nascent	Exceptional focus on capacity building and member training

10	Bordoloni Agro Fed Producer Company Limited	Matured	Strict financial controls fostering sustainable growth
11	LEKOPE Majuli Women Farmer Producer Company Limited	Matured	Strong gender inclusion supported by comprehensive records
12	Mohabahu Farmer Producer Company	Matured	Well-established market partnerships and digital adoption
13	Abadari Farmer Producer Company	Matured	High working-capital efficiency and input aggregation
14	Dhemaji Agro Fed Producer Company Limited	Matured	Excellent buyer satisfaction through quality assurance
15	Mara Chaulkhowa Farmer Producer Organization	Developing	Steady governance practices and sound financial planning
16	Jugami Farmer Producer Company	Developing	Strong growth trajectory with regular member engagement
17	Majuli Agro Organic Producer Company Limited	Matured	Sustainable practices combined with low financial leverage
18	Kham Siphung Serja Farmer Producer Company Limited	Matured	Superior inventory management and margin protection
19	Dolongghat Krishi Producer	Developing	Reliable liquidity management and

	Company Limited		statutory compliance
20	Ghilamara Bamboo Producer Company Limited	Matured	Consistent adherence to governance norms and record-keeping

This table captures the organizations whose commitment to best practices has yielded tangible benefits for member farmers. Their success stories show that a clear focus on governance, capacity, finance and markets can transform collective enterprises into vibrant engines of rural development.

1. Introduction

Assam, a predominantly agrarian state in northeastern India, is home to a vast population of small and marginal farmers. To empower these farmers and enhance their economic well-being, the concept of Farmer Producer Organizations (FPOs) has been introduced. FPOs are collective entities formed by farmers to leverage economies of scale, improve access to markets, and enhance bargaining power. In recent years, Assam has witnessed a significant rise in the number of FPOs, with over 700 as of August 2024 such organizations operating across the state.

- 197 FPOs/FPCs established by the Department of Agriculture
- 62 by NABARD under Producers Organisation Development Fund (PODF) and Producers' Organisation Development & Upliftment Corpus (PRODUCE) Fund
- 347 under the "Formation and Promotion of 10000 FPOs" Centrally Sponsored Schemes (CSS)
- 43 FPOs/FPCs established by others under various CSR funds
- Additional 25 FPOs have been registered by National Cooperative Development Corporation (NCDC) and 59 FPCs have been registered by Assam State Rural Livelihood Mission (ASRLM) under the "Formation and Promotion of 10000 FPOs" scheme of CSS in 2023-24

These FPOs have become instrumental in transforming the agricultural landscape of Assam.

1.1. The FPO Ecosystem in Assam

The FPO ecosystem in Assam is supported by various government initiatives and schemes aimed at promoting collective farming and improving the livelihoods of smallholder farmers. The Department of Agriculture & Horticulture, Government of Assam, has outlined objectives for FPOs, including mobilizing farmers into groups, strengthening their capacity through best agricultural practices, ensuring access to quality inputs and services, and facilitating access to fair and remunerative markets.

In recent years, Assam has witnessed a notable rise in the promotion and development of Farmer Producer Organizations and Companies (FPOs/FPCs). Several of these collectives have achieved commendable success in institution-building, business development, value addition, and product marketing. Remarkably, products such as **Assam Lemon, Tezpur Litchi, Pineapple, Red Rice, and Pumpkin, cultivated and processed by these FPOs/FPCs, have found markets not only across India but also internationally.**

The Assam Government, through the Department of Agriculture, is actively working to strengthen FPOs/FPCs, aiming to transform them into economically viable and sustainable business ventures focused on enhancing farmers' income. However, agricultural conditions across Assam are not uniform. The Lower Brahmaputra Valley and Central Zone have seen better progress, with many farmers adopting double and even triple cropping practices, significantly boosting their earnings. In contrast, large tracts of land in the Upper Brahmaputra Valley and North Bank zone remain fallow after the Sali paddy season, as farmers in these regions are often reluctant to take up further cultivation despite available government assistance.

To address this disparity, it is essential to encourage greater participation in high-value agriculture, horticulture, and allied activities particularly among the younger generation. These sectors hold immense potential for becoming primary sources of income and livelihood.

Equally important is fostering convergence and collaboration among various government departments and development agencies to ensure integrated growth and comprehensive development of the agriculture and allied sectors across Assam.

One significant initiative is the Mission Organic Value Chain Development for North Eastern Region (MOVCD-NER), launched in 2015-16. This central sector scheme aims to develop organic value chains in the northeastern states, including Assam. Under this scheme, 100 FPOs/FPCs are to be created across the eight northeastern states, covering a total area of 50,000 hectares. As of 2018, 50,000 farmers have been engaged under the scheme. The scheme provides support across the entire value chain, including inputs, seeds, organic certification, and infrastructure for collection, aggregation, processing, marketing, and brand building.

The scheme offers financial assistance for setting up infrastructure such as collection centers, grading units, integrated processing units, and cold storage facilities. Subsidies of up to 75% are available for FPOs, while private entrepreneurs can avail up to 50% subsidy.

Additionally, partnerships with organizations like Mastercard and ACCESS Development Services have been established to strengthen FPOs in Assam. The MANDI program (Mainstreaming Agriculture through Networks and Development Initiatives) aims to benefit 50,000 farmers by providing structured technical assistance, training in best agricultural practices, improving access to market linkages and digital tools, and generating awareness about financial services and government schemes.

1.2. Rationale and Purpose of the Study

Understanding the FPO ecosystem in Assam is crucial for several reasons. Firstly, it provides insights into how collective action among farmers can lead to improved access to markets, better pricing, and enhanced income. Secondly, studying the challenges faced by FPOs can inform policy decisions and interventions aimed at strengthening these organizations. Lastly, documenting success stories can serve as models for replication in other regions.

The purpose of this study is to analyze the current state of FPOs in Assam, identify the challenges they face, and highlight successful models that can inform future initiatives.

1.3. Importance of Understanding Challenges and Success Stories

Understanding the challenges faced by FPOs in Assam is essential for developing targeted interventions. Common challenges include limited access to credit, inadequate infrastructure, lack of market linkages, and insufficient technical knowledge. Addressing these issues requires a comprehensive understanding of the local context and the specific needs of FPOs.

Conversely, analyzing success stories provides valuable lessons on effective strategies and practices. For instance, the Sitajakhala Dugdha Utpadak Samabai Samiti (SDUSS), established in 1958, is a cooperative milk producers' society in Morigaon district. It produces 15,000 liters of milk daily, catering to nearby towns and cities. The success of SDUSS demonstrates the potential of cooperative models in enhancing production and market access.

The Padumpathar Agro Organic Farmer Producer Company (FPC) in Golaghat district made significant strides by exporting 10 tonnes of organic ginger to Dubai. This achievement was facilitated by the Directorate of Horticulture of the Assam government under the MOVCD-NER scheme, highlighting the growing potential of organic farming in the region.

In the fisheries sector, the Fingua FPO in Barpeta district established a wholesale fish market (kata) to cater to the needs of local fish farmers. This initiative reduced transportation costs and time for farmers, leading to increased profits and improved livelihoods. The FPO's efforts have significantly impacted the lives of fish farmers in the region.

Despite the successes, FPOs in Assam face several challenges that hinder their growth and sustainability. A baseline survey conducted by ACCESS Development Services in Guwahati revealed that 95% of FPOs cited access to markets as their key challenge. Other significant issues include lack of financial services, limited awareness and knowledge to avail government schemes, and inadequate digital infrastructure and technical skills. In the fisheries sector, Fish Farmer Producer Companies (FFPCs) in Assam grapple with poor procurement of farmers' produce, shortage of custom hiring services, difficulties in establishing brand value, and challenges in accessing bank loans and developing infrastructure.

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2. Climate Resilience and Role of Technology in Assam

Can we add context to this with examples as the prior chapter?

3. About SELCO Foundation and Samunnati in Assam

Samunnati is on a mission to create an open Agri-network to unlock the trillion-dollar plus potential of Indian agriculture with smallholder farmers at the centre of it. Staying true to its name, Samunnati stands for collective growth & collective prosperity for the Agri ecosystem. Samunnati does this by connecting players across the agriculture value chain and enabling affiliated Farmer Collectives and the larger ecosystem to be more efficient and productive through multiple technology enabled interventions and collaborative partnerships.

Samunnati commenced its operation in Assam after successful on boarding as a sub-project under Xamahar in November 2022. Samunnati initiated relationships with FPOs incubated and adopted by the APART project under the aegis of ARIAS Society in Assam. As of November 2024, Samunnati has engagement with 100+ FPOs & 50 FPOs in 17 districts of Assam have taken and utilised credit facility from Samunnati ranging from Rs.500,000/- upto Rs.25,00,000/- for multiple crop cycles. Various commodities, such as, Paddy, Maize, Mustard, Potato, Spices, Non-Licensed Fishery Inputs, Licensed Agri Inputs have been included in the input and output procurement services rendered to the member farmers by the FPOs with the credit facilities/working capital loans extended by Samunnati.

Samunnati, under the Xamahaar project has provided capacity building training to 68 FPC's through the FPOAcademy training module. A total of 272 FPC's across 31 districts in Assam have been graded with the use of Samunnati's FPO Grading tool.

4. Project Overview

The objective of this project is to assess the status, needs, and challenges of 56 Farmer Producer Companies (FPCs) in Assam using a customized grading and assessment tool developed in collaboration with CRISIL. With the help of the tool, each FPC's organizational structure, business risks, and sustainability parameters aligned with the Sustainable Development Goals (SDGs) are evaluated. This

3.1. Objectives and Scope of the Study

Given the importance of FPOs in ensuring the sustainability of the positive outcomes for farmers, this study aimed to systematically learn from the FPO management's experience, its other stakeholders including farmers in the past and leverage that to inform the design, structure and functioning of the FPOs.

The specific objectives of the study are:

- In-depth study of existing FPO(s), in terms of their structure, operations and services offered.
- Undertake a context-specific needs assessment exercise to understand how well FPOs are designed to meet farmer and community needs.
- Develop a nuanced understanding of the governance structures, grading mechanisms, financial health, and credit access.
- Make concrete, actionable recommendations for the FPOs under study, based on the analysis of primary research.

5. Research Methodology

4.1. Location

The research is conducted in Assam, covering 20 districts: Bajali, Baksa, Barpeta, Bongaigaon, Chirang, Darrang, Dhemaji, Dibrugarh, Goalpara, Kamrup (R), Kamrup (Metro), Kokrajhar, Lakhimpur, Majuli, Morigaon, Nalbari, Nagaon, Tamulpur, Tinsukia and Udalguri. We have made deliberate efforts to include FPOs from a wide range of districts to ensure a comprehensive understanding of the diverse challenges and opportunities they encounter.

4.2. Research Design

The study employed a mixed-method approach, integrating both qualitative and quantitative data collection techniques to provide a holistic understanding of the functioning of the studied FPOs. The key components of the research design include:

- Qualitative Research: This involves in-depth semi-structured interviews with the Board of Directors and member farmers to explore operational, governance, and financial challenges. Focus Group Discussions (FGDs) were conducted with FPO board members, Farmers, CBBOs and FIGs to capture diverse perspectives and collective challenges faced by FPOs.
- Quantitative Research: Structured surveys were conducted with FPO representatives with the help of CRISIL framework to collect measurable data on financial performance, business linkages, and governance structures. The data were analyzed using excel formulas to identify patterns and trends across FPOs.

4.3. Method of Data Collection

- **Primary Data Collection**: The study primarily relied on quantitative methods using the CRISIL assessment tool. This tool will evaluate governance structures, financial health, and operational efficiency.
- **Semi-structured Interviews or Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs):** These were conducted with key FPO stakeholders, including Board of Directors, member farmers, and FIGs and CBBOs, to gain in-depth insights into management, operational issues, financial viability, market linkages, and value chain performance.

  To comprehensively understand the functioning, performance, and impact of 56 Farmer Producer Organizations (FPOs) in Assam, it was essential to gather primary data from a wide range of stakeholders operating at different levels of the FPO ecosystem and across various geographic and socio-economic contexts. Assam's agricultural landscape is highly diverse, shaped by variations in agro-climatic zones, cropping patterns, cultural practices, and institutional capacities. Capturing this diversity required engaging stakeholders from different regions and roles.

  The key stakeholder groups and their significance in the research are as follows:

  - ✓ **FPO Board Members** are responsible for governance, strategic decision-making, and day-to-day management of FPOs. Their perspectives provided crucial insights into organizational leadership, market strategies, financial viability, internal governance processes, and external partnerships. Variations in

Board practices between older and newer FPOs, and across districts, also highlighted institutional maturity differences.

- ✓ **Champion Farmers** serve as progressive leaders and change agents within their communities and FPOs. Engaging with them helped uncover how innovation adoption, member mobilization, and community leadership vary across locations. Their experiences also revealed the challenges and opportunities in scaling up successful farming and business practices.
- ✓ **Farmer Interest Groups (FIGs) and Member Farmers** form the grassroots base of FPOs. Their perspectives illuminated the extent of service delivery, inclusivity, trust in FPO governance, economic benefits realized, and the responsiveness of FPO structures to local farmer needs. By capturing inputs from farmers across diverse agro-ecological zones, from riverine belts to hill tracts to plains, the study was able to document both common patterns and location-specific challenges.
- ✓ **Cluster-Based Business Organizations (CBBOs)** play a critical facilitative role in supporting FPO formation, capacity building, business planning, and market linkages. Interactions with CBBOs provided a systemic view of institutional bottlenecks, technical and operational support needs, and differences in FPO readiness across districts.
- ✓ **Government Stakeholders** (including officials from agriculture, horticulture, and allied departments) offer insights on policy implementation, program design, convergence of schemes, and the broader enabling ecosystem. Their perspectives helped contextualize the effectiveness of public investments and institutional support to FPOs across different parts of Assam.

- **Secondary Data Collection:** Existing reports, government policies, and previous studies related to FPOs were partially reviewed to provide contextual background.

4.4. Sample Size

The study focused on a sample of **56 FPOs, 40 FIGs, 4 CBBOs, 2 Govt. stakeholders and 52 Farmers which includes Champion Farmers** ensuring a diverse representation of sectors such as agriculture, dairy, fisheries, and horticulture. The sampling framework is designed to ensure that insights derived from this study are applicable across a broad spectrum of FPOs in Assam.

Inclusion Criteria:

- FPOs that have been operational for at least one year.
- FPOs engaged in agricultural or allied activities.
- FPOs with a defined governance structure and membership base.

Exclusion Criteria:

- Dormant or inactive FPOs with no business activity in the last year.
- FPOs lacking a clear governance and operational framework.
- FPOs that do not engage in agricultural or allied activities.

6. Scoring Methodology

This section describes how the CRISIL tool converts detailed indicator assessments into a single performance figure. The approach is fully transparent, aligns expectations with an FPC's stage of development, and incorporates adjustments for exemplary practices and risk concerns. Full indicator rubrics are provided in Appendix.

5.1. Classification by Maturity Stage

Every FPC is classified according to the number of months since its incorporation. An FPC with fewer than eighteen months of operations is considered Nascent. An FPC with between eighteen and sixty months of operations is considered Developing. An FPC with more than sixty months of operations is considered Matured. This classification ensures that younger FPCs are not penalized for the lack of multi-year financial history or deep market linkages that naturally develop over time.

5.2. Pillars and Raw Scoring

The CRISIL framework evaluates performance across four pillars: Capacity Building, Governance, Financial Health, and Market Linkages. Each pillar comprises multiple indicators, and each individual indicator is scored on a scale of one to five. The raw score for each pillar is the sum of its indicator scores. Because the number of indicators varies, these raw totals span different ranges, as shown in Table 3.1.

Table 1: Themes/Pillars and Raw-Score Ranges

Themes/Pillar	Sub-Group	Number of Indicators	Minimum Raw Score	Maximum Raw Score
Capacity Building	Management Profile	16	16	80
Governance	Business Practices & Risk Management	9	9	45
Financial Health	Financials and Key ratio assessment	11	11	55
Market Linkages	Input Linkages	5	5	25
	Output Linkages	5	5	25
	Technology	4	4	20
	Total Market Linkages Score	14	9	45

Note: The Market Linkages raw score is capped at 45 because it comprises two parts. The first part is the core linkage score, which is based on five input-linkage indicators or, alternatively, five output-linkage indicators; each set sums to a maximum of 25 points, and if an FPC engages in both inputs and outputs the two sums are averaged so that this component still cannot exceed 25. The second part is the digital and technology-inclusion score, which covers four indicators and can contribute up to 20 points.

5.3. Normalization of Themes/Pillar Scores

To place each pillar on a common scale, raw totals are converted to a 0–100 range by dividing by the maximum possible raw score and multiplying by 100. Table 3.2 summarizes the parameters used for normalization.

Table 2: Normalization Parameters

Themes/Pillars	Maximum Raw Score
Capacity Building	80
Governance	45
Financial Health	55
Market Linkages	35

5.4. Weighting by Maturity Stage

Normalized pillar scores are combined into a preliminary composite using weights that correspond to the FPC's maturity stage. Governance retains equal emphasis at all stages, while Capacity Building carries greater weight in Nascent stage organizations and Finance and Market Linkages become more important as the FPC matures. Table 3.3 presents the stage-based weight distribution.

Table 3: Stage-Based Weights

Stage	Capacity Building	Governance	Financial Health	Market Linkages
Nascent	50%	25%	15%	10%
Developing	30%	25%	30%	15%
Matured	25%	25%	30%	20%

The preliminary composite score is calculated as the sum of each normalized pillar score multiplied by its corresponding weight.

5.5. Inflator Adjustments

Once the preliminary composite has been determined, the tool adds bonus points to acknowledge comprehensive adoption of key practices. Two inflators may each contribute five points:

1. **Business-Model Inflator** is awarded when an FPC operates actively in all of its declared lines of business, including input supply, output marketing, processing services, and other activities.
2. **SDG-Alignment Inflator** is awarded when an FPC satisfies all seven sustainability indicators defined by CRISIL, encompassing areas such as zero-hunger initiatives, gender equality, water and sanitation access, renewable energy, inequality reduction, marine resource conservation, and global partnerships.

An FPC that meets both conditions receives the full ten inflator points. Partial fulfilment of either condition does not yield partial credit.

5.6. Deflator Adjustments

The model subtracts penalty points to reflect known risks or documented negative trends:

- **Operational Risk Deflator** subtracts five points if the FPC is tagged as High Risk, three points if tagged as Moderate Risk, and zero points if there is No Risk.
- **Performance-Trend Deflator** subtracts five points if the FPC's most recent indicator trend is classified as Declined, and zero points otherwise.

5.7. Final Score Computation

The final CRISIL score starts with the stage-weighted composite of the four normalized pillars, then adds any earned bonus points and subtracts any penalties. The result is rounded to the nearest whole number. This methodology ensures that the final CRISIL score reflects institutional maturity, core operational performance, financial and market strength, sustainability achievements, and risk exposure in a single metric.

7. Basic Profiles of Farmer Producer Organizations (FPOs) under Study

The FPO movement in Assam has seen significant momentum in recent years. While a few FPOs were established as early as 2013 and 2014, the majority came into existence between 2018 and 2021. The median year of establishment among the studied FPOs is around 2020, indicating that most of these organizations are relatively young and still in formative stages of growth. This trend aligns with the national and state-level push to promote FPOs as a vehicle for farmer collectivization and market integration. Notably, 21 FPOs were established in 2020 alone, demonstrating the intensity of mobilization efforts during this period.

Such a young profile presents both opportunities and challenges: while these FPOs offer fertile ground for shaping future best practices and building sustainable institutions, they also require targeted support to develop governance, market linkages, and financial resilience.

6.1. Geographic Distribution

The studied FPOs cover a wide geographic spread, representing 20 districts across Assam. This broad coverage illustrates the diversity of agricultural systems and contexts that these organizations serve. The districts with the highest number of FPOs are Lakhimpur (7 FPOs) and Dhemaji (6 FPOs), followed by Nalbari (4 FPOs). Several other districts, including Dibrugarh, Darrang, Kokrajhar, Nagaon, and Bongaigaon, also host multiple FPOs.

The presence of FPOs across both flood-prone riverine areas and hilly tribal belts underlines their potential as locally-rooted institutions capable of addressing region-specific agricultural challenges. For donors, this geographic diversity highlights the need for regionally adaptive support strategies that take into account variations in agro-ecological conditions, market access, and farmer livelihoods.

6.2. Organizational Structure and Promoters

A variety of organizations and programs have played catalytic roles in forming these FPOs. Among the most prominent promoters are the Assam Agribusiness and Rural Transformation Project (APART), Small Farmers' Agribusiness Consortium (SFAC), National Agricultural Cooperative Marketing Federation of India (NAFED), and Indian Council of Organic Agriculture (ICCOA). Other entities involved include NABARD, KVKs, NGOs, and government departments. The involvement of multiple promoters provides an ecosystem of support, though it may also lead to variation in FPO capacities and governance models depending on the approach of the promoting institution.

6.3. Commodities

The commodity focus of these FPOs reflects Assam's agricultural base, dominated by staple cereals and oilseeds. Paddy (rice) is the single most common crop, with 36 FPOs engaged in its production, aggregation, or marketing. Mustard comes next, with 32 FPOs focusing on it, followed by maize with 23.

Beyond staples, there is considerable engagement with vegetables (16 FPOs) and horticultural crops, including fruits and spices (13 FPOs). A significant number of FPOs also list "other" commodities, this category spans fisheries, livestock (pig and poultry), turmeric, ginger, banana, guava, Assam lemon, mango, jute, honey, and value-added products like arecanut leaf plates and vermicompost.

This commodity profile suggests that while the FPO sector in Assam is anchored in traditional crops, it is also beginning to diversify toward higher-value and niche products. Such diversification is critical for enhancing farmer incomes and resilience, and it represents a promising area for donor engagement through value chain development and market facilitation.

6.4. Core Activities

Out of the 56 FPOs analyzed, 45 are engaged in marketing activities, while 41 participate in procurement, helping aggregate inputs and outputs at scale.

Input supply is also a common service, provided by 35 FPOs. This function enables members to access seeds, fertilizers, and technical support more affordably and reliably. Processing, essential for adding value and improving market returns, is undertaken by 30 FPOs. This figure indicates a healthy level of engagement with post-harvest activities, though more support is likely needed to expand processing capacities across the network.

Overall, the multifunctional role played by FPOs, spanning input provision, procurement, processing, and marketing, points to their emergence as integrated rural enterprises. Donors seeking to strengthen agricultural systems will find FPOs well-positioned to serve as delivery platforms for both economic services and developmental interventions.

8. Governance Structure

The governance structure of most FPOs is multi-layered. 95% all surveyed FPOs reported having a Board of Directors (BOD) as the central decision-making body. 85% these FPOs also appoint a Chief Executive Officer (CEO) to manage day-to-day operations. In addition to the board and CEO, 82% of FPOs formally involve the original promoters (the organizations that helped establish the FPO). A smaller subset, 20% of FPOs maintain advisory committees or expert panels to guide strategy and compliance. Overall, these structures emphasize farmer leadership (through the board) supported by managerial and advisory elements.

Governance Structure	% of FPOs
Chief Executive Officer (CEO), Board of Directors (BOD), Promoters, FIG	52%
Chief Executive Officer (CEO), Board of Directors (BOD), Promoters, Advisory Committee, FIG	16%
Board of Directors (BOD)	8%
Board of Directors (BOD), Promoters, FIG	8%
Board of Directors (BOD), Promoters, Advisory Committee, FIG	2%
Chief Executive Officer (CEO)	2%
Chief Executive Officer (CEO), Board of Directors (BOD), Advisory Committee	2%
Chief Executive Officer (CEO), Board of Directors (BOD), FIG	2%
Chief Executive Officer (CEO), Board of Directors (BOD)	2%
Chief Executive Officer (CEO), Board of Directors (BOD), Promoters	2%
Chief Executive Officer (CEO), Promoters, Advisory Committee	2%
Chief Executive Officer (CEO), Board of Directors (BOD), External Directors, FIG	2%

7.1. Board of Directors (BOD) Selection

Board members in FPOs are chosen from among the local farming community. The predominant practice is to propose respected lead farmers as board candidates and have them approved at the annual general meeting (AGM). A significant number of FPOs (27%) also use formal elections, where members vote to elect the board. In contrast, only 7% of FPOs reported appointing board members without direct member nomination; these boards sometimes consist of local political or family figures. This suggests that while member-driven processes are common, in a small minority of cases external influence or connections determine board composition.

- Lead farmers promoted and approved by AGM, 60% FPOs (most common)
- BODs elected through formal election, 30% of FPOs
- Not selected by members, 7% of FPOs (likely promoter-driven or special cases)
- Political leaders / Family members, 3% FPOs (minority, potential risk to good governance)

7.2. Tenure of BOD

- More than 5 years, 35 FPOs (long-term boards, stable but may risk stagnation)
- 3 years, 16 FPOs (typical governance practice)
- 2 years, 4 FPOs
- 1 year, 1 FPO (rare)

7.3. Overview of Governance Scores

The governance score for each FPC is a composite of nine distinct indicators, each scored on a scale of 0 to 5. The total governance score thus ranges from 0 to 45. The average governance score across all 56 FPCs is 29.34, suggesting that while basic compliance is present in most institutions, significant gaps exist in credit-related transparency and gender representation on boards.

The score distribution is as follows:

Governance Score Range	No. of FPCs
35 and above	6
30 to 34	23
25 to 29	20
Below 25	7

The following bar chart illustrates the number of FPCs within each governance score range:

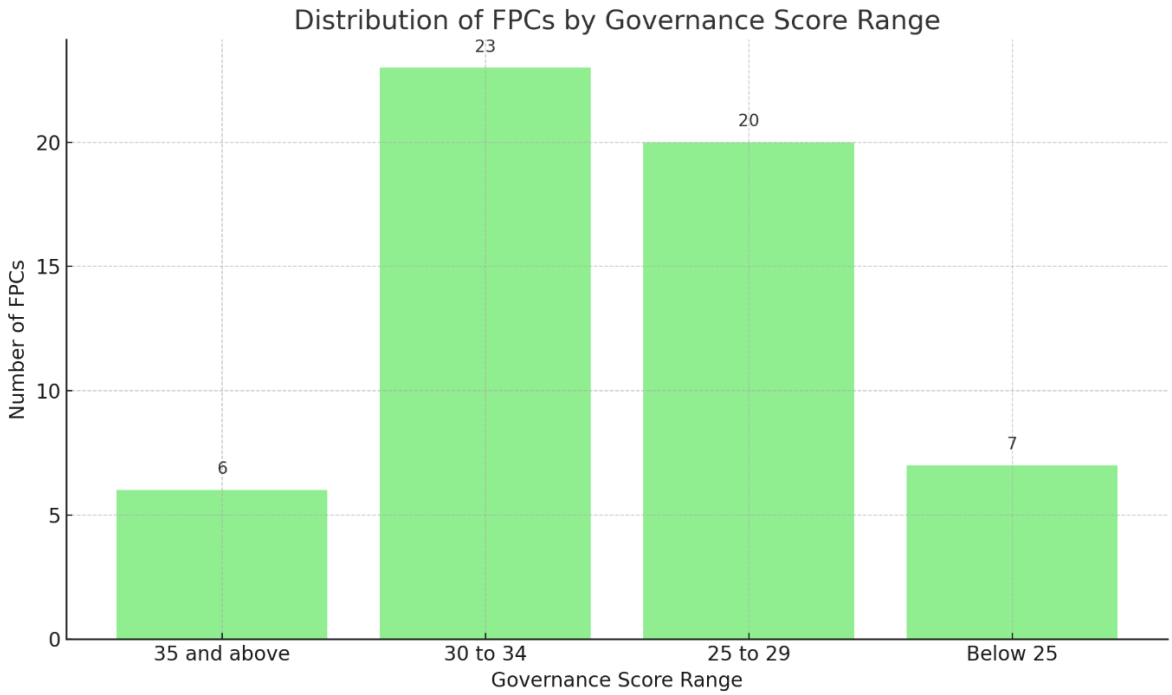

Figure: Distribution of FPCs by Governance Score Range

A majority of FPCs score between 25 and 34, reflecting moderate compliance on statutory norms and meeting governance expectations. However, 6 FPCs demonstrate high maturity (scores above 35), indicating areas for focused support.

7.4. Indicator-wise Analysis and Interpretation

Indicator	Average Score	Interpretation Based on Scoring Framework	Top 2 FPCs
Meeting Records	5.00	All FPCs maintained proper meeting documentation with decision records.	All FPCs (uniform score)
GST Filing	4.41	Most FPCs are timely or show occasional delays; few have pending compliance.	Dharitri Moran, LEKOPE Majuli

Indicator	Average Score	Interpretation Based on Scoring Framework	Top 2 FPCs
ITR Filing	4.34	Timely filing is a strong suit for most FPCs, though few still lag.	Dharitri Moran, Jwlwi Agro
License Approvals	2.41	Most FPCs possess partial licenses; only a few have full statutory approvals.	Dharitri Moran, Poohar
Credit Record of FPO	1.27	Credit score availability remains a challenge; limited FPOs have a formal CMR score.	Taba Tate, Khowang
Credit Record of Directors	1.02	In most FPCs, director credit history is either unavailable or poor.	Poohar, Madhunandan FPC
Book Update Frequency	4.14	Books are updated quarterly or monthly for most; a small number still update yearly.	Panitola, Manikpur
Board Meeting Frequency	4.36	The majority of FPCs conduct board meetings monthly, as per governance best practices.	47 FPCs with score 5
% of Female Membership	2.93	Moderate female participation (25–49% range); very few FPCs meet the 50% threshold for full inclusion	Birjhora, LEKOPE Majuli

The following radar chart visualizes the average scores across the nine governance indicators, highlighting areas of strength (e.g., meeting records, board meetings) and opportunities for improvement (e.g., credit records).

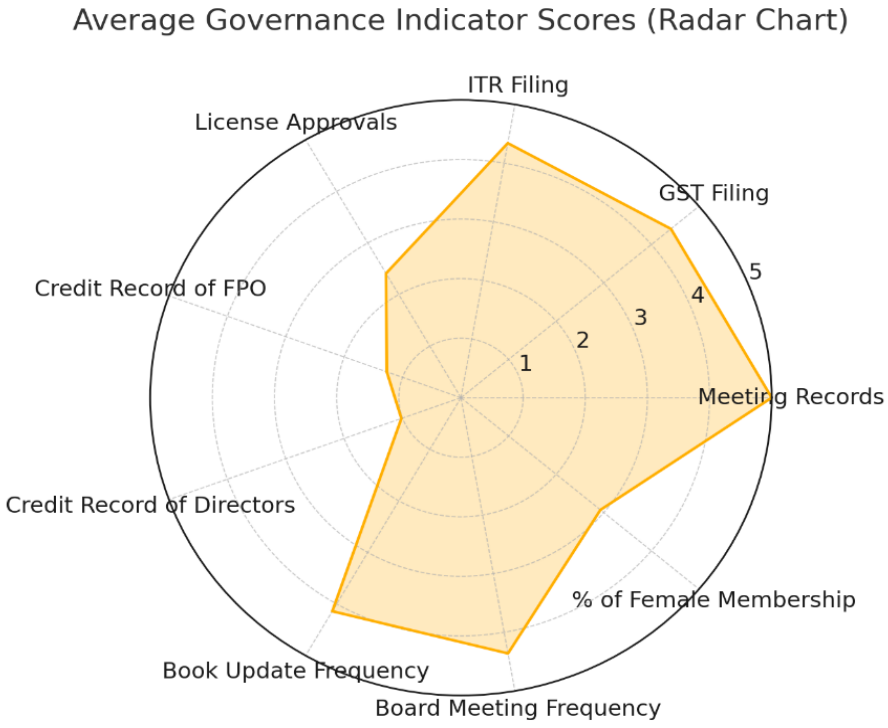

Figure 1: Radar Chart of Average Governance Indicator Scores

Note: Scores are based on the official CRISIL-aligned scale, where each indicator corresponds to specific qualitative and quantitative governance benchmarks (see Appendix for full scoring matrix).

7.5. Observations and Key Insights

- **Statutory Compliance is High:** Nearly all FPCs have strong performance in GST and ITR filing. This reflects good financial discipline and basic regulatory adherence.
- **Licensing and Credit Weakness:** A major gap exists in the areas of license approvals and credit ratings. Many FPCs either lack full licensing or have no established credit bureau records, affecting their financial credibility.
- **Gender Representation:** Only 14 out of 56 FPCs show high scores (5) for women participation in the membership. A focused gender mainstreaming strategy is recommended.
- **Meeting Practices are Well Established:** Board meetings and meeting records are consistently well maintained across the board, reflecting formalized governance processes.

7.6. Top Performing FPCs in Governance

FPC Name	Governance Score	Reasons for Strong Governance
Dharitri Moran Mustard Producer Co. Ltd	39	Consistently high across all indicators: timely GST and ITR filings, full meeting documentation, monthly board reviews, updated books, and female board representation
Panitola Agro Fed Farmer Producer Co. Ltd	37	High performance in documentation, credit record of directors, and statutory filings. Strong on gender inclusion and regular governance practices
Howly FPC	35	Excellent compliance on GST and ITR filings; strong director credit record and financial documentation; good meeting regularity and female representation
Machkhowa Agro Fed Producer Company Ltd	35	High credit score (FPO level), full GST/ITR compliance, perfect gender representation, and regular book and meeting practices
LEKOPE Majuli Women Farmer Producer Co. Ltd	35	Exceptional gender diversity, consistently updated records, timely filings, and regular governance meetings despite lack of license and director credit score

The governance analysis reveals that while foundational practices such as meeting documentation and statutory compliance are well established across most FPCs, critical gaps persist in licensing coverage, credit profiling, and gender representation. Targeted interventions in these weaker areas can significantly enhance institutional credibility and regulatory readiness. Strengthening these governance levers is essential for unlocking access to formal finance and long-term sustainability.

9. Capacity Building Assessment of FPCs

Capacity building reflects the institutional readiness and leadership strength of Farmer Producer Companies (FPCs) to operate independently and sustainably. This section evaluates 56 FPCs across 16 indicators under five broad dimensions: governance quality, board functionality, leadership depth, member participation, and institutional development support (training and exposure). Each indicator was scored between 1 to 5, with 5 indicating the most mature or ideal condition.

8.1. Overall Capacity Score Summary

Each FPC's performance across the 16 indicators is aggregated to form a composite "Capacity Score" (maximum: 80). The summary of overall scores is:

Category	Score Range	Number of FPCs	Interpretation
High Capacity	40–45	10	Strong governance, trained leadership, and active members
Upper-Mid Capacity	35–39	10	Fairly mature institutions, moderate member engagement
Mid Capacity	30–34	15	Basic systems in place, but leadership and training vary
Lower-Mid Capacity	25–29	10	Weak second line, low diversity, or poor training
Low Capacity	Below 25	11	Institutional underdevelopment and poor governance

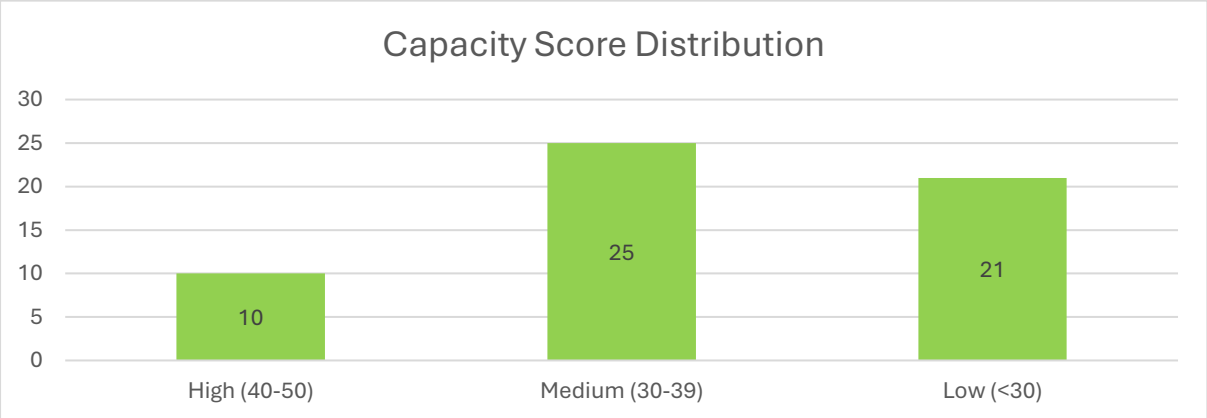

Figure: Distribution of FPCs by Capacity Score Tier – Indicates that majority of FPCs fall within the mid and lower-mid capacity range.

Note: The overall average capacity score across all FPCs is **31.50**, indicating a "Mid-Capacity" level on average. While most FPCs meet minimum structural requirements, leadership maturity and institutional exposure are key constraints.

8.2. Indicator-wise Performance and Interpretation

The table below summarizes the average score for each of the 16 capacity indicators, its implication based on the defined scoring logic, and highlights two top-performing FPCs per indicator.

#	Indicator	Avg Score	Interpretation Based on Score Logic	Top Performing FPCs
1	No. of BOD	2.45	Between 2 and 3 → Most FPCs meet minimum legal requirement (5+ BODs)	SHIRALU, Pahumara
2	BOD Experience	2.09	In majority cases, <40% of board has 10+ years' experience; shows low institutional maturity	Majuli Agro, Manikpur Joha
3	BOD Qualification	4.36	High: Most boards have at least one graduate and one undergraduate, satisfying strong education mix	SHIRALU, Mohabahu
4	Committees	1.34	Weak: Most FPCs have only 1–2 functional committees	Sissiborgaon Agro, Mohabahu FPC
5	Women on Board	2.05	Weak: Most FPCs have only 1–2 functional committees	Chengnoi, Naba Chandrapur
6	CEO Experience	2.66	Moderate: Majority of CEOs have <5 years of relevant experience	Matra Kara, SHIRALU
7	Second Line Management	2.75	Moderate: Majority of CEOs have <5 years of relevant experience	Gramya Krikhok, SHIRALU
8	No. of Members	2.36	Low to moderate: Many FPCs have fewer than 500 members; rarely exceed 800 to qualify for higher scores	Pratishruti, LEKOPE MAJULI
9	Member Participation	2.38	Moderate: Annual meeting attendance usually in 40–60% range	Bechimary United, Jugami
10	Promoting Agency Role	3.07	Active involvement: Most FPCs still rely on promoting agencies for finance, governance, or operations	Kham Siphung, Mohabahu FPC
11	Training (BOD)	1.43	Weak: Majority of FPCs conduct ≤3 training sessions per year for board members	Dolongghat Krishi, Matra Kara
12	Training (CEO)	1.39	Weak: CEO training largely absent; most FPCs provide ≤3 training opportunities annually	Bordoloni Agro, Howly
13	Training (Members)	2.14	Developing: Basic training being offered, but frequency remains limited (1–4 times/year)	Kalpani, Matra Kara
14	Exposure (BOD)	2.68	Average: BOD members generally undertake two exposure visits/year; few reach 3+ visits	Matra Kara, Bijit Narayan
15	Exposure (CEO)	1.89	Low: CEOs in most FPCs participate in only one or two exposure visits annually	Matra Kara, Kalpani
16	Exposure (Members)	3.38	Strong: Member-level exposure activities are better managed, with many FPCs conducting 2–3 visits/year	Matra Kara, Jugami

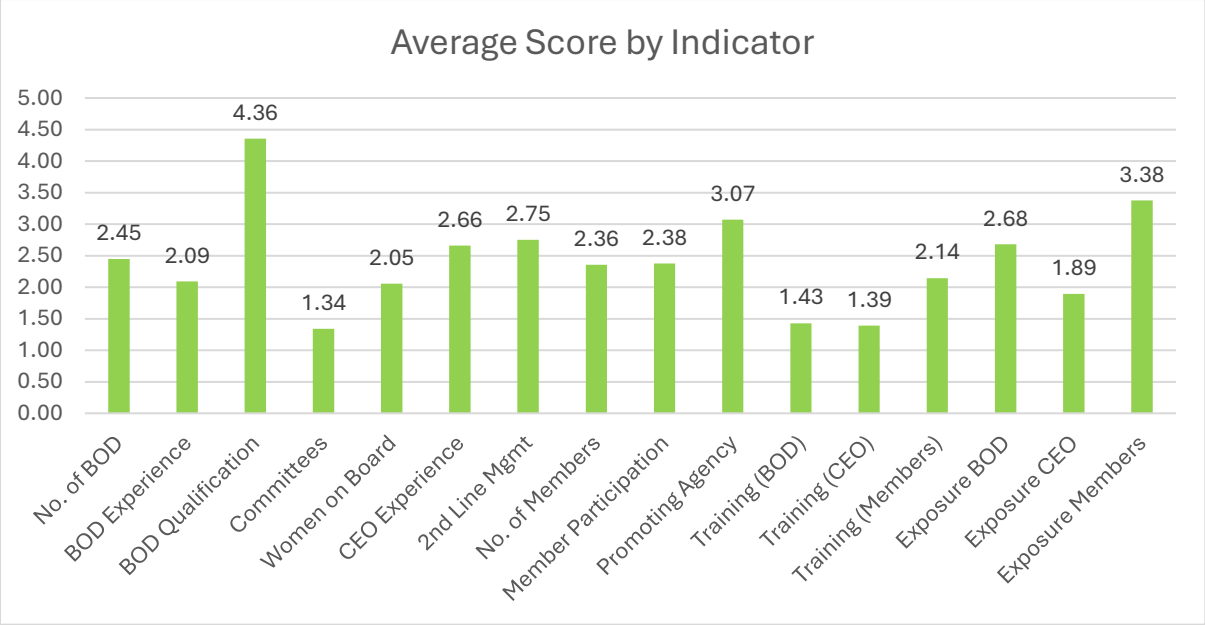

Figure 2: Average Scores Across Capacity Building Indicators – Reveals strongest areas (Qualification of Board, Member Exposure) and weakest (Functional Committees, Training Coverage).

8.3. Top Performing FPCs on Capacity Score

The five highest scoring FPCs and key capacity strengths are:

FPC Name	Score	Highlights
Matra Kara Krishi	45	High exposure across all levels (BOD, CEO, Members); strong CEO with 10+ years' experience; second-line management in place; active board training
Kalpani FPC	44	Well-qualified board (two graduates); strong exposure program; moderately experienced CEO; consistent training; functioning committee structure in place
Khowang Women Poultry	44	Exceptional gender inclusion (50% women directors); second-line leadership is well-formed; board committees functional; strong across all exposure indicators
Ghilamara Farmer's Producer Company Ltd	42	High-quality board with graduate members; committees functioning well; strong exposure program; some gaps in member participation and BOD/CEO training
Majuli Agro Organic Producer Company Ltd	41	Well-qualified board and strong member base; excellent exposure visits; however, lacks gender diversity and shows weaker scores in CEO training and committee setup

The overall results indicate that while governance structures are in place for most FPCs, there is significant scope to strengthen human capacity through experience-based hiring, consistent training, and institutional exposure. The top performers demonstrate that a well-trained leadership team and member engagement are critical levers for capacity maturity. Focused capacity-building investments in training, second-line development, and gender inclusion can help elevate the majority of FPCs from mid to high performance bands. From the FGDs, we found that these trainings are often organized by agricultural extension and development agencies. Common providers include Krishi Vigyan Kendras (KVKs), state agriculture departments, and organizations such as NABARD, APART or NIRD. The content of these trainings usually covers modern farming techniques, business management, or financial literacy.

10. Financial Performance and Key Ratio Assessment

The financial health of the Farmer Producer Companies (FPCs) was assessed using eleven key indicators, covering revenue growth, profitability, efficiency, liquidity, leverage, and payment practices. The composite score reflects not only accounting robustness but also operational sustainability and financial discipline.

Across the 56 FPCs, the **average financial score was 24.63**, indicating moderate performance with substantial room for improvement, especially in profitability and risk management indicators. Only 10 out of 56 FPCs scored above 34, showing strong financial health. Meanwhile, 19 FPCs scored below 20, reflecting fragile financial systems.

9.1. Average Score by Indicator and Interpretation

Indicator	Average Score	Interpretation	Top Performing FPCs
Revenue Growth	2.93	Most FPCs received a mid-level score (3), which corresponds to entities that are either newly formed (less than 3 years) or have not yet demonstrated consistent 3-year CAGR growth. Two FPCs reported a clearly positive 3-year CAGR to score 5	Bodoland Agro, Besimari FPC
Net Profit	1.18	The majority of FPCs reported negative growth or losses in net profit over the last two financial years, resulting in low scores across the board	Uttaran FPC, Bodoland Agro
EBITDA	1.79	Operational profitability remains weak. Most FPCs report EBITDA margins below 2.5%, indicating challenges in scaling and cost efficiency	Poohar, Jugami, Taba Tate
Net Profit Margin	1.30	Net profit margins are either minimal or negative for most FPCs, as reflected in scores clustered below 1.5%	Abadari, Panitola, Naba Chandrapur
ROCE	1.57	Return on Capital Employed is generally low, below 6% for most FPCs suggesting underutilization of capital and low profitability	Jugami, Abadari, LEKOPE
TOL/TNW (Leverage)	4.11	Leverage ratios are well managed in most cases. A large number of FPCs maintain TOL/TNW below 2.5x, indicating limited external borrowing and good financial discipline	80% of FPCs scored 5
Interest Coverage Ratio	0.04	Nearly all FPCs scored zero, which implies that either they do not have interest-bearing liabilities or they lack sufficient operating profits to cover interest expenses	Only 2 FPCs scored 1 – Panitola & Howly
Current Ratio	3.25	Liquidity positions are healthy. Most FPCs maintain a current ratio between 1.5 and 2.5 or above, indicating good short-term financial health	25 FPCs scored 5
Inventory Days	3.09	Inventory turnover is moderate. Most FPCs hold inventory for 45–60 days, which is typical given agricultural cycles and storage constraints	Abadari, Lakhipur, Bodoland Agro

Indicator	Average Score	Interpretation	Top Performing FPCs
Debtor Days	3.79	Most FPCs collect dues within 30 days, suggesting effective receivables management and buyer discipline	38 FPCs scored 5
Cash Payments (% of Revenue)	3.61	Cash transactions make up less than 30% of total revenue in most FPCs, indicating a positive shift toward digital or bank-based payments	33 FPCs scored 5

The radar chart below highlights key financial strengths (leverage management, debtor days, current ratio) and gaps (interest coverage, profitability metrics).

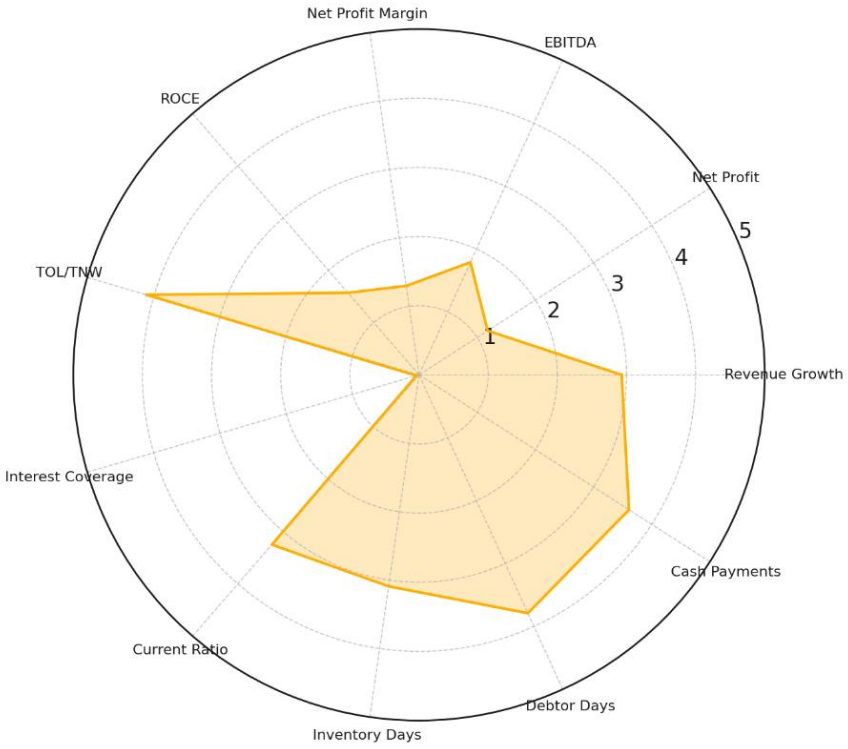

Figure 3: Radar Chart of Average Financial Indicator Scores

9.2. High-Performing FPCs in Financial Health

Based on the composite financial scores, the following FPCs demonstrated robust financial management:

FPC Name	Financial Health Score	Highlights
Bodoland Agro Organic Producer Company Limited	41	Strong EBITDA and liquidity; excellent receivables and inventory turnover
Sarukhetri Cooperative FPO Limited	39	High profitability and ROCE; all financial ratios except liquidity are strong
Bordoloni Agro Fed Producer Company Ltd	38	Solid EBITDA and ROCE; efficient working capital cycle, but inventory turnover is low.
Tulungia Shine Farmer Producer Company	38	Excellent capital efficiency; all core financial ratios strong except margins

FPC Name	Financial Health Score	Highlights
Naba Chandrapur Fed Agro Producer Company Limited	38	High revenue consistency and ROCE; moderate debtor days and high leverage discipline

These FPCs show a promising trajectory with sound financial systems, strong working capital management, and formalized business operations.

11. Market Linkage

Assam's FPOs (often formed as FPCs) are increasingly focusing on value-added agriculture and allied products and finding markets beyond the farmgate. For example, West Assam's dairy cooperative (WAMUL) helped form the Naba Milon Honey Producers' FPC (Kamrup), which supplies honey under WAMUL's "Purabi Honey" brand. Other FPOs similarly process and brand local produce: tribal and women-led FPOs sell artisanal goods such as Joha rice, fruit jams, pickles, oils and herbs, while fish farmer collectives market cultured fish. These FPOs often choose indigenous or organic niche products (e.g. starfruit jam, dry fruit teas, ethnic rice varieties) to differentiate their offerings. A hallmark of many Assam FPO products is traditional/local speciality – for instance, Abadari FPC in Assam markets mixed fruit juices, homemade olive pickles, mustard oil and local rice under its own "Abadari" label (e.g. starfruit jam, bael juice) – showcasing the region's cuisine and boosting farmer income.

10.1. Value-Added Products and FPO Brands

Assam's FPOs have created several branded products to capture more value. Aside from *Purabi Honey*, examples include Abadari's Pure Honey and starfruit, rosella and bael jams (made by an Assam FPO and sold at national tribal fairs), local rice (Joha), mustard and olive oils, pickle varieties, and fermented or dried fruits/vegetables. Aquatic FPOs (e.g. women-led fishing FPOs in Nagaon) produce and sell fresh and processed fish (e.g. dried fish, fish pickles). These products are typically marketed with the FPC's brand or under cooperative networks. By aggregating small-scale harvests, FPOs can invest in processing and packaging. For example, Assam's FPOs are beginning to package organic spices (turmeric, ginger, pepper) and Himalayan herb extracts for urban health-food markets. In poultry and dairy (though mostly cooperatives), FPOs do not yet dominate branded products; instead, they help supply raw milk, eggs or meat into local supply chains.

10.2. Market Destinations and Export Potential

Most Assam FPO products currently serve **local and regional markets**. Fresh produce and processed foods are sold in village haats, district markets and state agricultural mandis. FPOs also tap Assam's urban and Northeastern markets (Guwahati, Shillong, etc.), and some have linked with national retail/online platforms. For example, produce such as specialty rice, honey and jams from Assam FPOs are sold through online retail consortia and at national tribal/product fairs (e.g. Aadi Mahotsav), reaching buyers in other Indian states. The government and NGOs have helped Assam FPOs connect to larger buyers by organizing **buyer-seller meets** – a women's fish-farming FPO in Nagaon, for instance, expanded its market after an NGO-arranged buyer meet.

Exports remain limited but are emerging for niche Assam products. Traditionally, Assam's exports have been dominated by tea, but **new corridors** are opening. For instance, farmers' groups in Sivasagar now export **lemons and pumpkins to Dubai**. In general, FPOs can aggregate and grade produce for export-demanded items (fruits, vegetables, millets). However, volume is a challenge: "small landholdings in the state pose hurdles to generating an exportable surplus of focused products". When exports do occur, strict quality/packaging standards apply. Experts note that **sustained exports** require good branding, durable packaging and certifications (e.g. organic labels). Without those (or shelf-life and labelling), repeat export orders are hard to secure. Still, improvements in Assam's logistics and cold-chain (e.g. LEADS 2023 report) are gradually "unlocking opportunities for FPOs to pay equal attention to export markets apart from tapping domestic markets".

10.3. Market Linkages Assessment

This section evaluates how Farmer Producer Companies (FPCs) perform in terms of establishing and managing linkages on both the input and output sides of the agricultural value chain. It also includes their level of digitization and use of technology to support market access and member engagement.

The CRISIL-derived diagnostic tool uses 14 indicators to score Market Linkages out of a total possible raw score of 45. Each FPC's performance is based on field-verified responses. These indicators cover partnerships for inputs (seeds, fertilizers, pesticides), revenue and buyer engagement, bulk sales, digital infrastructure, payment delays, and technology usage.

Note: The Market Linkages score is capped at 45 because it comprises two components:

- A maximum of 25 points is assigned for input-output performance (e.g., input partnerships, crop coverage, sales to buyers).
- A maximum of 20 points is allocated for digital and technology-related metrics (e.g., record digitization, digital inclusion, communication tools).

10.3.1. Overview of Market Linkage Scores

Score Range	Classification	No. of FPCs
≥ 35	Strong	9
25 – 34	Moderate	22
< 25	Weak	25

- The average Market Linkages score across all 56 FPCs is **27.62**, indicating that most FPCs are in the moderate performance band.
- The top-performing Bihpuria Pumpkin FPC (Score: 54), with strong partnerships across input categories, diversified buyers, and full digital integration.
- FPCs such as **Matra Kara, Bihpuria Pumpkin,** and **Dharitri Moran Mustard** also scored above 35, reflecting institutional maturity in market operations and digitization.

10.3.2. Indicator-Level Insights

Indicator	Average Score	Interpretation	Best Performing FPCs
Input Seeds	4.11	Majority of FPCs have established formal tie-ups with seed distributors or companies.	46 FPCs scored 5
Fertilizer	0.98	Most FPCs lack formal linkages with fertilizer companies, which affects input reliability.	Mohabahu, Kalpani, Dharitri, Bordoisila
Pesticides	0.36	Pesticide distribution is nearly absent across the sample, requiring immediate intervention.	Mohabahu, Kalpani, Dharitri, Bordoisila
Core Crop Input Coverage	3.48	Most FPCs provide input services for more than 50% of their core crops, but coverage is not universal	Kalpani, Matra Kara, Khowang, etc.

Indicator	Average Score	Interpretation	Best Performing FPCs
Bulk Sales	2.43	Institutional buyer engagement is weak; bulk sales still underdeveloped for many FPCs	Mohabahu, Matra Kara, Bodoland, Khowang
Revenue Bifurcation	2.29	Limited diversification of revenue streams; most FPCs depend on just input or output activities	Mohabahu, Kalpani
Delay in Supplier Payments	4.18	Timely payments to suppliers are common among most FPCs, showing good internal control.	Over 65% of FPCs
Delay in Buyer Deliveries	4.11	Delivery timelines are generally adhered to, which contributes positively to buyer confidence.	Approx% of FPCs
Buyer Satisfaction	4.09	Majority of FPCs report satisfactory buyer relationships, but this needs triangulation through buyer interviews.	34 FPCs scored 5
Digitization of Member Records	4.79	Digital record maintenance (land, Aadhaar, bank details) is nearly universal across FPCs.	53 FPCs scored 5
Digital Inclusion	3.57	Digital banking familiarity is moderate to high, though not yet universal	Mohabahu, Majuli, Khowang
Communication with Members	3.50	Multiple channels (email, chats, meetings) are used for updates, but not all FPCs actively use group platforms.	Dharitri, Bihpuria Pumpkin FPC
Technology Used by the FPO	1.79	Technology use is still rudimentary; many rely only on phones or basic online tools.	Madhunandan FPC, Bihpuria Pumpkin FPC

Below is a radar chart showing the average scores for Market Linkage and Technology indicators, highlighting strong performance in supplier payments, digitization of member records, and buyer delivery, alongside gaps in pesticide linkages and overall technology adoption.

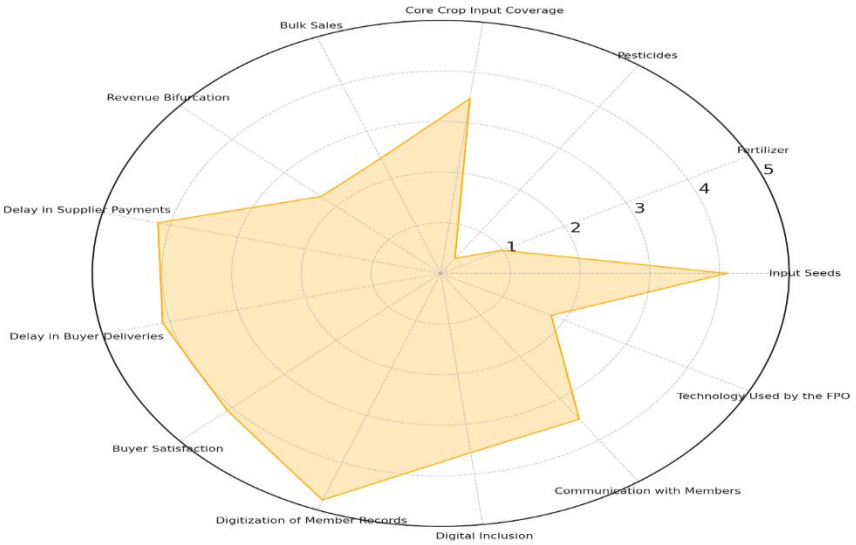

Figure 4: Radar Chart of Average Market Linkages & Technology Indicator Scores

10.3.3. Market Challenges Faced by FPOs

Challenge	%age	Age-Specific Trends
Limited market access & high transport cost	77.50%	Reported widely across all categories; critical for rural/remote areas
Low bargaining power & price fluctuations	75.50%	A major issue for nascent FPOs with no buyer networks
Limited access to market demand info	49%	Noted especially in Emerging and Nascent FPOs
Competition from large agri producers	45%	Mature FPOs impacted by aggressive pricing by large players
Infrastructure gaps (roads, cold storage)	57%	Nascent FPOs cited most severe difficulties

FPOs in Assam commonly experience severe challenges in reaching markets due to poor road networks, lack of storage, and low bargaining capacity. Price volatility and the absence of real-time market data further reduce profitability. Nascent FPOs, especially, are vulnerable due to inexperience and lack of infrastructure.

10.3.4. Efforts for Market Linkages

Strategy	No. of FPOs	% of Total	FPO Age Trends
Retail chain partnerships	32	65.30%	Nascent and Emerging preferred low-barrier entry
Trade fair participation	30	61.20%	Common among Emerging and Mature FPOs
Online sales platforms	21	42.90%	Mature FPOs more comfortable using e-commerce
Contract farming with corporates	6	12.20%	Limited but growing through models like PepsiCo

Retail partnerships and trade fairs serve as primary marketing strategies for FPOs. While online sales remain underutilized, some mature FPOs have started using digital channels. Contract farming, although limited, showcases high-impact collaboration (e.g., Suntali Maize with PepsiCo).

10.3.5. Top 5 Performing FPCs on Market Linkages

FPC Name	Market Score	Highlights
Bihpuria Pumpkin FPC	54	Full input & output tie-ups, top digital inclusion and multi-channel communication
Matra Kara Krishi Farmers Producer Company Limited	50	Strong institutional sales, diversified revenue streams, and robust digital tools
Madhunandan FPC	47	Comprehensive market coverage, reliable buyer engagement, and high satisfaction
Birjhora Farmer Producer Company Limited	46	Strong buyer linkages, active communications, but lacks input tie-ups

Khowang Women Poultry Producer Company Ltd	39	Excellent buyer-side coordination and digital readiness despite limited input access

The market linkage performance of the 56 FPCs shows a moderate average score of 27.62 out of 45, with notable strengths in buyer satisfaction, timely operations, and record digitization. However, significant gaps remain in input tie-ups for fertilizers and pesticides, diversified revenue sources, and broader technology adoption. While a few FPCs like Mohabahu, Matra Kara, and Bihpuria exhibit strong, integrated market systems, most require structured support to strengthen institutional partnerships and digital outreach. Focused interventions in these areas can substantially enhance market readiness and income potential.

10.4. Key Marketing and Sales Challenges

Assam's FPOs face multiple hurdles in marketing their products:

- **Infrastructure & Logistics:** Poor roads, lack of collection centers and cold storage make it hard to move perishable goods. Assam's hilly terrain and long distances to ports/trade centers inflate transport costs. FPO products often pass through many intermediaries before reaching markets. Studies note "lack of proper marketing infrastructure" and many **middlemen**, which limits farmers' revenue. In practice, this means FPO members often rely on private traders or local agents, reducing the share captured by producers. (On the positive side, forming FPOs can "reduce intermediaries" and raise the producer's share of the consumer rupee.)
- **Market Intelligence & Scale:** Most FPOs lack real-time market information (demand trends, prices), making it hard to time sales or diversify. Their small scale also limits bargaining power. As one study notes, small/marginal farmers in Assam have "limited exposure to market as well as business orientations," so FPO formation aims to improve livelihoods by collective marketing. However, building a predictable supply of standard-quality product is a continual challenge.
- **Branding and Quality Standards:** Many FPO-made products lack strong brand recognition. Packaging is often simple, and quality certifications (organic, GI tags) are scarce. Without branding, Assam FPO goods struggle against branded competitors. Packaging and labeling are also concerns: national experts warn that exports and city markets demand higher-quality packaging and shelf-life. Insufficient investment in branding/marketing means Assam FPO products may be seen as generic.
- **Policy and Institutional Support:** While central and state schemes exist, many Assam FPOs are not fully utilizing them. Research in Northeast India found that "most FPOs were not availing available support schemes or financial assistance". Implementation gaps in state support (such as co-investment for processing units, marketing subsidies) further constrain FPO marketing. For example, Assam's FPO promoters (SFAC, NABARD, NGOs) can form FPOs, but after registration the support on branding, market linkages or credit disbursement can be weak. Capacity-building has tended to focus on technical farming aspects, while entrepreneurial, managerial and marketing trainings are "less" in number. Overall, Assam's FPOs struggle with policy constraints and limited infrastructure, as well as social factors (trust issues, low literacy) that hamper scalability.
- **Pricing & Competition:** Assam's informal markets create fierce price competition. Farmers often feel they get low prices because middlemen capture margins. To earn better prices, FPOs must differentiate products (through value-addition or branding). A

case study of Assam FPOs recommends **product differentiation** and incentive mechanisms so that farmers commit to higher-quality, higher-value crops. In practice, Assam FPO members have achieved higher incomes by selling directly under brand labels or through cooperative networks (as with Purabi honey). But pricing remains a key concern when competing with mass-market or imported goods.

10.5. Identifying Market Opportunities

Assam FPOs have been tapping various channels to find markets for value-added products:

- **Government Schemes and Support:** Central programs (SFAC's FPO grants, **PM-FME** scheme, RKVY, PSS for marketing, NHM organic mandate, etc.) and state agri/agro-industries departments are official sources of support. Many FPOs rely on **SFAC** or NABARD for initial capital and formation, and these agencies often facilitate buyer contacts. For instance, SFAC organizes "FPO mart" events and facilitates registration on digital platforms. However, awareness is uneven: as noted, most FPOs "were not availing" the subsidies they qualify for. Strengthened extension from government (like ACAE, ATMA Agri-Hubs, and KVKs) can help identify niche markets (e.g. medicinal herbs, tribal crafts) and link FPOs to them.

- **NGO and Institutional Facilitation:** NGOs and development agencies have played a big role. For example, the Social Work and Research Centre (SWRC) helped the Anchalik Matsya FPO in Nagaon start buyer meets and Kisan Credit Card linkages. Such NGOs often provide market intelligence, help meet quality standards, or accompany FPOs to trade fairs. Academic and research institutions (CAU-Imphal, AAU, NEFRI, veterinary institutes) also advise on production improvements and can guide market research. The 2023 North-East FPO Conclave itself (in Imphal) helped Assam FPOs learn about market trends and connect with investors.

- **Buyer Linkages and Trade Fairs:** Collective marketing events are crucial. Government and private trade fairs (Aadi Mahotsav, Krishi Kumbh, SIFT/NITI Aayog events) showcase FPO products to large audiences. At these fairs, Assam FPOs sell directly (e.g. Assam tribal FPOs have exhibited handicrafts, rice, and food) and network with bulk buyers. Similarly, **District Level Kisan Melas** and Tribal Haats often reserve stalls for FPOs. Buyer-Seller Meets (organized by NABARD, SFAC, export councils) help FPOs pitch their products to exporters and processors. For instance, after attending a buyer-seller meet, a women's fish FPO expanded its clientele beyond local traders.

- **Online Platforms and E-Commerce:** Assam FPOs are increasingly exploring digital marketing. Many are registering on platforms like the Government's **SFAC FPO portal**, ONDC-connected apps (like local 'e-mandi' apps), and e-commerce portals (Amazon-ASSAM or private agritech startups). For example, the Abadari FPC sells its jams, pickles and oils via an ONDC-linked grocery app, reaching urban consumers. Online platforms solve some market-information problems and offer direct delivery. Social media and community radio also help spread awareness of FPO brands, especially in remote areas.

- **Strategic Partnerships:** Some Assam FPOs partner with cooperatives and private companies as Business to Business (B2B) linkages. The Purabi Honey case illustrates a partnership between WAMUL (co-op) and a newly-formed FPO, securing a procurement and marketing guarantee. Similarly, tie-ups with NGOs (e.g. CCWB's

Tractor Yojana) or with CSR programs can open institutional buyers (schools, offices) for FPO products (e.g. supplying rice or vegetables in bulk).

Through these channels, Assam's FPOs systematically seek out opportunities for value-added products. Notably, government support (both central and state) has emphasized linking FPOs to markets, but capacity-building and follow-up remain critical. Aligning with market demands such as organic certification or standard packaging – is an ongoing learning process for most FPOs.

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12. SDG Alignment Analysis

The assessment included an evaluation of how each FPC aligns with seven key Sustainable Development Goals (SDGs), specifically:

- **SDG 2**: Zero Hunger
- **SDG 5**: Gender Equality
- **SDG 6**: Water & Sanitation
- **SDG 7**: Modern Energy
- **SDG 10**: Reduced Inequality
- **SDG 14**: Life Below Water
- **SDG 17**: Partnerships for the Goals

Each FPC was scored "Yes" or "No" for these SDGs based on verifiable practices. To incentivize sustainability integration, FPCs that aligned with **all 7 SDGs** received a **bonus of 5 points** in their total institutional maturity score.

Observations & Insights

- **Only 2 FPCs**, **LEKOPE Majuli Women FPC** and **Suntali Maize Producer Company Limited** met all 7 SDGs and were awarded the bonus 5 points.
- The majority of FPCs fulfilled between **4 to 6 SDGs**, indicating a moderate level of sustainability adoption.
- **SDG 6 (Water & Sanitation)** and **SDG 7 (Modern Energy)** had universal compliance; nearly all FPCs reported improvements in clean energy and sanitation.
- However, **SDG 2 (Zero Hunger)** and **SDG 5 (Gender Equality)** were fulfilled by less than **15%** and 5% respectively of the FPCs, reflecting weak alignment on food security initiatives and women's participation.

13. Credit Linkage

Assam's Farmer Producer Organizations (FPOs) access credit from a mix of public, cooperative, and private lenders. Key players include NABARD (through its NABKISAN subsidiary), commercial and cooperative banks, specialized NBFCs like Samunnati and Annanya, and innovative platforms such as Rang De. NABKISAN Finance Ltd. (a NABARD subsidiary NBFC) has become a major FPO lender, deploying schemes for production and processing loans and sanctioning over 1,800 FPO loans nationwide by late 2022. NABKISAN operates in Assam among 21 states, providing bulk credit (refinance to other NBFCs and direct loans) for agriculture and allied activities. In practice, commercial banks (e.g. SBI, UCO Bank), regional rural banks (Assam Gramin Vikash Bank), and state cooperative banks also lend to FPOs under priority-sector lending (PSL) guidelines. For example, banks can sanction seasonal **cash credit (CC)** or **crop loans** to FPOs for short-term needs, and longer-term equipment or project loans. Public-sector banks often lend at ~9–12% interest (with government subvention), while NBFCs typically charge higher rates (around 15–18%). In the cooperative sector, a new government scheme allows Primary Agricultural Credit Societies (PACS) to form FPOs and provide them term loans up to ₹18 lakh over 3 years, with matching equity grants and a national **Credit Guarantee Fund** that covers up to ₹2 crore of project loans. This scheme effectively lets eligible institutions (StCBs/DCCBs) lend to FPOs collateral-free up to the guarantee limit.

Table: *Key institutions providing FPO credit in Assam and their loan offerings.*

Institution/Program	Type	Key Credit Products	Collateral / Guarantee
NABKISAN Finance Ltd. (NABARD)	Govt. NBFC (Refinance)	FPO production loans, value-chain loans (working capital and term)	Hypothecation of produce/stock; bank guarantee; assured by NABARD (refinance/guarantee)
Commercial Banks (e.g. SBI, UBI)	Commercial bank (PSL)	Cash Credit (seasonal crop, inputs); term loans for equipment, infrastructure	Crop/livestock hypothecation; land or property; member guarantees; SFAC/NABARD guarantee schemes
Cooperative Banks / RRBs	Regional/Co-op bank (PSL)	CC and term loans for agri and allied activities (often through PACS)	Similar to commercial banks; cooperative guarantee (e.g. state AAB cover)
Samunnati (Agri-NBFC)	Private NBFC (agrifintech)	Input Procurement Loans (bulk purchase of seeds/fertilisers); Output Procurement Loans (advances against produce); Catalytic Infrastructure Loans (warehouses, equipment)	Hypothecation of commodities; escrow of FPO sales; personal/corporate guarantee

Rang De (P2P platform)	Peer-to-Peer Lender	Small agribusiness loans to FPO-linked groups and farmers (often short-term)	Group guarantee (joint liability); some use co-signer or minimal physical collateral
NCDC (Coop Devt. Corp.)	Government agency	Long-term project loans for FPOs (especially co-op FPOs); interest subvention	Generally collateral-free (with interest subsidy); often FPO equity and grant cushion
SFAC / CGF Scheme	Govt. agency (grant/guarantee)	Equity grants to FPOs (matching contributions) and *Credit Guarantee Fund (CGF)* cover for loans	Provides 70% collateral cover on loans (up to ₹2Cr); no direct lending

Such institutions offer a range of loan products. **Working capital loans** (typically 6–12 months or renewable cash-credit limits) are used by FPOs for seasonal activities and bulk procurement of inputs or produce. **Term loans** (3–7 years or more) finance longer-term investments like processing units, transport vehicles, or farm equipment. Samunnati's *Input Procurement Loan* helps FPOs bulk-buy farm inputs at scale, while its *Output Procurement Loan* ensures timely payment to member farmers for delivered produce. Its long-tenor *Catalytic Infrastructure Loan* enables FPOs to build warehouses, drying yards, machinery and other agro-infrastructure.

Interest rates vary by lender: NBFCs cite rates of roughly 15–18% per annum, whereas cooperative and commercial banks charge lower rates (often 7–10%), subject to government subventions. Collateral requirements are a major hurdle for many FPOs. Lenders typically ask for land, fixed deposits, or hypothecation of stock. However, initiatives like the NABARD-backed CGF allow many FPOs to borrow on a "collateral-free" basis (covering 70–80% of loans up to ₹2 crore). In practice, FPOs often rely on internal guarantees (member co-guarantee) or third-party assets.

12.1. Supported Agricultural and Allied Value Chains

Credit to Assam FPOs generally targets priority farm and allied sectors. Many FPOs in Assam focus on horticulture (e.g. banana, citrus, pineapple, jackfruit, mango), spices and condiments (ginger, turmeric, black pepper), and pulses/cereals (rice, mustard). Allied enterprises like **dairy**, **poultry**, **fisheries**, and **beekeeping** are also common. For example, cluster-based dairy FPOs use working-capital loans to aggregate milk and purchase chilling equipment, while poultry FPOs may finance hatcheries and feed procurement. According to NABARD case studies, women-led poultry FPOs (in states including Assam) have achieved substantial scale – collectively 15,000 producers in 27 organizations generated over ₹5,240 million in turnover and ₹400 million in members' profits. Similarly, spice-board-supported FPOs and oilseed-processing FPOs receive term loans for crushers and packhouses. In practice, loans are chiefly used for **bulk aggregation and trade** (buying seeds, fertilizers, or produce in volume) and for **value-add assets** (warehouses, processing machines, cold-storage). Samunnati reports that FPO input loans lead to lower input costs and larger aggregated purchases, while infrastructure loans build long-term capacity. In Assam's context, this could mean financing modern drying facilities for turmeric or cold storage for harvested fruits, for example.

12.2. Impact on Profitability and Sustainability

Loans that finance aggregation and value addition can substantially improve FPO viability. By pooling produce and engaging in larger-scale marketing, many FPO members realize better prices and higher income. For Assam specifically, one study found that farmers belonging to FPOs earned **significantly higher incomes** than non-members. In a different state case (Andhra Pradesh), FPO membership yielded 2.11% higher farmgate prices and a 39.1% higher annual income compared to individual farmers. These gains reflect the economic impact of collective procurement, better bargaining, and access to modern inputs. In practice, FPO-funded activities (like a new maize drying plant or a joint-venture tea processing unit) help amortize costs over many members, improving profitability for all. Of course, the return on a loan depends on the project's success: analysts stress that FPO credit is justified only if the enterprise generates returns above the loan's interest cost. When that holds, an FPO can turn credit into profits, pay back lenders, and build equity – enhancing long-term sustainability. Indeed, the above examples of significant turnover and profit gains suggest that well-chosen credit investments can boost the economic viability of Assam's FPOs.

FPCs were asked to describe the influence of credit access (or the lack thereof) on their farming activities, business operations, and overall success. The responses were categorized into three distinct groups based on the nature of the impact:

Impact Type	PFC Percentage	Typical Responses
Restricted operations	40%	"Limited access to credit has restricted expansion and operations."
Enabled growth & investment	22%	"Credit enabled purchase of inputs and expansion."
No reliance on credit	20%	"No impact, as the FPC does not rely on credit."
No response/unclear	18%	No clear information or ambiguous responses.

The presence or absence of credit has a substantial influence on the performance and potential of FPCs. While those with credit access reported growth and expansion, those without felt constrained in their operational capabilities.

12.3. Activities Financed by Loans

FPO loans in Assam typically fund the following activities:

- **Bulk input procurement:** Buying seeds, fertilizers, pesticides, animal feed, etc., in volume for the entire membership. Samunnati's *Input Procurement Loan* is a dedicated product for this purpose. Bulk buying reduces costs per unit and improves supply reliability.
- **Aggregation and purchasing produce:** Financing the purchase of harvests from member farmers (e.g. paddy, vegetables, fruits). This ensures the FPO can negotiate better than individual farmers could.
- **Post-harvest infrastructure:** Building or upgrading warehouses, cold-storage units, drying floors, and grading/packing facilities. Loans often cover cement silos, cold

rooms, or processing sheds. Samunnati's *Catalytic Infrastructure Loan* explicitly targets such investments.

- **Processing equipment:** Acquiring machinery like oil expellers (for mustard/ginger), maize shellers, rice hullers, milk chillers, or spice mills. These add value and open new markets.
- **Transport and logistics:** Purchasing vehicles or boats for aggregated transport of goods. For remote Assam FPOs, this can include tractors with trolleys or truck hire.
- **Livestock and fishery enhancements:** In dairy FPOs, funds may install milk-chilling centers or bulk tanks. In fisheries or poultry, loans finance pond construction, feed stock, and poultry sheds.
- **Working capital for production:** Short-term credit for on-field activities (like hiring extra labor during harvest, or for rearing young poultry).

In all cases, the funded activities tie to specific value chains. For example, an Assam turmeric FPO might use credit to install a solar dryer and buy bulk spices for processing, while a community fishery FPO might borrow for pond aerators and fingerling stock.

12.4. Loan Availment Status among FPCs

Among the 56 FPCs surveyed, only 28% of the FPCs have successfully availed loans. Commercial banks emerged as the dominant source, serving 12 FPCs, while government banks and microfinance institutions supported 5 FPCs. Loan amounts varied significantly, ranging from ₹5 lakhs to ₹1 crore, with quantum typically aligned to specific operational needs such as input procurement or infrastructure development. The remaining 39 FPCs, representing 70% of the respondents, indicated that they had either not applied for loans or had not received any credit support. This significant disparity underscores the limited penetration of formal credit within the FPC ecosystem in Assam.

The reasons behind this low uptake are multifaceted and are explored in the subsequent sections. However, the immediate observation is clear: a large majority of FPCs continue to function without institutional credit, which potentially hampers their ability to scale operations and invest in infrastructure, input procurement, or market linkages.

The dataset does not explicitly categorize loans into working capital, term loans, or cash credit limits. However, contextual analysis indicates that FPCs applied for blended credit products. Working capital loans were primarily sought for short-term needs like purchasing seeds, fertilizers, or seasonal labor, while long-term loans targeted asset acquisition (e.g., machinery, storage facilities). Member-farmer loans, though mentioned in applications, lacked granular detail on allocation.

12.5. Major Challenges in Accessing Credit

Based on a combination of primary data (from 50 FPCs) and secondary sources, the report investigates the prevalence of loan uptake, the challenges faced in accessing credit, the impact of credit on operational success, and the specific barriers encountered by member farmers. The objective is to provide a holistic understanding of the role of credit in the growth trajectory of FPCs and highlight the systemic issues that need to be addressed to strengthen their financial ecosystem.

Challenge Category	Details
High interest rates & strict repayment terms	Unsustainable rates (15–18%), rigid schedules not aligned with farm income
Collateral & approval delays	Lack of assets, bureaucratic delays, CGF underutilized
Lack of financial documentation/history	No audited accounts or credit history; eligibility issues
Capacity and management gaps	Weak governance, poor financial planning, lack of professional leadership
Small loan ticket size	Bank transaction cost too high for small loans; discourages lending
Vulnerability to external risks	Floods, market crashes, and COVID-19 disrupt revenue and repayment ability
Institutional coordination bottlenecks	Confusion with cooperatives/PACS, delayed disbursement
Low awareness & access to credit schemes	Poor knowledge of NABKISAN, SFAC; lack of digital/physical access

12.6. Opportunities and Recommendations

Both primary field data and secondary sources highlight a layered problem: FPOs are often too young or underprepared to meet formal lender requirements, while small farmers struggle with individual access to credit owing to low financial literacy and procedural hurdles. To address these gaps and unlock the potential of FPOs in Assam, a multi-pronged strategy is necessary:

1. **Build Institutional Capacity**: NGOs and support agencies should help FPOs improve business planning, financial record-keeping, and loan proposal preparation. Stronger internal systems can enhance lender confidence and reduce approval time.
2. **Promote Awareness and Financial Literacy**: Structured training programs can equip FPO leaders and member farmers with the knowledge needed to navigate loan processes, meet documentation requirements, and evaluate different credit options.
3. **Leverage Technology and Market Platforms**: Linking FPOs to e-NAM, NCDEX, and warehouse receipt systems can help create reliable transaction histories and collateral substitutes. This digital traceability increases creditworthiness while expanding market access.
4. **Encourage Tailored Financial Products**: Financial institutions should design credit products specifically for collective enterprises, with flexible repayment terms and minimal collateral. Models from institutions like NABKISAN, Samunnati, and Rang De demonstrate the viability of such approaches.
5. **Activate Risk Mitigation Instruments**: Credit Guarantee Funds (e.g., NABSanrakshan) should be actively promoted and made easier to access. NGOs can support FPOs in understanding and applying for these instruments, which are critical for unlocking collateral-free credit.
6. **Align Policy and Planning**: Inclusion of FPO-specific targets in state credit plans, interest subvention schemes, and incentives for cooperative and regional rural banks can

provide the enabling environment needed. Cluster-based lending (by commodity or geography) may also lower risk and cost for lenders.

7. **Improve Data Systems**: Establishing a central registry of FPOs and tracking their credit performance can help funders and policymakers identify successful models, detect at-risk organizations, and design better interventions.

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14. Renewable Energy Adoption Across FPOs, FIGs, and Farmers in Indian Agriculture

Assam's agriculture remains heavily rainfed (about **60%** of cultivated area) and suffers from inadequate irrigation, high post-harvest losses, and fragile infrastructure. Decentralized renewable energy (DRE) solutions are increasingly seen as vital to improve productivity, reduce costs, and enhance sustainability. Key DRE technologies at the **production** stage include solar photovoltaic (PV) irrigation pumps, small-scale solar micro-grids, farm biogas/bio-CNG plants, and biomass gasifiers. In the **processing** stage, technologies like solar dryers, solar-powered rice mills, solar cold storage units, and other solar-powered value-addition equipment (e.g. freezer units for fisheries) are relevant. Below we discuss these technologies, their benefits, government support, and implementation examples in Assam.

13.1. DRE Technologies in Production

- **Solar Irrigation Pumps:** Solar-powered water pumps (both off-grid and grid-connected) can replace diesel pumps or supplement unreliable grid supply. Assam's terrain and high solar insolation make solar pumps a feasible option. The Assam government's clean energy policy explicitly promotes solarisation of existing grid-connected irrigation pumps. Under the central PM-KUSUM scheme (Component B for off-grid pumps and C for grid-connected pump solarisation), farmers can install solar pumps from 1–10 HP with ~50% central subsidy (instead of the usual 30%). State agencies like Assam Power Distribution Co. (APDCL) and the Assam Energy Development Agency (AEDA) are nodal for implementing PM-KUSUM. In practice however, uptake has been slow: though 4,000 pumps were sanctioned for Assam under PM-KUSUM by late 2024, **none had been installed**. Barriers include high upfront cost (farmers pay ~20% share) and perceived low demand due to abundant monsoon rain. Still, solar pumps can operate nearly free (no fuel costs) and need little maintenance, making them promising for assured irrigation during dry spells.

- **Solar Micro-Grids / Feeder Solarisation:** Small solar micro-grids or village-scale PV plants (often 5–100 kW) can electrify clusters of farms or provide power for tube wells. PM-KUSUM Component C also supports "feeder-level solarisation" where the state may put solar panels on distribution lines feeding agricultural areas. While specific Assam projects are nascent, the policy framework and potential benefits (energy security, reduced diesel use) are similar to solar pumps.

- **Biogas and Bio-CNG:** Biogas digesters using cattle dung or agri-residues can provide cooking/gas and organic fertilizer for farmers. More advanced bio-CNG plants (like the Oil India Ltd projects launched in Assam's cities) convert organic waste into compressed biogas for fuel. Although these urban waste projects are aimed at city fuel networks, similar technology could be applied on farms (e.g. converting cattle manure to bio-CNG or electricity). Central support exists under the *National Biogas and Manure Management Programme*, offering subsidies (often 30–50%) for family-size plants, and under the *SATAT* scheme (for large bio-CNG projects). Assam's clean energy policy also encourages waste-to-energy projects including agricultural residues. However, no large-scale farm biogas implementations in Assam have been reported in the literature to date.

- **Other DRE Sources:** Small wind turbines or micro-hydro are generally of limited use in Assam's lowland farms. Biomass gasifiers (using rice husk or wood waste) can power

rural mills or cookstoves; although not widely documented in Assam, such solutions have been piloted in some Northeast states.

13.2. DRE Technologies in Processing

- **Solar Dryers:** Solar dryers (direct or hybrid) are simple structures for dehydrating fruits, vegetables, spices, or fish. They substantially improve quality and reduce losses compared to open-air drying. For instance, a NABARD-supported pilot in Nagaon district (fishery value chain) is providing **solar dryers** at 10 model fish farms to process fish and feed. Such dryers can be applied to tea leaves, ginger, chili, fish, etc., enabling farmers to add value and extend shelf life. (Diya Foundation also notes that solar equipment empowers agri-entrepreneurs in remote Assam, including farmers.)

- **Solar-Powered Rice Mills / Other Processing Units:** Rice milling is a major activity in Assam. Solar or hybrid power can run small de-husking or grinding machines. While specific Assam case studies are scarce, solar mills have been implemented elsewhere (often financed through agricultural credit schemes). Similarly, solar power can run oil expellers, flour mills, or dairy equipment.

- **Solar Cold Storages:** Solar-powered refrigerated storages are vital for perishable crops (fruits, vegetables, fish, milk). In August 2023, Assam's Bodoland Territorial Council (BTC) partnered with central NERAMAC to set up **five solar cold storage units** (one in each BTC district) for local farmers. These refrigerated warehouses, powered largely by on-site PV, will "extend the shelf life of perishable goods" and cut reliance on grid electricity. This project alone is expected to benefit ~5,000 farmers. SELCO Foundation is also actively mapping and piloting solar cold-chain solutions in Assam to curb huge post-harvest losses (estimated at ₹92,650 crore/year nationwide).

- **Other Processing Aids:** Mini solar freezers, solar water heaters (for dairies/food processing), and solar electrified flash dryers for tea or spices are emerging options. NABARD's fishery project for example equips farms with **solar freezers** for storing catch. In general, any post-harvest or processing step requiring electricity (aerators, pumps, lights, small machinery) can be powered by renewables.

13.3. Benefits and Impact

DRE in agriculture can **raise productivity, cut costs, and improve sustainability**. Key impacts include:

- **Improved Irrigation & Crop Yields:** Solar pumps and micro-grids reduce dependence on erratic monsoon and costly diesel. They ensure "assured water for farming" in dry seasons, encouraging farmers to take up multiple-cropping and higher-value crops. Lower energy costs (no fuel expense) increase farmers' net income; for example, solar pumps have much lower operating and maintenance costs than diesel pumps.

- **Reduced Fuel Costs and Emissions:** Replacing diesel engines with solar (or biogas) cuts fuel bills and eliminates local air pollution. Studies note that diesel pump sets have high O&M costs and contribute to carbon emissions. DRE adoption helps "decarbonize farm irrigation" and mitigates climate impact. The NABARD fishery pilot explicitly aims to "reduce over-dependence on fossil fuels" and environmental damage.

- **Higher Quality and Less Waste:** Dryers and cold stores powered by solar preserve crops at peak quality, reducing spoilage. By extending shelf life, solar cold storage units protect farm output – one report notes that solar cold stores increase the "durability of

the products". Given the immense losses from poor storage infrastructure, improved DRE-enabled post-harvest facilities could markedly boost farm incomes (nationwide losses from inadequate storage exceed ₹92,000 crore annually).

- **Resilience and Livelihoods:** Reliable power (from micro-grids or solar home systems) stabilizes small enterprises. In remote Assam, NGOs have used solar to empower rural livelihoods – e.g. Diya Foundation's program supplied solar equipment to 350 entrepreneurs (tailors, spinners, farmers) to run their businesses uninterrupted by grid outages. For agrarian communities, DRE means less vulnerability to fuel price shocks and more opportunities (e.g. chillers for dairy, ventilation for poultry). NABARD and SELCO's pilots are building capacity so farmers can operate and maintain solar equipment, thus embedding these benefits in local value chains.

13.4. Government Schemes and Subsidies

Central Schemes: The flagship **PM-KUSUM** (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) is the main national program for solar pumps and farm solar plants. It offers capital subsidies (Central Financial Assistance, CFA) of up to **50%** of pump cost for the North Eastern states (other components like grid solar plants also have CFA up to 30–50%). Under KUSUM Component B, stand-alone off-grid pumps (1–10 HP) get 50% subsidy (farmers pay ~20%, NE state 30%). Component C allows solarising grid pumps and solarising feeders. However, in Assam KUSUM projects have seen virtually no uptake: by late 2024 zero pumps had been installed despite thousands sanctioned. Component A (2 MW solar plants on farms) was also sanctioned but unimplemented. Besides KUSUM, the **NBMMP** (biogas program) subsidizes household digesters (~30–50% of cost) and the **SATAT** scheme offers incentives for large-scale bio-CNG plants using agri residue. For cold storage and processing, central schemes (e.g. **MoFPI's Cold Chain Scheme**, **MIDH** for horticulture) provide capital subsidies (often 35–50% for North-East) for building solar-powered cold rooms or value-addition units.

State Initiatives: Assam's governments have not widely publicized a dedicated DRE scheme for farmers beyond contributing their share to national programs. In PM-KUSUM, Assam was to cover 30% cost share (for pumps), but its contribution also seems stalled. The 2025 Assam clean energy policy explicitly calls for promotion of solarisation of agricultural pump sets and grants "deemed non-agricultural status" to land used for renewable projects (easing approvals). State nodal agency AEDA is responsible for implementing renewable schemes. Some Assam-specific programs (e.g. state budget allocations for solar pumps or subsidies for grid connection) are mentioned in passing, but explicit details (including the referenced "CMSGUY" schemes) are not readily found in public documents. The state also partners with central agencies: for example, Assam's BTC areas are leveraging NERAMAC and NABARD funding (with state facilitation) to build solar cold stores. Overall, farmers in Assam rely mainly on central subsidies (like KUSUM) supplemented by any state share or local grants.

Technology	Application	Applicable Schemes	Subsidy / Incentive
Solar Irrigation Pump	Farm water pumping (irrigation)	PM-KUSUM (Comp B/C); Assam solar pump programs	CFA ~50% (NE states); Assam state ~30%; farmer pays ~20%sentinelassam.comsentinelassam.com

Solar Micro-Grid/Feeder	Rural electrification, cluster irrigation	PM-KUSUM Comp C (feeder solarisation); MNRE grants	30–50% CFA (depending on program); viability gap support for mini-grids
Biogas/Bio-CNG Plant	Gas/electricity from farm waste	MNRE Biogas Programme (NBMMP); SATAT (bio-CNG)	~30–50% for family biogas plants; VGF for large CBG plants
Solar Dryer	Drying crops (fruits, fish, spices)	MNRE/NABARD pilots; state agri schemes	~30% MNRE subsidy typical
Solar Rice Mill	Paddy milling, dehusking	RKVY/MIDH grants; state agro-industry schemes	~25–35% via agri-processing subsidies (e.g. MoFPI)
Solar Cold Storage	Refrigerated storage for produce	MoFPI Cold Chain Scheme; NABARD/NERAMAC projects	35–50% (higher for NE) grant; subsidized loans
Biomass Gasifier	Powering mills (rice husk, etc.)	NABARD rural energy funds; MNRE biomass programmes	~50% grant often under rural energy projects

13.5. Case Studies and Examples

- **NABARD Fishery Pilot (2025):** In Nagaon district, NABARD launched a project (with GIZ and SELCO Foundation) equipping 10 model fish farms with solar pumps, aerators, dryers, and freezers. This demonstration project (210+ beneficiaries) aims to show how DRE can increase stocking density, cut mortality, reduce diesel use, and boost fish farmers' incomes. It highlights practical benefits: e.g. solar aerators ensure oxygenation cheaply, while solar dryers/freezers improve post-harvest quality.
- **Solar Cold Stores in Bodoland (2023):** BTC's pact with NERAMAC set up five solar-powered cold storage units (one per district) for local farmers. These stand-alone solar cold rooms will preserve vegetables and fruits off-grid, extending shelf life and connecting to women's livelihood programs. Officials expect this to directly benefit ~5,000 farmers by reducing spoilage and aligning with sustainable development goals.
- **NGO-Led Rural Electrification:** Diya Foundation reports providing solar setups to hundreds of rural entrepreneurs in Assam/Meghalaya. By supporting 350 people (farmers, handloom spinners, poultry rearers, shopkeepers) with solar equipment, they bridged energy gaps in remote areas, enabling longer operating hours and higher output. Farmers equipped with solar pumps or lights could work when grid power was missing, illustrating micro-level impact.
- **State and Central Collaborations:** Assam's initiatives often rely on convergence funding. For example, under central *Kusum* and *PM-KUSUM* guidelines, APDCL and AEDA were designated implementers, though actual uptake lagged. NABARD's involvement in fisheries and NERAMAC's in cold-chain show how Assam taps different

schemes. (To date there are no high-profile examples of solar rice mills or village microgrids publicly reported, indicating untapped potential.)

13.6. Primary Research Findings on DRE Adoption

This section presents a detailed and integrated synthesis of renewable energy adoption trends, barriers, and opportunities across three core tiers of India's agricultural ecosystem: Farmer Producer Organizations (FPOs), Farmer Interest Groups (FIGs), and individual farmers. Based on field-level findings from 56 FPOs, 40 FIGs, and 52 individual farmers, the report aims to highlight the most pressing energy-related challenges in the agricultural landscape and proposes actionable pathways to improve decentralized renewable energy (DRE) adoption, particularly solar solutions. The analysis finds widespread energy instability affecting 80–90% of entities, critically low DRE penetration (13–18%) despite high interest (over 80%), and several structural barriers that include high initial investment, lack of technical knowledge, poor awareness, and service deficits. Among the renewable technologies assessed, solar irrigation pumps emerged as the most preferred solution, with demand cutting across all three groups. The report concludes with an integrated set of recommendations that emphasize financial innovation, technical skill development, awareness campaigns, and tier-wise rollouts of priority solutions to support energy-resilient agriculture in India.

I. Energy Challenges in Agricultural Ecosystems

India's agricultural sector continues to be the backbone of the rural economy, supporting the livelihoods of over half the population. However, the sector suffers from a persistent energy paradox: despite being heavily dependent on energy for irrigation, processing, and storage, it faces chronic unreliability in power supply. This paradox is starkly evident in the findings of this report, which captures insights from various entities, FPOs that represent farmer collectives, FIGs as functional sub-groups within FPOs, and individual farmers who operate at the grassroots.

Out of the surveyed sample, 56 FPOs, 40 FIGs, and 52 farmers, only a small fraction, ranging between 13% and 18%, have adopted any form of decentralized renewable energy (DRE). This discrepancy between energy needs and renewable adoption presents a significant policy and implementation gap. The report examines this landscape in detail and offers a structured understanding of the constraints and the potential that can be unlocked with targeted interventions.

II. Current Energy Use and Reliability Crisis

One of the most pressing issues across all tiers is the unreliability of conventional energy sources. A majority of the respondents reported frequent power disruptions that severely impacted irrigation and post-harvest processing. Among individual farmers, 80% indicated that power cuts regularly hampered their operations, pushing many to resort to costly diesel generators, which were used by 45% of respondents. Similar patterns were seen among FIGs and FPOs, where 93% and 66%, respectively, reported energy-related interruptions that increased operational costs significantly, by as much as 25–40% in some cases.

Irrigation emerged as the single most vulnerable area, with two-thirds or more of all respondents indicating that unreliable energy directly impacted their ability to water crops. This was particularly detrimental for paddy and maize cultivation, which are water-intensive. Other affected areas included cold storage and mechanical processing, both of which depend heavily on consistent electricity supply.

In terms of energy sources, a large number of entities still depend on manual labour and non-electric tools. About 57% of farmers and 42% of FPOs reported using no electrical equipment at all, while diesel generators were used as backup during outages. Grid electricity, where available, was often inadequate, with many users describing it as "unpredictable" and insufficient for their needs.

III. DRE Adoption Status Across Tiers

Despite the acute energy needs, the actual adoption of decentralized renewable energy systems remains alarmingly low across the board. Among FPOs, only 18% have implemented DRE solutions, primarily solar pumps, with a small proportion using biogas systems. Among FIGs, 13% have adopted solar technology, and among individual farmers, the adoption rate is as low as 4%. Even within this small subset of adopters, recurring problems were reported, including maintenance difficulties and underutilization due to technical breakdowns.

Tier	Adoption Rate	Primary Technologies Used	Experience
FPOs	18%	Solar pumps (78%), biogas (22%)	66% report cost savings but face maintenance issues
FIGs	13%	Solar pumps (100%)	All report technical challenges
Farmers	4%	Solar pumps (100%)	Positive ROI but need more support

A clear example of this is the Machkhowa Agrofed FIG, where the installed solar pumps are reported to remain idle for nearly a third of the time due to minor, yet unaddressed, mechanical issues. This situation reflects a broader concern that while the technology is available and even shows early signs of cost savings (reported by 66% of FPO adopters), a lack of technical support, training, and after-sales service severely limits its effectiveness.

One of the most concerning findings was that only 12% of adopters across all tiers had received formal training on operating and maintaining the systems. This lack of capacity leads to the technology being underutilized or abandoned, despite its potential to improve productivity and reduce energy costs.

IV. Common Cross-Tier Challenges

Several structural and behavioural barriers were consistently reported across all groups. The most significant among them is the high upfront cost of renewable energy systems. About 90% of FPOs, 83% of FIGs, and 58% of interested farmers identified cost as the primary deterrent. The absence of viable financing mechanisms only compounds the problem, with 76% of FPOs and 70% of FIGs lacking access to institutional loans, and nearly half of the farmers requiring subsidies to proceed.

Another major challenge is the lack of technical knowledge among users. Nearly three-fourths of FPOs and FIGs lack the capacity to conduct even basic troubleshooting, while 35% of farmers reported needing training to operate solar pumps. Despite this, only a minority of organizations provide training, and a vast majority, 87% of FIGs, for instance, expressed the need for dedicated workshops and practical demonstrations.

A third set of issues revolves around awareness and perception. Many users are either unaware of the benefits of DRE or unconvinced about the return on investment. For example, 36% of FPOs expressed uncertainty about potential savings, while 26% of FIGs were completely unaware of solar energy solutions. In addition, many organizations ignored technologies like

biogas and wind energy despite their suitability, particularly for FPOs engaged in processing and biomass-intensive activities.

Lastly, infrastructural deficiencies further restrict adoption. After-sales service is unreliable or non-existent for over half the FIGs, and 45% of FPOs face delays in part replacement and servicing. Moreover, hybrid energy models that could combine grid and solar power are scarcely implemented, although 91% of entities were found to be suitable candidates for such configurations.

V. Willingness to Adopt DRE: High Latent Demand

Encouragingly, there exists a high level of latent demand for DRE adoption across all tiers. Among FPOs, 58% expressed a direct willingness to adopt, while another 24% were conditionally interested. Among FIGs and farmers, 80% and 83%, respectively, were open to adoption, indicating that the real obstacle lies not in interest, but in capability and affordability.

Tier	Willing to Adopt	Conditional Interest	Resistant
FPOs	58%	24%	8%
FIGs	80%	13%	7%
Farmers	83%	-	17%

The conditions for adoption are consistent: financial support through subsidies or low-interest loans, training in installation and maintenance, and clearer projections of cost-benefit outcomes. For instance, 76% of FPOs and 48% of farmers demanded subsidies, while over 87% of FIGs requested hands-on technical workshops. Interestingly, the only notable resistance came from groups such as the Shiralu FPC, which continues to rely solely on manual practices and sees no need to adopt new technologies.

VI. Most Sought-After DRE Solutions

Across all respondent groups, solar irrigation pumps emerged as the top priority. Over 90% of farmers, and roughly two-thirds of FPOs and FIGs, listed solar pumps as their most desired technology. The preference is driven by the urgent need for reliable water supply in paddy and maize cultivation. Several FPOs reported that solar pumps could reduce their energy costs by 60%, while farmers stated that power cuts during the cropping season led to devastating losses.

Other desired solutions included solar-powered cold storage and processing units, particularly among FPOs. For example, cold storage is seen as vital for perishable goods like poultry and vegetables, while solar-powered milling and oil extraction units are in demand for value-added processing. However, biogas systems, which could serve processing-heavy FPOs with large volumes of crop waste, were surprisingly underutilized, with only 8% showing interest, largely due to poor awareness and lack of technical linkage.

Solution	FPO Demand	FIG Demand	Farmer Demand	Primary Use Case
Solar Irrigation Pumps	66%	63%	90%	Water-intensive crops (paddy, maize)
Solar Cold Storage	36%	17%	10%	Perishables (poultry, vegetables)
Solar Processing Units	48%	-	12%	Milling, grinding, oil extraction

Biogas Systems	8%	0%	0%	Crop waste-to-energy conversion

VII. Integrated Recommendations

The report proposes an integrated strategy to catalyze renewable energy adoption across the agricultural sector. First, innovative financial models are necessary to overcome the upfront cost barrier. These include tiered subsidies, such as 50% support for FPOs and 30–70% sliding grants for farmers, and pay-as-you-go leasing models where farmers can access technology for as little as ₹3–5 per day.

Second, capacity-building initiatives must be strengthened. This could include deploying mobile DRE clinics staffed with multilingual technicians to offer on-site training, and mandating five-year maintenance agreements as part of procurement contracts. Champion networks made up of successful DRE adopters could also be developed to train and mentor their peers.

Third, awareness and market linkages should be enhanced. Regional demonstration hubs can exhibit real-time solar ROI and create a visual, data-driven case for adoption. Platforms that match technology providers with suitable FPOs and FIGs can also help address the disconnect between demand and supply. Public-private partnerships will be crucial in delivering targeted awareness drives to fill the current perception gaps.

Finally, the rollout of solutions should follow a phased and priority-based strategy. Solar irrigation pumps should be prioritized for entities facing water scarcity, followed by solar cold storage for perishable-focused groups, and then biogas systems for crop-waste-intensive FPOs.

VIII. A Pathway to Energy-Resilient Agriculture

In conclusion, the findings of this report underscore three universal truths. First, energy instability remains a widespread and critical issue affecting productivity across FPOs, FIGs, and individual farmers. Second, there is strong consensus around solar irrigation as the most pressing need. And third, financial, technical, and informational barriers are the primary impediments preventing a transition to renewable energy.

The pathway to energy-resilient agriculture in India must be based on holistic and targeted interventions that match ground-level needs with viable technologies. This includes reforming subsidy policies, encouraging private-sector innovation in financing, and creating community-led training models that can unlock the potential of decentralized renewable energy. With the right strategies, India can enable a transition from energy-deprived to energy-smart agriculture, ushering in a new era of productivity, resilience, and sustainability for millions of smallholders across the country.

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15. Value Chain of FPO Produce in Assam

14.1. Production Stage

Assam's economy is fundamentally agrarian: ~88% of its 28.11 lakh ha land is cultivable. Major crops include cereals (especially rice), pulses, oilseeds, sugarcane and jute. In 2018-19 Assam produced about **52.45 lakh tonnes of cereals** (predominantly rice), along with **1.08 lakh tonnes of pulses** and **2.04 lakh tonnes of oilseeds**. Horticulture is strong: **38.7 lakh tonnes of vegetables** and **23.9 lakh tonnes of fruits** were harvested. Key high-value crops include GI-tagged varieties – e.g. Karbi Anglong ginger, Tezpur litchi, Joha rice and Bora (glutinous) rice – as well as turmeric, chili, banana, pineapple and black rice.

Livestock and allied production is significant: Assam yielded **3.06 lakh tonnes of fish**, **48.86 thousand tonnes of meat** and **8.6 lakh tonnes of milk**. The pig population is about **2.1 million** (for pork), alongside poultry, ducks, bees (honey) and sericulture (muga/eri silk). Assam's allied sector grew ~5.8% (in 2018-19), outpacing crop growth, reflecting rising dairy and aquaculture activities.

Despite this diversity, production faces challenges: most farmers hold *small, fragmented plots*, limiting mechanization and economies of scale. Cultivation is largely rainfed; irrigation covers a small share, so crops are vulnerable to erratic weather. Floods annually inundate large areas, damaging paddy and horticulture fields, while droughts hit the Barak valley in dry years. Seed and input quality are issues – many farmers lack access to certified seeds and affordable fertilizers – which depresses yields. Further, low mechanization means labour-intensive practices prevail.

- **Major Crops:** Rice (Aman, Boro), jute, maize, pulses, mustard, sugarcane, and high-value horticulture (ginger, turmeric, pineapple, bananas, etc.).
- **Livestock/Allied:** Dairy (buffalo/cattle), poultry, pigs (2.1M head), ducks, fish (3.06 LMT), bees/honey, and sericulture (Assam muga silk).
- **Practices & Inputs:** Predominantly traditional (manual tillage, animal labor). Farmers source hybrid seeds and fertilizers from government schemes or local agro-dealers, but often face shortages or quality issues. Organic manure is used in pockets (e.g. ginger, spice belts) but chemical inputs dominate.
- **Challenges:** Small/fragmented holdings limit investment. Annual floods and erosion destroy crops and soil nutrients. Inadequate irrigation and lack of cold storage force distress sales after harvest. Pests/diseases (e.g. rice blast, tea borer) are also common.

14.2. Processing Stage

Agro-processing in Assam is nascent but expanding. The state's first **Mega Food Park (Nalbari)** was completed (investment ₹36.12 Cr) to provide common processing and cold-chain facilities. Additionally, several **Agro-Processing Clusters** are underway in districts (Darrang, Kamrup, Karbi Anglong, Marigaon, Sonitpur, Tinsukia), each aiming to serve ~4,000 farmers. Two cold-chain projects in Kamrup (private units) are now operational. Existing warehousing (Central Warehousing Corp.) offers bulk storage (e.g. 15,591 MT in Sorbhog, 10,500 MT in Jorhat I, 11,455 MT in Dhubri).

Most food processing, however, remains small-scale. Common forms of value addition include **rice mills**, **mustard oil extraction**, **spice grinding**, **fruit/vegetable pickles and juices**, and traditional products (e.g. jaggery from sugarcane). Some notable examples:

- **Ginger/Spice Processing (Karbi Anglong):** Karbi Anglong is Assam's 2nd-largest ginger producer, yet lacked processing until recently. *Jirsong Agro Producer Company Ltd.* (Manja) has aggregated **800 ginger farmers** and set up an SFURTI-backed processing unit. This unit washers, dries, sorts and packages ginger into value-added products (dry slices, powder, candies), turning 200 tonnes per year into ₹45–60 lakh of sales across national markets (Kolkata, Delhi, Bangalore, Guwahati). A **Common Facility Centre** for ginger (with slicing and packing machines) was also established under MSME support.
- **Turmeric & Chili (Karbi Anglong):** The Spices Board promoted two producer companies – *Coinonya Farm Producer Co. Ltd.* (turmeric) and *Karbi Farms Producer Co. Ltd.* (ginger & chili) – focusing on organic cultivation and processing for exports. These initiatives aim to certify Assam spices as organic and connect growers to higher-value markets.
- **Rice & Others:** Districts with rice specialties (e.g. sticky-soft rice in Nalbari/Sivasagar) have small-scale pitha (rice cake) and puffed-rice units. Oilseed (mustard) producing districts (Darrang, Dhemaji) have local presses. In ODOP banana districts (Goalpara), ripening and packaging for market are emerging. However, **common gaps** remain: many ODOP products have no modern processing; as one review notes, "there is lack of value-added manufacturing unit" in ginger despite raw material availability. Overall, processing capacity in Assam must grow to reduce post-harvest losses and add farmer incomes.

14.3. Marketing Stage

FPOs in Assam seek to connect members to fair markets. Common marketing channels include **APMC (mandi) markets** (e.g. Guwahati, Dhubri, Karimganj) and institutional buyers (government procurement of paddy, initiatives for pulses/oilseeds). Regional marketing arms like **NERAMAC** support NE farmers by linking them to broader markets. For example, NERAMAC assisted *Riseng Agro Producer Company Ltd.* (Dhemaji) in piloting black rice cultivation and marketing.

To improve transparency, Assam has been integrating with the **e-NAM** (National Agriculture Market) platform. During the pandemic the government explicitly allowed FPOs to sell via e-NAM. This lets FPOs access buyers across states and get real-time price discovery. Some FPOs also leverage digital tools: WhatsApp groups circulate market rates; the Kisan Suvidha app provides weather/price info. Efforts are underway to train FPOs in e-trading.

In practice, most FPOs aggregate member output into bulk lots. This collective selling helps secure better prices (often near MSP for staples or a quality premium for organic produce) than individual smallholders might get. A few FPOs have signed MoUs with retailers or agro-processors: for instance, Karbi ginger from Jirsong is sold through established traders in Kolkata and Bangalore as a branded dry spice. There are also nascent efforts to promote **direct-to-consumer sales** – some farmers' markets and local "produce outlets" in Guwahati feature FPO products (vegetables, honey, spices) as demonstration of quality. However, most FPO sales still rely on conventional value chains.

- **Market Linkages:** Regulated markets, NERAMAC, APEDA (for exports), government procurement centers.

- **Aggregation:** FPOs collect and grade produce at village/cluster level for bulk delivery. This reduces transaction costs and middlemen.
- **Price Realization:** Collective selling enables negotiation for MSP or better. For example, FPO-aggregated ginger and turmeric have fetched prices 10–20% higher than local farm-gate rates (due to organic quality and bulk sales). Export-grade commodities (e.g. organic sesame oil) can earn even more.
- **Digital Initiatives:** Implementation of e-NAM, Kisan Call Centre extensions, and agri-mobile apps for extension. A few FPOs experiment with e-commerce (tie-ups with online grocery platforms), though volumes are small. The state encourages digitization of land records and use of digital payments among FPOs.

14.4. Distribution Stage

Logistics remain a bottleneck. Assam's produce moves through a mix of roads, waterways and limited rail links. **Intermediaries** – local traders and commission agents – dominate rural markets and transport. Few large-scale distributors exist; many vegetables and fruits, for example, pass through multi-tier brokers before reaching urban markets.

Cold-chain infrastructure is still emerging. According to government data, only two commercial cold storage projects (in Kamrup) have been completed, with combined preservation capacity <0.3 lakh tonnes/year. Several large ambient warehouses exist: Sorbhog (15,591 MT), Jorhat I (10,500 MT), Dhubri (11,455 MT), but these largely serve bulk grains. Perishable clusters (vegetables, fish) rely on iceboxes and timely transport. As a result, post-harvest losses are high for many FPO crops.

For national distribution, Assam is connected by NH-27 (east-west) and NH-15 (south) for truck transport to mainland India and Bangladesh. A new rail bridge (Hatsingimari-Dhubri) partially revived broad-gauge freight to West Bengal. The Brahmaputra's inland waterways have potential (e.g. rice/oilseed barges to Kolkata), but seasonality limits use. Assam's agri-produce does reach all-India markets: for instance, Jirsong's dried ginger now sells in Kolkata, Siliguri, Delhi, Bangalore and Guwahati. Some niche products (tea, oranges, black sesame) are exported via air/sea ports, but FPO exports are currently minimal.

- **Intermediaries:** Rural markets use commission agents. Urban distribution relies on private haat traders and wholesalers. FPOs often depend on pre-existing trader networks unless they establish direct links.
- **Infrastructure:** Limited cold storage (Kamrup), handful of packhouses for fruits, and the mentioned large warehouses. Often insufficient for peak harvests.
- **Reach:** Statewide roads and rail connect to markets in Delhi, Kolkata and beyond. Some exports to Bangladesh occur (e.g. bananas, pineapples) through border trade. Lack of containerized transport and last-mile road gaps slow down distribution.

14.5. Branding & Packaging Stage

Branding of Assam's agricultural goods is nascent. At present, products are mostly known generically (e.g. "Assam ginger", "pineapple from Cachar"). However, Assam does have several GI tags covering FPO-relevant products: Karbi Anglong Ginger, Tezpur Litchi, Joha Rice, Bora (sticky) Rice, Kaji Nemu (citrus), Chokuwa Rice, etc. These GIs offer marketing potential that FPOs can leverage by promoting regional identity (e.g. "Assam black rice").

On-pack labeling and packaging are still developing. Most FPO outputs are bulk-packed (jute bags, plain sacks, or unbranded plastic). Few have invested in value-added packaging (sealed pouches, cartons). One notable case: Jirsong APC's SFURTI facility includes automated drying and packaging lines for ginger, producing retail-ready packets of ginger powder and candy. Similarly, the Coinonya turmeric FPC packages its spice in branded packets for export. But these are exceptions. Generally, FPOs lack proper branding or even basic branding elements (logos, labels).

Quality standards and certification remain low. Only a handful of FPO products carry organic or Agmark labels. In most cases, quality assurance is informal. This gap in branding and packaging means Assam's FPO goods have limited shelf appeal and must compete as unbranded commodities. Stakeholders note a need to improve food-grade packaging materials, incorporate "Assam brand" identity, and train FPOs in packaging hygiene and design.

- **GI Tags:** Assam has GI certifications for 6+ crops (ginger, litchi, joha rice, etc.), but awareness among farmers is limited.
- **Current Packaging:** Basic (cloth/plastic bags). Few FPOs have branded packaging; most value-adders re-bag into plain containers.
- **Quality/Standards:** Widespread lack of FSSAI/food-safety certification. Organic labeling only in pilot clusters.
- **Gaps:** Inadequate packaging materials, no unified "Assam" branding for exports, and poor marketing collateral.

14.6. Value Chain Insights from the Survey of 56 FPOs in Assam

This section analyzes qualitative survey data from 56 Farmer Producer Organizations (FPOs) in Assam. The FPOs provided information on their value chain activities, challenges at each stage (production, processing, marketing, distribution), value-addition strategies, supply chain bottlenecks, and stakeholder collaboration. We quantify common patterns using frequency counts and present findings in tables. The goal is to inform FPO-promoting agencies and funders of key issues, implications, and emerging best practices.

Key Value Chain Stages

84% of FPOs operate primarily in the **Marketing** and 78% in **Production** stages of the value chain. About half (51%) also engage in **Processing** and 48% in **Distribution**. The table below summarizes how many FPOs reported each stage as part of their core activities:

Value Chain Stage	% of FPOs Engaged	Number of FPOs (out of 56)
Marketing	84%	47
Production	78%	44
Processing	51%	29
Distribution	48%	27

This indicates that while almost all FPOs are involved in selling (marketing) and many in production, fewer have strong processing or distribution roles. A small number mentioned other stages (e.g. input supply or fishery-specific stages), but the dominant stages are as above.

Production-Stage Challenges

FPOs cited climate/weather, seed/input quality, and irrigation/infrastructure as the top production challenges. Specifically, 66% of the FPOs noted *climate change and unpredictable weather patterns*; 56% cited *insufficient access to quality seeds and inputs*; and 56% reported *poor irrigation and infrastructure*. Other issues were much less common (see table below).

Production Challenge	**%**
Climate change and unpredictable weather patterns	66
Insufficient access to quality seeds and inputs	56
Poor irrigation and infrastructure	56
Lack of technical support	4
Market linkage for member farmers	2
Training/demo needed for indigenous seed cultivation	2
Processing machine (e.g. spice grinding) issues	2
Labour/workforce shortages causing delays ("working delay")	2
Market linkage issues for fishery products	2
Land availability/tenure issues	2
Delayed fertilizer delivery	2

The overwhelming majority of FPOs struggle with climatic variability and basic agri-input access. Limited irrigation infrastructure exacerbates this. These findings suggest a critical need for interventions in climate-resilient farming, better seed distribution, and irrigation support. The few unique responses (e.g. fishery market linkage, equipment issues) indicate niche concerns affecting individual FPOs.

Processing-Stage Challenges

The most frequent processing problems were high costs, inadequate facilities, and under-utilized capacity. In total, 58% of the FPOs cited *high processing costs*, 54% cited *lack of adequate processing facilities*, and 44% cited *low capacity utilization of processing units*.

Processing Challenge	**%**
High processing costs	58
Lack of adequate processing facilities	54
Low-capacity utilization of processing units	44

Many FPOs lack economies of scale or equipment to process raw produce affordably. Funding agencies should note that investment in shared processing units, subsidies for equipment, or capacity-building (e.g. pooling member produce) could help reduce costs and improve utilization.

Marketing-Stage Challenges

Lack of marketing expertise, poor logistics, and low product awareness emerged as the top marketing hurdles. Specifically, 72% FPOs mentioned *lack of marketing expertise*, 66% noted

poor transportation and logistics, and 48% pointed to *low awareness of their products*. These issues far outnumbered any other complaints.

Marketing Challenge	%
Lack of marketing expertise	72
Poor transportation and logistics	66
Low awareness of products in the market	48

Marketing capacity is a critical bottleneck. Most FPOs need training in marketing skills and better transport logistics. Enhancing market linkages and branding (e.g. through packaging, described later) would address the awareness gap. These findings underscore that even productive FPOs struggle to reach consumers effectively without external support or partnerships.

Distribution-Stage Challenges

At the distribution level, inefficient logistics, high costs, and poor road infrastructure were primary issues. 58% of FPOs reported *inefficient transportation/logistics*, 56% saw *high distribution costs* as a barrier, and 46% pointed to *poor road infrastructure* in Assam's rural areas.

Distribution Challenge	% (of 50)
Inefficient logistics and transportation	58%
High distribution costs	56%
Poor road infrastructure	46%

Distribution challenges mirror the marketing logistics issues, confirming that physical infrastructure and transport services are weak links. Improving road networks, cold chain, and transport partnerships could significantly reduce these costs and delays for FPOs.

Value Addition Strategies

FPOs employ several value-addition techniques to enhance product value. The most common strategies were **processing into higher-value goods**, **consumer-friendly packaging**, and **quality control**. Specifically, 68% of the FPOs reported *processing raw products into higher-value items*, 66% used *consumer-friendly packaging*, and 56% implemented *quality control measures*. The table below summarizes these:

Value Addition Strategy	%
Processing raw produce into higher-value products	68%
Packaging products in consumer-friendly forms	66%
Implementing quality control measures	56%

A significant majority of FPOs are actively enhancing product value. These practices – especially processing (e.g. creating grains, flours, pickles) and packaging – can improve marketability. Funding agencies might build on these existing efforts by supporting processing equipment, packaging design training, and certification programs. Quality control (sanitary measures, grading) is also widespread, which is a positive best practice to maintain.

Supply Chain Bottlenecks – Primary Data

The most cited supply-chain bottlenecks were **raw material inconsistency**, **transportation delays**, and **coordination gaps**. 60% of the FPOs said *inconsistent supply of raw materials* (e.g.

seasonal shortages or irregular procurement) hampers their chain. 56% noted *delays in transportation/logistics* (overlap with distribution issues). 42% mentioned *lack of coordination among stakeholders* (farmers, processors, buyers).

Supply Chain Bottleneck	**%**
Inconsistent supply of raw materials	60%
Delays in transportation and logistics	56%
Lack of coordination among stakeholders	42%

These bottlenecks reflect earlier challenges: erratic input supply (inputs & produce) and logistics slowdowns. Notably, many FPOs cited coordination issues, suggesting the need for better supply chain integration and planning. Interventions like advance contracting with buyers, collective procurement of inputs, and improved information sharing could alleviate these bottlenecks.

Our Secondary research highlights several systemic and institutional barriers that hinder the growth of FPOs in Assam:

1. **Production & Land Constraints**: Most member farmers operate on fragmented land holdings (<1 hectare), limiting scale and efficiency. Poor access to certified seeds, fertilizers, and mechanization further reduces productivity.
2. **Climate Vulnerability**: Agriculture in Assam is prone to frequent floods, soil erosion, and droughts in certain zones, leading to crop losses and distress sales. Crop insurance coverage remains limited.
3. **Infrastructure Deficits**: Critical gaps exist in post-harvest infrastructure such as cold storage and warehouses. Unreliable rural roads, electricity supply, and lack of mechanization slow down transport and processing.
4. **Market & Pricing Barriers**: Farmers often lack access to real-time market information and depend on middlemen. Price volatility is common due to weak market infrastructure and limited MSP enforcement in remote areas.
5. **Financial & Technical Limitations**: Newer FPOs struggle to secure credit due to lack of collateral and financial track records. Members often lack capacity in business planning and technical know-how, while extension services are insufficient.
6. **Policy & Regulatory Challenges**: Regulatory complexity, such as multiple licenses and market fees, adds costs. Though schemes like ODOP exist, their implementation is uneven and not always supported by enabling infrastructure.

These bottlenecks – from field to fork – constrain the FPO ecosystem. Studies and reports emphasize that without addressing storage/processing shortfalls and market linkages, farmers remain "forced to sell produce at lower prices due to the lack of proper storage".

Stakeholder Collaboration Practices

Most FPOs actively collaborate with buyers and processors to improve market access and pricing. The predominant practice is partnering with buyers for consistent demand 76% of the FPOs. 46% collaborate with processors/retailers to get better pricing. Only 14% reported working with transporters to improve logistics. The breakdown is:

Collaboration Practice	**%**

Partnering with buyers to ensure consistent demand	76%
Collaborating with processors/retailers for better pricing	46%
Working with transporters to improve logistics	14%

The fact that over three-quarters of FPOs engage buyers directly is a strong best practice, likely helping stabilize sales. Nearly half also work with processors for pricing, which can improve returns. However, relatively few reported proactive logistic partnerships, highlighting another gap. Strengthening multi-stakeholder linkages (e.g. with transport or government bodies) could further smooth operations.

Recommendations

To strengthen Assam's FPO value chains, a multi-pronged strategy is needed. Key recommendations include:

- **Strengthen Production Support:** Improve access to quality inputs and technology. Distribute certified seeds and bio-fertilizers through FPO networks, and subsidize key inputs in FPO clusters. Expand irrigation (canals, check dams, drip kits) in flood-prone and rain-fed areas. Offer subsidies or rentals for farm machinery (tractors, harvesters, graders) to FPOs, and promote mechanization services. Enhance extension outreach: involve KVKs and NGOs to train FPO members in best practices (IPM, organic methods, climate-resilient varieties). Encourage producer cooperatives and land pooling to achieve scale.
- **Invest in Processing & Storage Infrastructure:** Provide financial support (grants/loans) for **Common Facility Centres** tailored to ODOP crops – e.g. rice mills in Sivasagar, oil presses in Darrang, spice processing in Karbi Anglong. Scale up cold chains: subsidize cold-storage units (perhaps solar-powered) in key production hubs, and support refrigerated transport. Fast-track planned food parks and processing clusters under central/state schemes. Ensure rural feeder roads and reliable power supply to these units. As experts note, building cold storage and processing capacity is crucial to reduce post-harvest losses.
- **Enhance Market Linkages & Branding:** Fully integrate Assam's markets into e-NAM and train FPOs to use it. Encourage participation in state/national agricultural fairs and e-marketplaces. Link FPOs with NERAMAC, APEDA and large buyers: for example, aggregate black rice or Assam tea under a single brand for export. Organize regular FPO-run "horti-fairs" and buyer-seller meets in Guwahati. Leverage Assam's GI products: help FPOs register brands (e.g. "Karbi Anglong Ginger") and market these premium items nationally/internationally. Provide assistance for FPOs to obtain FSSAI, Organic, or Agmark certification to boost consumer trust.
- **Build Capacity & Finance:** Facilitate easier credit: classify FPO loans under priority sector, offer interest subvention, and enable Credit Guarantee cover. Use schemes (NABARD's Producer Organization fund, PMFME) to co-finance FPO storage and processing projects. Simplify regulations: implement single-window clearance for FPO enterprises, and exempt small-scale food units from onerous licensing. Strengthen FPO governance via training in bookkeeping, MIS and e-platforms. Encourage formation of FPO federations at the state level to share resources (market intelligence, testing labs).
- **Policy & Institutional Support:** Align state policies to support FPO clusters – e.g., the Assam Industrial & Investment Policy (2019) offers power subsidies that FPO-run agro-

units can tap. Encourage convergence between NHM, ATMA, RKVY, and NRLM so FPOs get coordinated support. Promote producer–consumer linkages: for instance, connect FPOs with institutional buyers (schools, hospitals) or defense canteens. Involve technical institutes (AAU, ICAR) in R&D for region-specific value-addition (like rice beers or bamboo shoots). Finally, monitor FPO outcomes and share best practices (e.g. Jirsong APC's model) across districts for replication.

Implementing these interventions will require collaboration between government (agriculture, commerce, cooperatives), funding bodies (NABARD, NCDC, NHB/MPEDA), NGOs/academia, and the FPOs themselves. Priority should be given to critical gaps identified by experts – notably storage/processing and marketing infrastructure – to ensure Assam's FPOs can turn local farm produce into profitable, branded products.

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16. Composite Score Synthesis and Detailed Top-Twenty Profiles

This section brings together each Farmer Producer Company's performance in Capacity Building, Governance, Financial Health, Market Linkages and SDG alignment into a single composite score as per the data in CRISIL Framework. The composite score reflects normalized pillar results weighted by organizational maturity, augmented by any bonus for full sustainability alignment and adjusted for documented risks or declining trends. What follows is an analysis of how all 56 FPCs distribute across score intervals, an examination of the role of organizational age, and a richly detailed profile of the twenty highest-scoring companies.

Table: Composite Score Distribution

Score Interval	Number of FPCs	Interpretation
Scores between 65 and 69	3	Bihpuria Pumpkin FPC, Khowang Women Poultry Producer Company Ltd & Birjhora Farmer Producer Company Limited have demonstrated near-perfect performance in governance, markets, finance and capacity building
Scores between 60 and 64	4	Suntali Maize Producer Company Limited, Machkhowa Agro Fed Producer Company Limited, Tulungia Shine Farmer Producer Company & Manikpur Joha Rice Producer Company Limited are consistently strong across nearly all dimensions
Scores between 55 and 59	14	These14 FPCs exceed the average performance but have a few targeted areas for enhancement
Scores between 50 and 54	9	These nine show solid foundations and stand on the threshold of top-tier institutional strength
Scores below 50	26	The FPCs require focused support in one or more pillars to elevate overall performance

Below is the bar chart illustrating how many FPCs fall into each composite score interval.

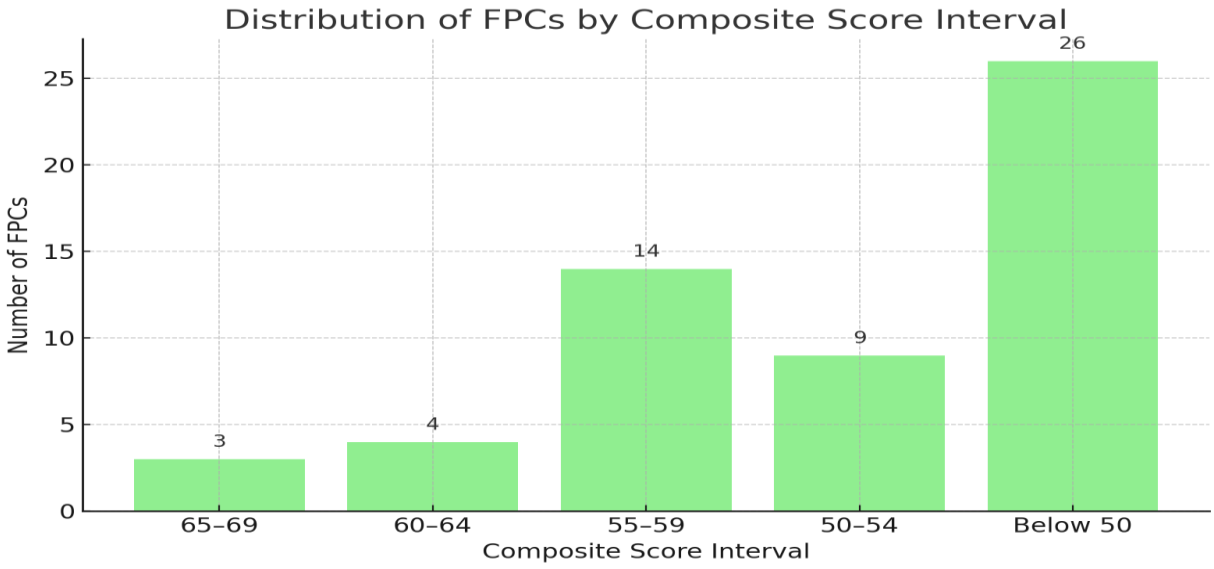

Figure: Distribution of FPCs by Composite Score Interval

Most FPCs cluster in below 50 interval, indicating that while foundational systems are in place, additional capacity building in leadership, financial management, or market development could propel many into the highest performance band.

Table: Performance by Maturity Stage

Performance Tier	Score Interval	Total FPCs	Matured Stage	Developing Stage	Nascent Stage
Top Tier	Scores 60 and above	7	6	1	0
Mid Tier	Scores from 50 to 59	23	16	6	1
Entry Tier	Scores from 35 to 49	25	15	10	0
At-Risk Tier	Scores below 35	1	1	0	0

The stacked bar chart below shows the total number of FPCs in each performance tier, decomposed by their maturity stages.

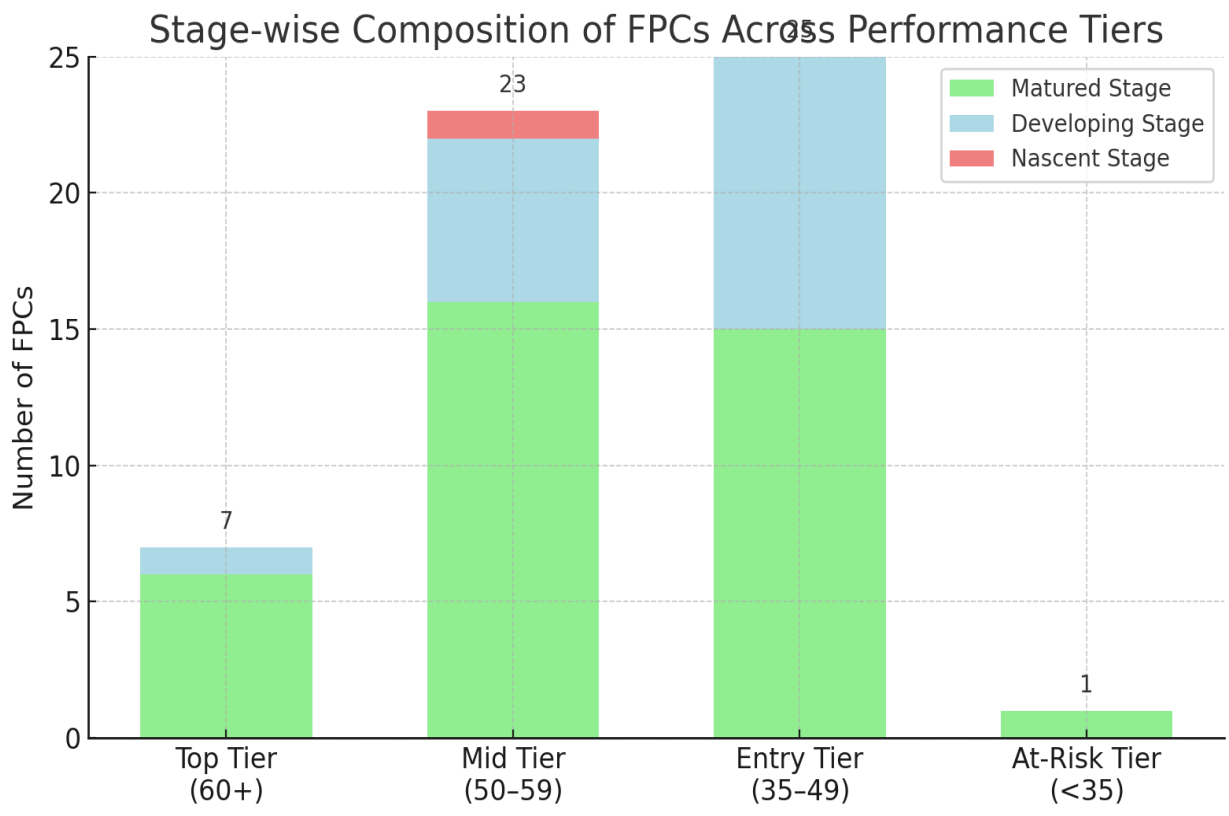

Figure 5: Stage-wise Composition of FPCs Across Performance Tiers

Companies in the Matured stage occupy most of the top two tiers, reflecting how longer operational history amplifies governance, financial stability and market linkages. Nevertheless, one Developing-stage FPC has also achieved Top-Tier status, showing that targeted focus can overcome the head start of older organizations.

Table: Profiles of the Top Twenty FPCs

Rank	FPC Name	Composite Score	Maturity Stage	Distinguishing Strengths
1	Bihpuria Pumpkin Producer Co.	69	Matured	Excellent market integration with strong supplier linkages, digital infrastructure, timely payments, and improved credit standing
2	Khowang Women Poultry Producer Co. Ltd	67	Matured	Exceptional board quality and women-led governance, full crop-level input services, and strong digital adoption among members
3	Birjhora Farmer Producer Company Ltd	66	Matured	Balanced performance across all indicators, with a strong finance score, zero payment delays, and seamless member communications
4	Manikpur Joha Rice Producer Company Ltd	64	Matured	Well-established governance practices, sound capacity base, and functional efficiency despite moderate market exposure
5	Machkhowa Agro Fed Producer Company Ltd	62	Matured	Strong compliance record, zero delays in payments and deliveries, and one of the top-performing finance score
6	Tulungia Shine Farmer Producer Company	62	Matured	High financial performance, no buyer/supplier delays, consistent governance meetings, and efficient capital use
7	Suntali Maize Producer Company Ltd	60	Developing	Good financial discipline, solid governance, and diversified revenue generation across input-output chains
8	Naba Chandrapur Fed Agro Producer Company Ltd	59	Developing	High financial and market scores, early-stage capacity already at par with mature FPCs. No payment/delivery delays
9	Matra Kara Krishi Farmers Producer Company Ltd	59	Nascent	Outstanding capacity metrics in early stage, strong digital records and outreach, excellent market tie-ups
10	Bordoloni Agro Fed Producer Company Ltd	59	Matured	Strong financial controls and good governance practices with regular board meetings and zero supplier delays
11	LEKOPE Majuli Women Farmer Producer Company Ltd	59	Matured	Effective women-centric governance, steady market and financial performance, fully digitized member records

12	Mohabahu Farmer Producer Company	58		Matured	Excellent market linkage strength, fully digital member records, and consistent financial management
13	Abadari FPC	58		Matured	High profitability and working capital efficiency, robust inventory and debtors' control
14	Dhemaji Agro Fed Producer Company Ltd	57	Matured	High buyer satisfaction, good governance compliance, and sound financial practices	
15	Mara Chaulkhowa FPO	57	Developing	Strong across governance and finance, active board, and regular updates in record-keeping	
16	Jugami FPC	56	Developing	Strong financial and governance metrics, high board participation, and consistent growth trajectory	
17	Majuli Agro Organic Producer Company Ltd	56	Matured	Financial sustainability with low leverage, healthy inventory turnover, and average governance structure	
18	Kham Siphung Serja Farmer Producer Company Ltd	56	Matured	Strong financial health and board-level governance with excellent inventory and profit margin control	
19	Dolongghat Krishi Producer Company Ltd	55	Developing	Stable performance with reliable liquidity ratios, regular statutory filings, and improving governance	
20	Ghilamara Bamboo Producer Company Ltd	55	Matured	Moderate performance across all domains with particular strength in governance and timely statutory compliance	

Below is the horizontal bar chart depicting each FPC's composite score, ordered by rank and color-coded by maturity stage.

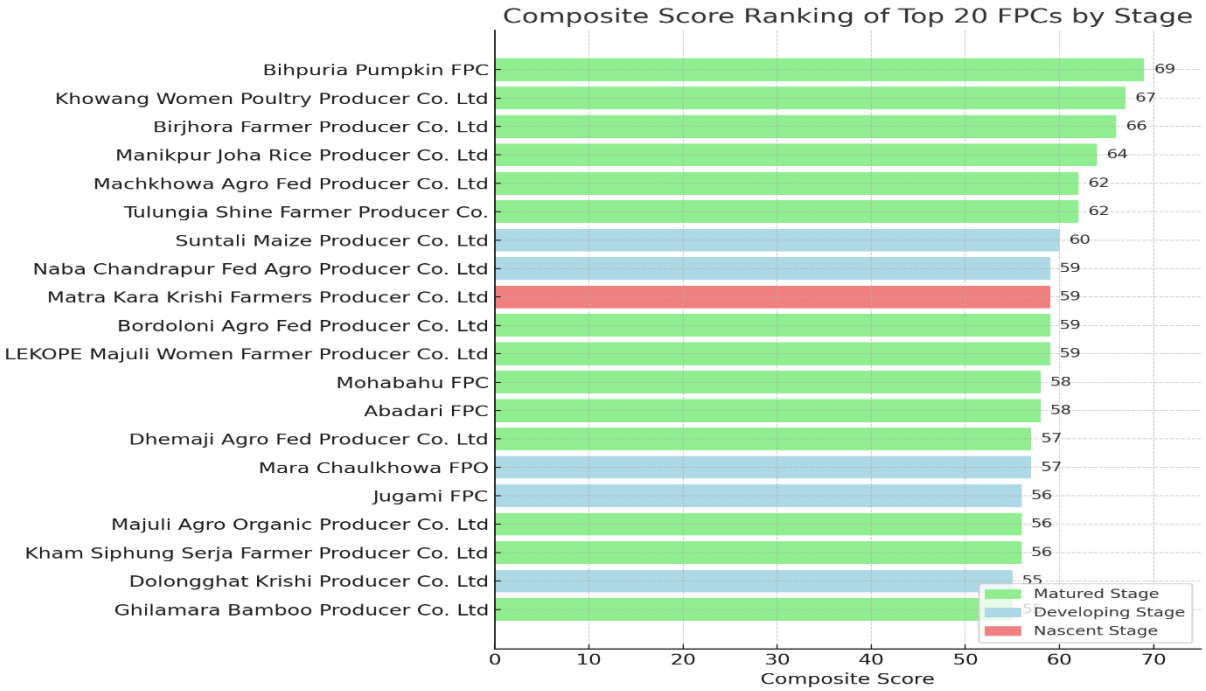

Figure: Composite Score Ranking of Top 20 FPCs by Maturity Stage

By examining these composite results and the stories behind the top-ranked companies, stakeholders can identify best practices to replicate, as well as specific areas like board governance, financial inclusion, market diversification or sustainability integration that warrant additional focus for the broader FPC network.

17. Cluster-Based Business Organizations (CBBOs) and it's Support to FPCs

This section presents a detailed analysis of the responses from three Cluster-Based Business Organizations (CBBOs) regarding their support to Farmer Producer Companies (FPCs). The objective is to understand the nature of support provided, challenges faced, effectiveness of current systems, and to identify areas where improvements can be made. The inputs from the four CBBOs offer a detailed and insightful understanding of the present scenario, revealing both commendable progress and persisting challenges in the support provided to FPCs.

16.1. Role of CBBOs in fostering FPOs

Cluster-Based Business Organizations (CBBOs) play a pivotal role in the formation, development, and sustainability of Farmer Producer Organizations (FPOs), particularly in the agricultural, horticultural, and livestock sectors. Their involvement begins at the grassroots level, where they mobilize small and marginal farmers into cohesive groups. These groups are then formalized as FPOs, typically registered as Producer Companies, following government guidelines. CBBOs ensure that FPOs meet eligibility criteria such as minimum membership strength and statutory compliance.

A critical part of the CBBO mandate is capacity building. CBBOs conduct intensive training and orientation programs for both farmer members and FPO leadership. These capacity-building efforts cover governance, financial literacy, market intelligence, and use of digital and agricultural technologies. Institutions like **NERAMAC** and **Assam Agricultural University**, along with grassroots organizations such as Diya Foundation, have been instrumental in conducting workshops that strengthen the institutional and managerial skills of FPOs.

Another important function of CBBOs is to assist FPOs in preparing comprehensive Business Development Plans (BDPs). These plans are tailored to the local context, focusing on strengthening specific agricultural value chains such as ginger, turmeric, fishery, piggery, and dairy. In doing so, CBBOs help identify market opportunities and support the aggregation and processing of produce. This approach ensures that FPOs can operate competitively and sustainably within their respective sectors.

In recent years, CBBOs in Assam have also integrated Decentralized Renewable Energy (DRE) solutions into agricultural operations to improve efficiency and sustainability. Collaborating with organizations like SELCO Foundation and NABARD, CBBOs have facilitated the use of solar-powered technologies such as irrigation pumps, cold storage units, and dryers. For instance, **Kalong Kapili Agro Producer Company** in Nagaon has adopted DRE technologies to enhance fishery value chains, while **Diya Foundation** has promoted solar-based solutions in horticulture and livestock management in Kamrup district.

Market linkage is another area where CBBOs offer essential support. By aggregating produce, establishing buyer-seller networks, and facilitating partnerships with processors and e-commerce platforms, CBBOs help FPOs secure better prices and reach wider markets. They also assist with certifications and quality control to improve market competitiveness. In addition to market access, CBBOs play a crucial role in financial inclusion by helping FPOs access equity grants, credit from financial institutions, and other forms of government assistance.

Finally, CBBOs are tasked with ensuring the long-term sustainability of FPOs. This involves establishing governance systems, setting up management information systems, and training FPOs to function independently once handholding support concludes. The ultimate goal is to

transform FPOs into self-reliant, commercially viable entities that can support farmer livelihoods while contributing to rural economic development.

16.2. Prominent CBBOs in Assam

- **Associated Tea & Agro Management Services Pvt. Ltd. (ATMS)** – Guwahati-based advisory firm (active statewide across Assam). ATMS has promoted many FPOs (e.g. for banana in Morigaon, ginger in Karbi Anglong, oranges in Kamrup, chilli in Golaghat, flowers in Kamrup, honey in Jorhat). ATMS specializes in FPO/FPC promotion, post-harvest management and market linkage for small growers and its focus areas are agriculture and allied (horticulture – fruit/vegetables/flowers; dairy/fishery; livestock – e.g. piggery).
- **Sesta Development Services (SDS)** – Guwahati based trust operates across Assam. Its focused sectors are agriculture, animal husbandry, dairying and fisheries, and rural livelihood development. SDS works on promoting FPOs, training farmer members, and incubating agri-businesses (poultry, piggery, fishery, nutrition gardens, etc.) for smallholders.
- **Grant Thornton Bharat LLP** – New Delhi-based consulting firm (empaneled CBBO for Assam). Operates through SFAC programmes to organize FPCs/FPOs across Assam. It focuses on broad agri-business advisory (supported by government grants) to form and handhold FPOs in diverse areas of agriculture, horticulture and livestock.
- **Vitro Biotechnologies Ltd.** – Delhi (empaneled CBBO for Assam). Focused sectors are agricultural biotechnology (e.g. high-quality planting material, tissue culture) to boost farm productivity.
- **North East Organised Floritech Pvt. Ltd. (NEO)** – New Delhi (empaneled CBBO for Assam). Focused sectors are horticulture/floriculture and agri-processing (NEO has backed FPOs for seed processing and plantation crops).
- **Assam Agricultural University (AAU),** headquartered in Jorhat, plays a pivotal role in promoting Farmer Producer Organizations (FPOs) across Assam through its Directorate of Extension Education and Krishi Vigyan Kendras (KVKs). Acting as a Cluster-Based Business Organization (CBBO), AAU supports FPO formation, provides technical mentorship, fosters market linkages, and facilitates capacity building under schemes like APART and the Central Sector Scheme. Collaborations with NABARD and targeted interventions in tribal and aspirational districts further amplify its impact on enhancing sustainable livelihoods for farmers.
- **The Assam State Rural Livelihoods Mission (ASRLM)** actively promotes Farmer Producer Organizations (FPOs) in Assam, having facilitated the formation of 59 FPCs in 2023–24 under the Central Sector Scheme. It fosters producer groups across farm and non-farm sectors, focusing on value addition, market linkages, and capacity building through collaborations with institutions like SIPRD, TRIF, and NAFPO.
- **ACCESS Development Services** promotes FPOs in Assam through its MANDI program, which focuses on building FPO capacities, enhancing market linkages, and improving financial literacy. By onboarding 83 FPOs and targeting 50,000 farmers, the initiative provides structured technical assistance, fosters digital adoption, and connects FPOs with key stakeholders to strengthen their sustainability and market presence.

16.3. Challenges faced by CBBOs in supporting FPOs in Assam

In India's national FPO scheme (launched in 2020 with a ₹6,865 crore budget) FPO formation follows a cluster-based approach. Under this scheme, state-appointed Cluster-Based Business Organizations (CBBOs) are charged with mobilizing farmers into Producer Organizations,

conducting surveys and group formation, building capacity, and linking FPOs to inputs and markets. Four CBBOs – **Associated Tea & Agro Management Systems Pvt Ltd (ATAMS), Previlege Advisory Services, Indian Institute of Entrepreneurship (IIE),** and **Margdarshak Development Projects Consulting Pvt Ltd** – have been selected to get responses of their activities and challenges while promoting FPOs. All four reported facing substantial hurdles. Drawing on their survey responses and secondary sources, the challenges can be grouped into **structural**, **financial/market**, **technical/capacity**, and **policy/institutional** categories. Common constraints include farm fragmentation, infrastructure deficits, limited access to finance and markets, skill gaps, and bureaucratic delays. Each CBBO also cited unique difficulties tied to their sector focus and operating areas.

16.4. Structural and Social Constraints

Assam's farming communities face highly fragmented landholding patterns and challenging geography. In the hill-tradition of Northeast India, the average farmer's holding is around 1 hectare, making economies of scale hard to achieve. Fragmented plots and subsistence farming mean that aggregating sufficient volume for an FPO is difficult. Poor rural infrastructure exacerbates these issues: many villages lack all-weather roads, electricity or irrigation, and Assam's frequent floods further disrupt connectivity and yields. One recent analysis notes that Assam's rugged terrain and inadequate transport force farmers to rely on intermediaries, reducing earnings and discouraging collective marketing. The **absence of essential post-harvest infrastructure (dryers, cold storage, processing)** also limits value-addition in Assam. Social factors play a role too: traditional practices (e.g. free-grazing livestock damaging crops) and risk-averse attitudes hinder farmers' willingness to pool resources.

These structural constraints were echoed by all four CBBOs. For example, *Associated Tea & Agro* reported that narrow mountain roads and scattered tea smallholdings made aggregation costly. *Previlege Advisory Services* noted that language and cultural differences (tribal vs non-tribal communities) slowed farmer mobilization in some districts. *IIE* pointed to monsoon floods cutting off rural roads and isolating communities. *Margdarshak* highlighted severe gaps in rural logistics - for instance, the lack of cold chains for perishable produce which made it hard for their FPOs to collect harvests without loss.

16.5. Financial and Market Constraints

Finance and market access present another shared challenge. Across Assam, smallholder farmers have scant capital and weak credit histories, so FPOs struggle to meet the equity or collateral requirements of banks. Many of the new FPOs simply cannot raise enough paid-up capital (one study found some NE FPOs had only ₹10,000 paid-up capital against a ₹20 lakh authorized ceiling). Without adequate funds, FPOs cannot invest in inputs, infrastructure or paid staff. On the demand side, CBBOs report that limited storage and transport compel farmers to sell produce through local middlemen at lower prices, rather than accessing broader markets. The WorldFish survey of Assam's fish-producing FPOs exemplifies this: fish FPOs "face procurement issues" and "limited access to finance and infrastructure," and struggle to establish a brand or processing facilities.

In their responses, the CBBOs identified these constraints as well. *Previlege Advisory* and *Margdarshak* stressed that delays or insufficiency in government grant disbursements leave FPOs cash-strapped during inception. Both reported that farmers' poverty meant initial member contributions were very low, making loan collateralization virtually impossible. *IIE* specifically mentioned frequent loan rejections by banks due to FPOs' weak balance sheets. *ATAMS* noted that tea smallholders were often reluctant to part with scarce savings, so building

the minimum equity capital (share subscription) was hard. These organization-specific reports align with general findings that Indian FPOs "face difficulties in accessing credit and financial resources" and suffer from poor market linkages that limit their income potential.

16.6. Technical and Capacity Constraints

A third category of challenge is technical and managerial capacity. FPO members (mostly small farmers) typically lack experience in running corporate-style entities. This skill gap forces CBBOs to invest heavily in training and hand-holding. As noted in the literature, FPOs "often lack the necessary managerial and technical skills required for effective governance," leading to inefficiencies. In Assam's context, language barriers and limited formal education amplify this: *IIE* reported that many farmers could not understand standard Hindi or English training materials, requiring Assamese translation. All CBBOs complained that farmer-directors often were unaware of basic governance requirements, so workshops on accounting, group meetings and roles of a board were needed.

Documentation and compliance have also been problem areas. The Advancing North-East report highlights that many NE FPO boards are "weak in terms of documentation", for example, it found widespread lack of PAN cards and KYC for farmer-directors. CBBOs in Assam echoed this: they have repeatedly helped FPOs obtain farmers' identity documents so that companies can open bank accounts. Margdarshak and Previlege both noted that low literacy makes record-keeping (minutes, account books) a serious challenge, requiring CBBO staff to draft and explain records on farmers' behalf. Moreover, poor infrastructure (e.g. unreliable electricity and internet) in Assam's villages means that digital tools and tele-training are difficult. An analysis of Assam notes "unreliable electricity in remote areas" that hinders productivity. In practice, CBBOs often conduct face-to-face training in the field instead of online modules.

Thus, all CBBOs highlighted capacity deficits: board leadership, bookkeeping, and compliance skills must be built from scratch. For instance, *Margdarshak* emphasized that many FPO members had never operated a bank account or formal ledger before. *Previlege* found it was essential to develop financial literacy (even basic balance sheets) among directors. *ATAMS* had to simplify training content significantly. These needs underscore the literature consensus that continuous "training and capacity-building programs are essential" for FPO success.

16.7. Policy and Institutional Constraints

Finally, CBBOs grapple with policy and institutional barriers. By their nature, FPO schemes involve multiple agencies (central agriculture departments, state governments, banks, and funding bodies like NABARD/NCDC/SFAC), which can create coordination issues. The CJAST review observes that FPOs require "supportive policies," and that "inconsistent policy support and bureaucratic hurdles can impede their growth and impact". In Assam, CBBOs reported that changes or ambiguities in state guidelines often caused delays. For example, one CBBO noted confusion over whether new FPOs should register under the Companies Act or as cooperatives (each path having different paperwork). *Margdarshak* pointed out that overlapping schemes (e.g. organic farming subsidies, horticulture development programs) sometimes imposed extra requirements on the same farmers without clear coordination. *IIE* highlighted that state government meetings to release grants were infrequent, so FPOs waited months for promised funds. *Previlege* and *ATAMS* both observed that even after FPO registration, some departments in Assam were unfamiliar with the 10K FPO scheme, causing procedural back-and-forth.

These examples reflect the general issue that bureaucratic complexity hinders FPO momentum. All four CBBOs cited slow approval of business plans and late disbursal of grants as major obstacles. In short, while central policy envisions support, the on-ground institutional bottlenecks (procurement rules, multiple approval layers, shifting agency roles) slow implementation. Addressing these requires policy alignment and clarity from state agencies – a common refrain among the CBBOs.

16.8. Organization-specific Constraints

In addition to the above shared themes, each CBBO faces some unique challenges linked to its context:

- **Associated Tea & Agro Management Systems Pvt Ltd (ATAMS):** This CBBO primarily works with tea and horticulture clusters. It reported that Assam's hilly tea gardens pose a special challenge: farm plots are very dispersed and often lack access roads. Mobilizing tea smallholders (many of whom are less literate) required extra effort. ATAMS also noted that many growers use traditional hand-processing, so introducing value-addition required bridging a large technology gap.
- **Previlege Advisory Services:** As a financial consulting firm, Previlege highlighted credit and equity issues. It found that Assam's rural banks are reluctant to lend to new FPOs, and farmers often do not trust formal loans. Previlege spent much time arranging collateral-free credit lines. It also stressed the difficulty of uniting farmers with different crops and languages into a single cluster, an issue less prominent in more homogenous regions.
- **Indian Institute of Entrepreneurship (IIE):** A training and incubator institution, IIE focused on capacity challenges. It reported that many farmer-leaders needed intensive mentorship in entrepreneurship fundamentals. In Assam, IIE also found that cultural norms limited women's participation; some FPOs had few or no female directors, even though empowering women farmers was a goal of the scheme. Language was another barrier: IIE had to translate materials into Assamese and regional dialects.
- **Margdarshak Development Projects Consulting Pvt Ltd:** Margdarshak (an agribusiness consulting firm) emphasized market linkage constraints. Working across Assam, it noted severe gaps in cold storage and processing (e.g. for fruits, fish, vegetables) that its FPOs confronted. Margdarshak also cited challenges in coordinating with local authorities: for instance, district-level agricultural officers often had many priorities (e.g. MGNREGA, irrigation) and limited bandwidth to handhold new FPOs. This made Margdarshak rely on private networks to forge market connections for producers.

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18. Farmers Interest Groups and Services it Renders to FPCs

Farmer Interest Groups (FIGs) form the backbone of community-based agricultural support within Farmer Producer Companies (FPCs) in Assam. Acting as decentralized grassroots units, FIGs play a pivotal role in enhancing the capabilities of smallholder farmers by providing a range of services that strengthen productivity, foster market integration, and build financial resilience. This report, based on data collected from 40 FIGs across 30 FPCs, examines the breadth and depth of services provided, assesses their overall effectiveness, and highlights actionable improvements as identified by stakeholders.

The services delivered by FIGs span across several core areas aimed at improving both the production and market potential of smallholder agriculture. One of the most prevalent forms of support is **input supply facilitation**, with 34 out of the 40 surveyed FIGs (representing 85%) actively engaged in distributing key agricultural inputs. Through close linkages with their parent FPOs, these FIGs help ensure timely access to high-quality seeds, fertilizers, and other critical inputs. For example, Ankur FIG (under Suntali Maize FPC) and Surjoydoy FIG (under Anunad FPC) have developed efficient mechanisms to streamline input distribution, particularly benefiting paddy farmers.

Training and capacity building emerges as another significant area of FIG engagement. About 65% of FIGs (26 in total) conduct skill development initiatives that go beyond conventional agronomy to encompass modern farming techniques, financial literacy, and machinery usage. FIGs such as MILIJULI (operating under Bordoloni Agro Fed FPC) and Handohkhowa (linked with Basundhara Agro Tech) stand out for their commitment to regular workshops on sustainable agricultural practices, thereby equipping farmers with knowledge to adapt to evolving market and climatic conditions.

Market linkage support is provided by 18 FIGs (45%), focusing on connecting smallholders to larger buyers and leveraging collective bargaining to secure better prices. Success stories include DULUNG FIG (Machkhowa Agrofed) and Arne Chapori FIG (Sissiborgaon Agrofed), both of which facilitate bulk sales to institutional buyers, enabling farmers to capture greater value from their produce.

While somewhat less developed, **credit facilitation** is another emerging service area. Currently, 7 FIGs (18%) assist members in accessing loans, often working in tandem with their FPOs to bridge existing gaps in rural credit delivery. FIGs such as Guijan (Panitola Agro Fed) and Antai Sereb (Chakrasila Tea FPC) have made notable progress in helping members secure financing, though broader uptake remains a challenge.

17.1. Effectiveness of FIG Support

The effectiveness of FIG support varies significantly across the landscape, influenced by the extent and integration of services provided. Approximately 45% of FIGs (18 in total) are considered **very effective**, particularly those that offer a well-rounded suite of services, including input supply, training, and market linkages. For instance, members of SILAPATHAR FIG (under Madhunandan FPC) and Mathikhula FIG (under Dhemaji Agro Fed) report substantial improvements in both yields and incomes, crediting their FIGs' comprehensive support for these outcomes.

Conversely, 14 FIGs (35%) are rated as **moderately effective**, primarily because they concentrate on only one or two areas of support, most commonly input distribution. FIGs such

as Jaugafu (Jwlwi Agro) and Kanaklata (Shiralu FPC), while providing essential inputs, face limitations in expanding their impact due to resource constraints and limited service integration.

At the other end of the spectrum, 8 FIGs (20%) are categorized as **minimally effective**. These FIGs, including Dowamakha Cluster (Gramya Krikhok Mancha) and Bechimary Mili Juli, struggle with underdeveloped training programs and weak market linkages, resulting in low levels of farmer engagement and limited on-the-ground impact.

17.2. Key Improvement Suggestions

Farmers and FIG leaders alike have identified several priority areas for improvement to enhance the relevance and impact of FIG support. A significant proportion (30%) call for **enhanced capacity building**, recommending more advanced training modules in areas such as financial management, climate-resilient agriculture, and the use of modern technologies like solar-powered equipment. FPOs like Bordoloni Agro Fed have emphasized the need to strengthen the knowledge base of farmers to cope with emerging challenges.

Another 20% of FIGs advocate for **stronger governance practices**. Suggestions include instituting more regular FIG meetings, improving record-keeping systems, and fostering participatory decision-making processes to ensure that services remain farmer-driven. FIGs like Lekope Majuli Women FPC highlight the importance of inclusive and transparent management to build trust and accountability within the groups.

Infrastructure and input-related improvements are also high on the agenda. About 18% of FIGs seek greater access to subsidies for quality seeds, farming machinery, and transport solutions. FIGs such as those under Matia Krishak FPC note that better logistical and infrastructural support could significantly reduce production and post-harvest costs.

Lastly, improving **market and credit access** remains a key aspiration for 13% of FIGs. There is growing interest in deploying digital tools for real-time price discovery and creating stronger linkages between FPOs, banks, and end buyers. FIGs under Machkhowa Agrofed, for instance, propose leveraging technology to enhance market transparency and streamline credit facilitation.

17.3. Challenges and Opportunities

Despite encouraging outcomes in many FIGs, critical gaps remain that limit their overall impact. For example, while the majority of FIGs excel in input delivery and training, as many as 55% lack effective credit facilitation mechanisms, and about 35% continue to underperform in establishing robust market linkages. The fragmented nature of service delivery means that even well-performing FIGs often fall short of providing holistic support to their members.

Nonetheless, there are clear success factors that can guide future improvements. FIGs that benefit from **strong FPO backing** consistently demonstrate better outcomes in terms of resource mobilization and service delivery. A notable example is Dekagiri FIG under Chengnoi FPCL, where FPO leaders play active roles within the FIG, resulting in improved coordination and enhanced service provision.

19. Perspectives of Government Stakeholders

Understanding the perspectives of government stakeholders such as the Small Farmers Agribusiness Consortium (SFAC) and Krishi Vigyan Kendra (KVK) is essential while analyzing any study on Farmer Producer Organizations (FPOs). These institutions play a pivotal role in shaping the policy environment, delivering extension services, and enabling institutional linkages that directly impact the growth and sustainability of FPOs. Both SFAC and KVK Kamrup are playing crucial but distinct roles in the FPO ecosystem in Assam. SFAC, with its strategic monitoring and evaluation functions, ensures that the macro-level frameworks and policy implementations are aligned with FPO needs. On the other hand, KVK Kamrup is deeply embedded in the local agricultural landscape, offering ground-level support that directly enhances the capacities of FPO members.

Together, they represent the complementary ends of the FPO support spectrum - SFAC bringing in high-level policy advocacy and coordination, and KVK Kamrup delivering field-level interventions and technical empowerment. A more synchronized collaboration between these two institutions, supported by NABARD, state departments, and other stakeholders, could greatly enhance the sustainability, resilience, and effectiveness of Farmer Producer Organizations in Assam.

18.1. Small Farmers Agribusiness Consortium (SFAC)

(Respondent: Hari Kumar Boro, Consultant, Kamrup Metro, Assam)

SFAC has been actively involved in extension services for farmers and FPOs in Assam for more than four years. The organization's support primarily revolves around monitoring and evaluation, indicating that their role is largely strategic and oversight-based rather than direct, on-the-ground implementation. This approach is essential in ensuring that FPOs are functioning as per the objectives and that policy-level interventions are grounded in real-time feedback.

SFAC's engagement with FPOs is need-based, meaning it does not follow a fixed schedule but responds to evolving requirements of the organizations. The main mode of interaction and outreach is also centered around monitoring and evaluation mechanisms rather than field demonstrations or direct farmer interactions. This suggests that SFAC plays a facilitating and reviewing role, often behind the scenes, which is critical for the broader coordination and policy alignment necessary to strengthen the FPO ecosystem.

In terms of feedback mechanisms, SFAC has digital platforms in place that allow FPOs and farmers to communicate their experiences and concerns. These insights are then used to enhance service delivery and ensure that interventions are targeted and responsive. When it comes to support for renewable energy, SFAC acknowledges that incentives are available for farmers and FPOs. However, the adoption of such technologies is hampered by various challenges, including a lack of awareness, difficulty in accessing credit, and the absence of customized renewable solutions that cater to the specific needs of smallholder farmers.

SFAC strongly believes that improving awareness and easing access to financial resources through credit linkages are crucial to increasing the uptake of renewable energy among farming communities. Additionally, the organization emphasizes the need for stronger coordination mechanisms with FPOs to ensure that extension services are better aligned with ground-level needs. Field-level application of digital tools is also seen as an important strategy for enhancing the effectiveness of extension services.

To further strengthen FPO engagement, SFAC suggests a focus on mobilizing farmers, conducting awareness programs, and providing regular training. These interventions are seen as essential for building the capacity of FPOs to operate effectively in a rapidly evolving agricultural economy. Overall, SFAC's contribution lies in its ability to provide high-level guidance and monitoring, supporting FPOs through policy advocacy and strategic oversight rather than through direct service delivery.

18.2. Krishi Vigyan Kendra (KVK), Kamrup

(Respondent: Dr. Sonmoina Bhuyan, Sr. Scientist and Head, Kamrup, Assam)

Krishi Vigyan Kendra (KVK), Kamrup, has also been engaged in supporting farmers and FPOs for more than four years. Unlike SFAC, KVK Kamrup plays a more hands-on role in the development of FPOs, focusing on a wide range of direct services including capacity building, technical assistance, market linkage facilitation, financial literacy, and the promotion of sustainable agriculture practices. These services are crucial in enhancing the skills, knowledge, and economic resilience of farmers organized under FPOs.

The methods adopted by KVK Kamrup for outreach and engagement are primarily field-oriented. These include on-field demonstrations, training programs, field visits, and awareness campaigns. These methods help build trust and rapport with the farming community while also ensuring that the interventions are practically applicable and easily understandable. Like SFAC, the KVK also interacts with FPOs on an as-needed basis, but their grassroots involvement suggests more frequent and context-specific engagements.

In terms of feedback collection, KVK Kamrup relies on periodic meetings where farmers and FPO representatives share their experiences. This feedback is then used to refine and improve the services provided by the institution. The organization acknowledges the availability of government subsidies for renewable energy, particularly solar energy, and has been promoting their adoption among farming communities. However, challenges persist in terms of infrastructure, especially in remote service areas, which limits the full-scale deployment of decentralized renewable energy solutions.

To address these barriers, KVK Kamrup recommends the provision of consultancy services to guide farmers through the process of installing and using renewable energy technologies. Additionally, the organization underlines the importance of institutional mechanisms such as strengthening bank linkages, which can improve FPO access to financial services and working capital.

KVK Kamrup also stresses the need for improved digital literacy among farmers. They advocate for hands-on training sessions to help FPO members operate agricultural apps and other digital tools more effectively. This would not only streamline extension services but also empower farmers with real-time market, weather, and agronomic information.

One of the standout suggestions from KVK Kamrup is the organization of exposure visits for FPOs to successful models in other states. This would help local FPO leaders learn best practices, build networks, and gain the confidence to replicate successful strategies in their own areas. The institution sees this as a critical component of strengthening FPO engagement and enhancing the operational maturity of these farmer-led enterprises.

Aspect	SFAC	KVK Kamrup
Focus Area	Monitoring & Evaluation	Capacity Building, Training, Tech Support

Engagement Method	Digital, M&E	Field-based (demos, visits)
Feedback Use	Via digital platforms	Through meetings and communication
Renewable Energy Support	Incentives exist	Subsidies for solar energy
Major Renewable Barriers	Awareness, credit access	Service area/infrastructure gaps
Suggested Policy Enhancements	Credit linkages, awareness	On-ground consultancy
Institutional Strengthening Needs	Coordination with FPCs	Improved bank linkages
Additional Support Mechanisms	Mobilization, awareness, training	Exposure visits to model FPCs

20. Champion Farmers

FPOs typically apply a combination of these criteria: for example, some FPOs explicitly select farmers who both achieve high yields and embrace innovation, while others additionally require active community engagement. Champion farmers are those who perform well on their own farms (good yields, efficient inputs) and are willing to lead by example or share knowledge with peers.

Criteria for Identifying Champion Farmers	Number of FPOs (out of 56)	Description / Notes
High productivity and efficient resource management	46	Considered the primary indicator of a progressive farmer
Active involvement in community agricultural initiatives	44	Includes participation in field demonstrations, local meetings, etc.
Adoption of innovative technologies and sustainable practices	37	Examples: use of new seeds, drip irrigation, organic methods

Although the data does not spell out formal processes (e.g. nomination or voting), the uniformity of criteria suggests that most FPOs use internal assessments or leader observations. In other words, veteran or progressive farmers are likely flagged by management because they excel in production and innovation. One FPO noted they prioritize those "active in community-based initiatives," implying that peer visibility is a factor. Thus, the identification process is data-driven (yield records, innovation use) and socially confirmed (recognition in meetings) rather than random. Notably, FPO age (mature vs. emerging) does not clearly change this pattern: whether nascent or well-established, FPOs cited the same core attributes when naming champion farmers.

19.1. Core and Secondary Activities

Champion farmers across FPOs engage primarily in a few key cropping activities, often supplementing them with allied enterprises. The most common **core crop** is paddy (rice): 35 of the 56 FPOs champion farmers report paddy as a major crop of their progressive farmers. Other important crops include **vegetables** (Champion farmers of 6 FPOs), **mustard (oilseed)** (Champion farmers of 6 FPOs), **maize** (Champion farmers of 4 FPOs), **turmeric** (Champion farmers of 1 FPO), **tea** (Champion farmers of 1 FPO), and **sugarcane or potato** (1 each). Several FPOs mention multi-cropping: for instance, a few champion farmers cultivate combinations like maize-vegetables-paddy or sugarcane-potato-mustard. In essence, most champion farmers focus on staple or cash crops suited to their region, with rice being particularly dominant.

In addition to these primary crops, many champion farmers pursue **secondary or allied activities**. The most frequent allied activity is **livestock rearing**, cited by the champion farmers of 22 FPOs, followed by **fishery** (Champion farmers of 11 FPOs). Other reported activities include **own businesses or shops** (Champion famers of 9 FPOs) and non-farm work. A few FPOs noted that progressive farmers have no other occupations, focusing solely on farming. This pattern

suggests that champion farmers often diversify their income streams: for example, an FPO with paddy growers might also train them in aquaculture or animal husbandry.

It is evident that **paddy-based farming** is the hallmark of most champion farmers. Groups of FPOs in rice-growing regions also tend to diversify into fishery (e.g. integrated fish-farming in paddies) or livestock, taking advantage of water/land resources. In contrast, some FPOs centered on vegetables or mustard have champion farmers running small shops or businesses as side activities.

19.2. Annual Earnings of Champion Farmers

The data on average annual revenue (income) of progressive farmers is categorized rather than numeric, but clear patterns emerge. Of 56 FPOs reporting income, **41 FPOs** indicate their champion farmers earn between **₹1 lakh and ₹5 lakh per year**, while **15 FPOs** report champions earn **less than ₹1 lakh**. No FPO reported champions earning above ₹5 lakh, suggesting that most progressive farmers in these FPOs are small to medium-scale. This implies a **range** of annual income roughly from under ₹1 lakh up to ₹5 lakh (50,000 to 500,000 rupees).

A summary table of these categories is shown below:

Annual Income Range (₹)	No. of FPOs	Share of Reporting FPOs
Less than 1,00,000	15	27%
1,00,000 – 5,00,000	41	73%

Table: Distribution of reported average annual incomes of champion farmers across FPOs (n=56 FPOs).

From this, we see that roughly three-quarters of FPOs place their progressive farmers in the ₹1–5 lakh bracket. If we approximate midpoints (say, ₹0.75 lakh for the lower group and ₹3 lakh for the higher group), the **overall average income** of champion farmers might be estimated around ₹2.4 lakh per year. In practical terms, this means these farmers earn a modest livelihood – enough to be relatively well-off in rural areas, but not high by commercial standards.

It's important to note that these figures are *average* for the progressive farmers, meaning individual farmers might earn more or less. However, the table clearly indicates that none of the FPOs reported very high incomes (over ₹5 lakh), implying even the most successful farmers here face income caps. This could reflect market or land-size constraints. In narrative, we would stress that champion farmers mostly fall in the low five-figure to mid-five-figure rupee range annually, a crucial insight for donors and NGOs targeting agricultural livelihoods.

19.3. Peer Support and Mentoring

A defining role of champion farmers is to help their peers improve. The data show that **most progressive farmers actively support fellow members**. Specifically, about **88% of the FPOs** (49 out of 56) report that champion farmers **share knowledge and resources** in community meetings. Around **65%** (37 FPOs) note that these farmers **demonstrate new techniques on their own farms**, effectively encouraging others to adopt better practices. Nearly **45%** (25 FPOs) even mention that champion farmers help peers access financial support or government subsidies.

In practice, this means champion farmers frequently hold informal training or demonstration sessions. For example, an FPO might organize field days where a progressive farmer shows his new drip-irrigation setup, while another might invite others to learn about fish farming in paddy

fields. The combined evidence from the two related survey questions indicates a strong culture of peer learning: nearly **three-quarters of FPOs (42 of 56)** say champion farmers **provide training or mentoring**. Of these, 33 FPOs (58% of total) said the training is *regular* (ongoing workshops or farm visits), while 9 (16%) said it happens at least during annual events. Only about 14 FPOs reported that champion farmers do *not* train others (citing reasons like lack of time or expertise).

Thus, the narrative is clear: champion farmers are not isolated; they act as extension agents within their FPOs. By sharing best practices at meetings and by example in their own fields, they bridge the gap between information and action. For instance, one FPO noted champions "provide regular training on modern farming practices," while another said they mentor during annual gatherings. Overall, the data suggest that in a given FPO, if you are a champion farmer, you are *expected* to help uplift others through guidance, whether formally or informally.

19.4. Challenges Faced by Champion Farmers

Despite their leadership role, champion farmers face notable obstacles. Three challenges repeatedly emerge in the data:

- **Resource Constraints:** About **68% of FPOs** report that their progressive farmers lack adequate resources or financial support. In other words, even though these farmers are exemplary, they still struggle with credit, quality inputs, or infrastructure. For example, an FPO might note that champions have no trouble adopting new techniques, but find it hard to scale up due to limited capital.
- **Resistance from Peers:** Approximately **60% of FPOs** cite **resistance to change from traditional farmers** as a hurdle. This suggests that while champion farmers are willing to innovate, their neighbors or other members may be skeptical. A champion might demonstrate a new crop variety or technology, but traditional peers often hesitate to follow. Resistance could also stem from social dynamics; if new methods fail initially, skeptics can reinforce reluctance.
- **Time Constraints:** Similarly, around **58% of FPOs** mention that champions simply **have limited time** due to managing their own farms. This is especially true for those with very small holdings (<5 acres): if a champion is busy planting and caring for crops, they may find it hard to dedicate time for others. Some FPOs explicitly note that progressive farmers work hard on their farms and thus have less bandwidth to train peers regularly.

The champion farmers identified in this data set are generally **small-scale, innovative growers** – typically managing fewer than 10 acres (most have <5 acres or 5–10 acres of land) – who excel in their main crops (often rice or vegetables) and supplement their income with allied activities like livestock or fishery. FPOs select them based on **high productivity, innovation adoption, and community involvement**, and they in turn play key roles in peer education. On average, they earn modestly (mostly in the ₹1–5 lakh per year range), highlighting the need for ongoing support even for the best farmers. Despite their leadership, these champions frequently struggle with limited resources, time, and reluctant peers.

21. Appendix

Appendix A: Detailed Assessment Criteria

The following tables set out the full rubric used to score Farmer Producer Companies (FPCs) on Capacity Building (Management Profile), Governance, Financial Health, Market Linkages, and Technology. Scores are adjusted by Deflators (risk penalties) and Inflators (bonuses for sustainability and business-model breadth).

A. Capacity Building – Management Profile

Indicator	Rationale	Score	Parameters
Number of board of directors	ROC requires 5–15 directors	5	13 or more
		4	9–12
		3	6–8
		2	Exactly 5
		1	Fewer than 5
Quality of board	Years of collective board experience	5	All directors have ≥10 years
		4	≥70 % have ≥10 years
		3	≥40 % have ≥10 years
		2	≥10 % have ≥10 years
		1	None have ≥10 years
Qualification of the board	Educational attainment	5	≥2 graduates + 1 undergraduate
		4	1 graduate + 1 undergraduate
		3	1 undergraduate + 1 ≥10th grade
		2	≥1 director completed 10th standard
		1	All directors ≤8th standard
Committees formed	Functional committee structure	5	≥5 director-led committees
		4	4 active committees
		3	3 active committees
		2	2 active committees
		1	1 committee
Board diversity	Share of women directors	5	≥50 % women
		4	40 %–49 % women
		3	30 %–39 % women
		2	20 %–29 % women
		1	10 %–19 % women
CEO experience	Relevant leadership tenure	5	≥10 years
		4	5–9 years
		3	<5 years
		2	Unrelated field experience
		1	No prior experience
Second line of management	Depth of leadership bench	5	Well-defined second line capable of leadership
		4	CEO + accounts team + ≥1 divisional manager

		3	CEO + accounts team only
		2	CEO only
		1	No CEO
Number of members	Membership scale	5	>1 000
		4	800–1 000
		3	500–799
		2	300–499
		1	<300
Member participation	Annual meeting attendance	5	>80 %
		4	60 %–80 %
		3	40 %–60 %
		2	25 %–40 %
		1	<25 %
Role of promoting agency	Degree of FPC independence	5	Agency-promoted; FPC fully self-sufficient (paid fee basis)
		4	Agency remains actively involved
		3	Agency involved in finance and governance
		2	Agency nominally involved
		1	No promoting agency
Training of BODs / CEO / members	Annual training count	5	>6 sessions per year
		3	4–6 sessions
		1	≤3 sessions
Exposure visits (BOD / CEO / members)	Industry-benchmarking trips	5	3 visits per year
		3	2 visits
		1	1 visit

B. Governance

Indicator	Rationale	Score	Parameters
Functioning and minutes of meeting	Quality of decision documentation	5	Detailed decisions recorded and reported to MCA
		3	Detailed but not filed
		1	Sketchy
		0	Not maintained
Statutory filing – GST / Income Tax	Timeliness and completeness	5	Regular and on time
		4	Occasional delay
		3	Not applicable (new FPC)
		2	Frequent delays
		1	Data pending
Approvals and licenses	Coverage of required licenses	5	All licenses in place
		3	Some licences missing
		0	No licences
Credit record of the FPO	CIBIL credit rating	5	CMR 1, 2 or 3
		3	CMR 4, 5 or no history
		1	CMR 6 or 7
		0	CMR 8–10

Credit bureau record of directors	Aggregate director creditworthiness	5	All ≥700 or no history
		3	All ≥600
		1	Any <600
Book updates frequency	Regularity of accounting records	5	Monthly
		3	Quarterly
		1	Annually
Frequency of board meetings	Governance engagement	5	Monthly
		3	Bi-monthly
		1	Quarterly
Percentage of female members	Gender inclusiveness	5	≥50 %
		3	25 %–49.9 %
		1	<25 %

C. Financial Health and Key Ratios

Indicator	Rationale	Score	Parameters
Revenue Growth	Compound annual growth rate over three years	5	Positive CAGR
		3	Operating <3 years
		1	Negative CAGR
Net Profit	Year-on-year growth in net profit	5	Positive growth over last two years
		3	Uneven growth
		1	Negative growth
EBITDA margin	Operational profitability	5	≥3.5 %
		4	3.0 – 3.49 %
		3	2.5 – 2.99 %
		2	2.0 – 2.49 %
		1	1.5 – 1.99 %
		0	<1.5 %
Net profit margin	Overall profitability	5	≥1.5 %
		4	1.0 – 1.49 %
		3	0.75 – 0.99 %
		2	0.5 – 0.74 %
		1	0 – 0.49 %
		0	Loss
Return on capital employed (ROCE)	Efficiency of capital usage	5	≥8 %
		4	7 – 7.99 %
		3	6 – 6.99 %
		2	5 – 5.99 %
		1	4 – 4.99 %
		0	<4 %
Leverage (TOL/TNW)	Debt burden relative to net worth	5	<1.5 times
		4	1.5 – 2.5 times
		3	2.5 – 3.5 times
		2	3.5 – 4.5 times
		1	4.5 – 6 times
		0	>6 times

Interest coverage ratio	Ability to service interest	5	≥3 times
		4	2.5 – 2.99 times
		3	2.0 – 2.49 times
		2	1.5 – 1.99 times
		1	1.0 – 1.49 times
		0	<1 times
Current ratio	Liquidity position	5	≥2 times
		4	1.5 – 1.99 times
		3	1.0 – 1.49 times
		2	0.5 – 0.99 times
		1	<0.5 times
Inventory days	Working-capital efficiency	5	<30 days
		4	30 – 45 days
		3	45 – 60 days
		2	60 – 90 days
		1	90 – 120 days
		0	>120 days
Debtors days	Receivables collection	5	<10 days
		4	11 – 30 days
		3	30 – 45 days
		2	46 – 60 days
		1	61 – 75 days
		0	>75 days
Cash as % of revenue	Degree of formalization	5	<20 %
		4	20 – 30 %
		3	30 – 40 %
		2	40 – 50 %
		1	>50 %

D. Market Linkages

D.1 Input Linkages

Indicator	Score	Parameters
Seeds	5	Tie-up with input supplier
	1	No formal tie-up
Fertilizer	5	Tie-up with input supplier
	1	No formal tie-up
Pesticides	5	Tie-up with input supplier
	1	No formal tie-up
Non-regulated farm requirements	5	Tie-up with input supplier
	1	No formal tie-up
Core-crop coverage	5	Inputs provided for all core crops
	3	>50 % of core crops
	2	50 % of core crops
	1	<50 %

D.2 Output Linkages

Indicator	Score	Parameters
Bulk sales to institutional buyers	5	>30 % of sales

	3	10 – 30 %
	1	<10 %
Revenue diversification	5	Income from inputs, outputs and other services
	3	Two of three streams
	1	Single revenue stream
Supplier payment punctuality	5	No delays
	3	Occasional delays
	1	Frequent delays
Buyer delivery punctuality	5	No delays
	3	Occasional delays
	1	Frequent delays
Buyer satisfaction	5	Good
	3	Average
	1	Poor

D.3 Technology

Indicator	Score	Parameters
Digitization of member records	5	Digital land records, Aadhaar, bank details
	1	Hard-copy only
Digital inclusion	5	>80 % members use online/mobile banking
	3	30 – 80 % members
	1	<30 % members
Communication channels	5	Email, chat groups and online platforms
	3	Single digital channel
	1	None
Technologies adopted	5	Multiple digital tools
	3	Single tool
	1	None

E. Deflators (Risk Penalties)

Deflator	Penalty	Condition
Cheque bounce incidents	–3	1–5 bounces in past year
	–5	>5 bounces
Political affiliation	–3	Director or close relative holds elected office
Decline in credit score	–3	Latest credit bureau score lower than previous
Performance trend decline	–5	Year-on-year drop in aggregated pillar scores

F. Inflators (Bonus Points)

Inflator	Bonus	Condition
Full SDG alignment	+5	Meets all seven sustainability goals
Business-model breadth	+5	Operates in inputs, outputs, processing and has its own brand sales

Appendix B FPC Summary Sheet

The table below presents each Farmer Producer Company's final performance metrics, including maturity stage, composite score, grade, and key risk indicators.

FPC Name	Stage	Score	Grade	Credit Risk	Political Affiliation	Credit Bureau Rank	Family Relationship
Besimari FPC	Matured Stage	49	Limited Performer	Moderate Risk	No	Stable	No
Chengnoi FPC	Developing Stage	44	Limited Performer	No Risk	No	No previous score	No
Mohabahu FPC	Matured Stage	58	Moderate Performer	No Risk	No	Stable	No
Poohar FPC	Matured Stage	46	Limited Performer	No Risk	No	No previous score	No
Uttaran FPC	Developing Stage	47	Limited Performer	No Risk	No	Stable	No
Bihpuria Pumpkin FPC	Matured Stage	69	Satisfactory Performer	No Risk	No	Improved	No
Howly FPC	Matured Stage	44	Limited Performer	Moderate Risk	No	No previous score	No
Kalpani FPC	Developing Stage	52	Moderate Performer	Moderate Risk	No	No previous score	Yes
Madhunandan FPC	Matured Stage	49	Limited Performer	No Risk	No	Stable	No
Pratishruti FPC	Matured Stage	47	Limited Performer	No Risk	No	Stable	No
Jugami FPC	Developing Stage	56	Moderate Performer	No Risk	No	No previous score	No
Naba Chandrapur Fed Agro Producer Company Limited	Developing Stage	59	Moderate Performer	No Risk	No	No previous score	No
SHIRALU FPC	Matured Stage	47	Limited Performer	No Risk	No	No previous score	No
Anunad Agro Producer Company Limited	Developing Stage	45	Limited Performer	No Risk	No	No previous score	Yes
Chakrasila Tea & Agro Producer Company Limited	Developing Stage	43	Limited Performer	No Risk	No	No previous score	No
Abadari FPC	Matured Stage	58	Moderate Performer	No Risk	No	No previous score	No
Bijit Narayan Farmers Producer	Matured Stage	48	Limited Performer	No Risk	No	No previous score	No

Company Limited							
Matra Kara Krishi Farmers Producer Company Limited	Nascent Stage	59	Moderate Performer	No Risk	No	No previous score	No
Mur Bhal Krishi Producer Company Limited	Developing Stage	51	Limited Performer	No Risk	No	No previous score	No
Basundhara Agre Fed Producer Company Limited	Matured Stage	41	Limited Performer	No Risk	No	Stable	No
Panitola Agro Fed Farmer Producer Company Ltd	Matured Stage	50	Limited Performer	No Risk	No	Stable	No
Dolongghat Krishi Producer Company Limited	Developing Stage	55	Moderate Performer	No Risk	Yes	No previous score	No
Suntali Maize Producer Company Limited	Developing Stage	60	Moderate Performer	No Risk	No	No previous score	No
Sarukhetri Cooperative FPO Limited	Matured Stage	54	Moderate Performer	No Risk	Yes	No previous score	No
Khowang Women Poultry Producer Company Ltd	Matured Stage	67	Satisfactory Performer	No Risk	No	No previous score	No
Bordoloni Agro Fed Producer Company Ltd	Matured Stage	59	Moderate Performer	Moderate Risk	No	Stable	No
Dhemaji Agro Fed Producer Company Ltd	Matured Stage	57	Moderate Performer	No Risk	No	Stable	No
MAA PADUMONI FED FARMER PRODUCER	Matured Stage	40	Inadequate Performer	No Risk	No	Stable	No

COMPANY LTD							
Majuli Agro Organic Producer Company Ltd	Matured Stage	56	Moderate Performer	No Risk	No	Stable	No
Taba Tate Farmer Producer Company Ltd	Matured Stage	53	Moderate Performer	No Risk	No	Stable	No
Sissiborgaon Agro Fed Producer Company Ltd	Matured Stage	44	Limited Performer	No Risk	No	Stable	No
Ghilamara Bamboo Producer Company Ltd	Matured Stage	55	Moderate Performer	No Risk	Yes	Stable	No
Pahumara FPC	Matured Stage	34	Inadequate Performer	Moderate Risk	No	No previous score	No
Ghilamara Farmer's Producer Company Ltd	Matured Stage	48	Limited Performer	No Risk	No	Stable	No
Jengraimukh Agri Farmer Producer Company Limited	Matured Stage	54	Moderate Performer	No Risk	No	Stable	No
Moumari Dhemaji Farmer Producer Company Ltd	Matured Stage	51	Limited Performer	No Risk	No	Stable	No
Bechimary United Farmers Producer Company Limited	Developing Stage	46	Limited Performer	No Risk	No	No previous score	No
Amphri Valley Agri and Allied Farmer Producer Company	Matured Stage	39	Inadequate Performer	No Risk	No	Stable	No
Aranai FPC Limited	Matured Stage	43	Limited Performer	No Risk	No	No previous score	No

Bodoland Agro Organic Producer Company Limited	Matured Stage	55	Moderate Performer	No Risk	No	No previous score	No
Bordoisila Farmers Producer Company Limited	Matured Stage	52	Moderate Performer	No Risk	No	No previous score	No
jeew FPC	Developing Stage	40	Inadequate Performer	No Risk	No	No previous score	No
Dharitri Moran Mustard Producer Company Ltd	Matured Stage	51	Moderate Performer	No Risk	Yes	No previous score	Yes
Gramya Krikhok Mancha Agro Producer Company Limited	Matured Stage	40	Inadequate Performer	Moderate Risk	No	No previous score	No
Jwlwi Agro Producer Company Limited	Developing Stage	46	Limited Performer	High Risk	No	Stable	No
LEKOPE MAJULI WOMEN FARMER PRODUCER COMPANY LIMITED	Matured Stage	59	Moderate Performer	No Risk	No	No previous score	No
Machkhowa Agro Fed Producer Company Limited	Matured Stage	62	Satisfactory Performer	No Risk	No	Stable	No
Tulungia Shine Farmer Producer Company	Matured Stage	62	Satisfactory Performer	No Risk	No	Stable	No
Moirabari Krishi Producer Company Limited	Developing Stage	46	Limited Performer	No Risk	Yes	No previous score	No
Mara Chaulkhowa FPO	Developing Stage	57	Moderate Performer	No Risk	No	Stable	No

Manikpur Joha Rice Producer Company Limited	Matured Stage	64	Satisfactory Performer	No Risk	No	No previous score	No
Lakhipur Spices Farmer Producer Company	Developing Stage	49	Limited Performer	No Risk	No	No previous score	No
Kham Siphung Serja Farmer Producer Company Limited	Matured Stage	56	Moderate Performer	No Risk	No	Stable	No
Nilachal Agro Producer Company Limited	Developing Stage	44	Limited Performer	Moderate Risk	No	No previous score	No
Birjhora Farmer Producer Company Limited	Matured Stage	66	Satisfactory Performer	No Risk	No	No previous score	No
Adarshik Agro Producer Company Limited	Matured Stage	42	Limited Performer	Moderate Risk	No	No previous score	

Appendix C – SDG Alignment Matrix

The table below indicates, for each Farmer Producer Company (FPC), whether it meets the criteria for alignment with the seven Sustainable Development Goals incorporated into the CRISIL tool. "Yes" denotes full compliance with the SDG indicator; "No" denotes partial or no compliance.

FPC Name	SDG 2 Zero Hunger	SDG 5 Gender Equality	SDG 6 Water & Sanitation	SDG 7 Modern Energy	SDG 10 Reduce Inequality	SDG 14 Oceans & Marine	SDG 17 Partnerships
Besimari FPC	No	No	Yes	Yes	No	No	No
Chengnoi FPC	No	No	Yes	Yes	No	No	No
Mohabahu FPC	Yes	No	Yes	Yes	No	Yes	No
Poohar FPC	No	No	Yes	Yes	No	No	No
Uttaran FPC	No	No	Yes	Yes	No	No	No
Bihpuria Pumpkin FPC	Yes	No	Yes	Yes	Yes	Yes	Yes
Howly FPC	No	No	Yes	Yes	Yes	Yes	Yes

Kalpani FPC	No	No	Yes	Yes	Yes	Yes	Yes
Madhunanda n FPC	No	No	Yes	Yes	No	No	No
Pratishruti FPC	No	No	Yes	Yes	No	No	No
Jugami FPC	No	No	Yes	Yes	No	Yes	No
Naba Chandrapur Fed Agro Producer Company Limited	Yes	No	Yes	Yes	Yes	Yes	Yes
SHIRALU FPC	No	No	Yes	Yes	No	No	No
Anunad Agro Producer Company Limited	No	No	Yes	Yes	No	No	No
Chakrasila Tea & Agro Producer Company Limited	No	No	Yes	Yes	Yes	No	No
Abadari FPC	No	No	Yes	No	No	Yes	No
Bijit Narayan Farmers Producer Company Limited	Yes	No	No	No	Yes	Yes	No
Matra Kara Krishi Farmers Producer Company Limited	Yes	No	Yes	Yes	Yes	Yes	Yes
Mur Bhal Krishi Producer Company Limited	No	No	No	No	Yes	No	No
Basundhara Agre Fed Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Panitola Agro Fed Farmer Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Dolongghat Krishi Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Suntali Maize Producer Company Limited	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Sarukhetri Cooperative FPO Limited	No	No	Yes	Yes	No	No	No
Khowang Women Poultry Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Bordoloni Agro Fed Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Dhemaji Agro Fed Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
MAA PADUMONI FED FARMER PRODUCER COMPANY LTD	No	No	Yes	Yes	Yes	Yes	Yes
Majuli Agro Organic Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Taba Tate Farmer Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Sissiborgaon Agro Fed Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Ghilamara Bamboo Producer Company Ltd	No	No	Yes	Yes	No	No	No
Pahumara FPC	No	No	Yes	Yes	No	No	No
Ghilamara Farmer's Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Jengraimukh Agri Farmer Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Moumari Dhemaji Farmer Producer Company Ltd	No	No	Yes	Yes	Yes	Yes	Yes
Bechimary United Farmers	No	No	Yes	Yes	No	No	No

Producer Company Limited							
Amphri Valley Agri and Allied Farmer Producer Company Ltd	Yes	No	Yes	Yes	No	Yes	No
Aranai FPC Limited	No	No	Yes	Yes	No	No	No
Bodoland Agro Organic Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Bordoisila Farmers Producer Company Limited	No	No	Yes	Yes	No	No	No
jeew FPC	No	Yes	Yes	Yes	No	Yes	Yes
Dharitri Moran Mustard Producer Company Ltd	No	No	Yes	Yes	No	No	No
Gramya Krikhok Mancha Agro Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Jwlwi Agro Producer Company Limited	No	No	Yes	Yes	No	No	No
LEKOPE MAJULI WOMEN FARMER PRODUCER COMPANY LIMITED	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Machkhowa Agro Fed Producer Company Limited	No	No	Yes	Yes	No	No	No
Tulungia Shine Farmer Producer Company	No	No	Yes	Yes	No	No	No
Moirabari Krishi Producer Company Limited	No	No	Yes	Yes	No	No	No

Mara Chaulkhowa FPO	No	No	Yes	No	No	No	No
Manikpur Joha Rice Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Lakhipur Spices Farmer Producer Company	No	No	Yes	Yes	Yes	Yes	Yes
Kham Siphung Serja Farmer Producer Company Limited	No	No	Yes	Yes	Yes	Yes	Yes
Nilachal Agro Producer Company Limited	No	No	Yes	Yes	No	No	No
Birjhora Farmer Producer Company Limited	No	No	Yes	Yes	No	No	No
Adarshik Agro Producer Company Limited	No	No	Yes	Yes	No	No	

Appendix D – Capacity-Building Indicator Scores

Below is the full raw scoring sheet for each FPC's 16 Capacity-Building indicators and the resulting total Capacity Score (out of 80).

FPC Name	No. of BOD	BOD Exp.	BOD Qual.	Committees	Women on Board	CEO Exp.	2nd Line	# Members	Participation	Agency Role	BOD Train.	CEO Train.	Mem. Train.	BOD Visits	CEO Visits	Mem. Visits	Capacity Score
Besimari FPC	2	1	5	0	2	1	3	1	2	2	1	1	3	1	1	1	22
Chengnoi FPC	2	1	4	1	5	1	2	2	1	4	1	3	1	3	5	0	27
Mohabahu FPC	4	1	5	5	3	3	3	4	1	5	3	1	3	3	1	3	37

Poohar FPC	3	1	5	0	1	1	1	3	1	3	1	1	1	5	0	5	25
Uttaran FPC	2	1	4	1	2	3	2	2	1	4	5	1	5	3	0	5	35
Bihpuria Pumpkin FPC	2	1	4	1	1	1	4	2	4	4	1	1	1	1	1	1	30
Howly FPC	2	1	5	0	0	1	1	3	3	2	1	5	1	1	0	5	26
Kalpani FPC	2	4	5	1	2	3	2	3	2	3	3	1	5	5	5	5	44
Madhunandan FPC	2	1	1	1	0	1	3	1	4	1	1	1	1	1	0	0	19
Pratishruti FPC	2	1	3	0	4	4	3	5	1	2	1	1	1	5	1	3	37
Jugami FPC	2	4	5	0	5	4	3	2	5	3	1	1	1	0	0	3	30
Naba Chandrapur Fed Agro Producer Company Limited	2	3	5	0	5	3	3	1	1	4	5	1	5	5	5	0	40
SHIRALU FPC	5	2	5	3	0	5	4	1	1	3	1	1	1	3	5	3	37
Anunad Agro Producer Company Limited	2	1	3	2	0	3	2	4	1	3	1	1	3	1	1	1	23
Chakrasila Tea & Agro Producer Company	2	1	5	0	4	1	3	1	1	3	1	1	3	0	0	1	20

Limited																		
Abadari FPC	2	1	5	2	2	3	4	1	4	2	1	1	1	3	3	5	33	
Bijit Narayan Farmers Producer Company Limited	2	3	4	0	4	3	3	3	3	3	1	3	3	5	1	5	37	
Matra Kara Krishi Farmers Producer Company Limited	2	3	3	0	2	5	3	3	1	4	5	1	5	5	5	5	45	
Mur Bhal Krishi Producer Company Limited	2	1	5	0	4	1	3	3	5	3	1	1	1	0	0	5	26	
Basundhara Agre Fed Producer Company Limited	2	3	5	2	2	3	3	1	3	3	1	1	1	0	1	5	31	
Panitola Agro Fed Farmer Producer Com	2	1	3	3	0	3	3	1	2	4	1	1	5	0	3	5	34	

pany Ltd																	
Dolonggghat Krishi Producer Company Limited	2	2	3	0	2	3	3	3	5	4	5	1	5	5	1	1	38
Suntali Maize Producer Company Limited	2	4	5	0	4	3	3	1	5	4	1	3	1	5	0	5	34
Sarukhetri Cooperative FPO Limited	5	1	3	0	0	3	4	3	2	4	1	1	1	5	3	5	29
Khowang Women Poultry Producer Company Ltd	2	1	4	4	5	4	4	3	2	3	3	1	3	5	5	5	44
Bordoloni Agro Fed Producer Company Ltd	2	3	5	2	2	3	3	2	3	3	3	5	3	1	1	5	40
Dhemaji Agro Fed Producer Company Ltd	2	3	4	4	2	3	3	3	1	3	1	1	1	3	1	5	33

MAA PADUMONI FED FARMER PRODUCER COMPANY LTD	2	4	5	3	2	3	3	2	2	1	1	1	1	1	0	5	29
Majuli Agro Organic Producer Company Ltd	2	5	5	2	0	3	2	4	3	3	1	3	1	5	5	3	41
Taba Tate Farmer Producer Company Ltd	2	3	5	4	5	4	2	2	3	1	1	1	1	0	0	1	26
Sissiborgaon Agro Fed Producer Company Ltd	2	4	5	5	2	3	3	2	2	4	1	1	1	0	1	5	35
Ghilamara Bamboo Producer Company Ltd	2	4	4	2	2	3	3	1	1	1	1	1	1	0	0	3	23
Pahumara FPC	5	1	5	1	2	5	3	2	1	4	1	1	1	3	3	5	34
Ghilamara Farmer's Produ	2	3	5	4	2	3	3	1	1	1	1	3	5	5	5	5	42

cer Com pany Ltd																		
Jengr aimu kh Agri Farm er Produ cer Com pany Limite d	2	2	5	3	2	3	3	3	2	3	1	3	5	5	1	5	41	
Mou mari Dhem aji Farm er Produ cer Com pany Ltd	2	1	5	0	2	3	3	1	5	1	1	1	5	1	0	3	28	
Bechi mary Unite d Farm ers Produ cer Com pany Limite d	2	1	5	0	2	1	1	3	5	2	1	1	1	5	0	5	28	
Amph ri Valle y Agri and Allied Farm er Produ cer Com pany Limite d	3	1	5	0	3	1	1	2	1	2	1	1	1	1	5	1	21	
Arana i FPC	5	1	3	0	0	3	3	2	1	3	1	1	1	3	5	5	30	

Limited																		
Bodoland Agro Organic Producer Company Limited	2	1	3	0	0	1	1	4	4	4	1	1	1	0	0	0	14	
Bordoisila Farmers Producer Company Limited	2	4	5	0	0	1	1	2	4	4	1	1	1	0	0	0	22	
jeew FPC	4	1	5	0	1	4	2	1	4	4	1	1	1	3	3	5	34	
Dharitri Moran Mustard Producer Company Ltd	2	1	3	4	2	3	3	1	4	1	1	1	1	1	1	0	29	
Gramya Krikhok Mancha Agro Producer Company Limited	4	1	5	2	1	2	5	1	3	4	1	1	3	5	5	3	40	
Jwlwi Agro Producer Company	2	1	5	0	0	1	1	3	1	2	1	1	1	0	0	0	14	

Limited																		
LEKOPE MAJULI WOMEN FARMER PRODUCER COMPANY LIMITED	2	1	3	3	2	3	3	5	3	3	1	1	1	3	0	5	30	
Machkhowa Agro Fed Producer Company Limited	2	4	4	4	2	3	3	3	1	4	1	1	3	3	1	5	37	
Tulungia Shine Farmer Producer Company	2	3	5	0	2	3	3	3	2	4	1	1	1	5	5	1	34	
Moirabari Krishi Producer Company Limited	2	1	5	0	2	1	3	3	1	3	1	1	1	0	0	5	22	
Mara Chaulkhowa FPO	2	3	4	4	2	3	3	2	1	3	1	1	1	3	1	5	33	
Manikpur Joha Rice Producer Com	2	5	4	0	2	3	3	3	3	4	1	1	3	5	5	3	40	

pany Limited																		
Lakhipur Spices Farmer Producer Company	2	4	5	0	5	3	3	2	2	4	1	3	5	5	0	1	36	
Kham Siphung Serja Farmer Producer Company Limited	4	1	5	2	1	3	4	3	5	5	1	1	1	3	3	5	34	
Nilachal Agro Producer Company Limited	2	1	5	0	2	4	3	3	1	4	1	1	1	3	3	5	32	
Birjhora Farmer Producer Company Limited	2	4	5	0	4	3	3	3	1	4	1	1	5	5	0	5	37	
Adarshik Agro Producer Company Limited	5	1	3	0	0	1	2	3	1	3	1	1	1	3	5	3	22	

Average Score across all FPCs: 31.50

Appendix E – Governance Indicator Scores

Each FPC's scores on the nine Governance indicators below are summed to produce the overall Governance Score (out of 45).

FPC Name	Meeting Records	GST Filing	ITR Filing	Licenses	FPO Credit Score	Directors' Credit Score	Book Updates	Board Meetings	% Female Members	Governance Score
Besimari FPC	5	3	5	3	0	3	5	5	1	30
Chengnoi FPC	5	5	5	3	0	0	3	5	1	27
Mohabahu FPC	5	5	5	3	0	1	5	5	5	31
Poohar FPC	5	5	5	3	0	5	3	5	3	34
Uttaran FPC	5	5	5	3	0	1	5	5	1	30
Bihpuria Pumpkin FPC	5	5	5	3	3	3	5	1	3	33
Howly FPC	5	5	4	3	0	5	5	5	3	35
Kalpani FPC	5	5	5	3	0	1	3	5	3	30
Madhunandan FPC	5	1	1	0	3	5	3	5	1	24
Pratishruti FPC	5	5	5	3	0	0	5	5	5	25
Jugami FPC	5	5	5	3	0	1	3	5	5	32
Naba Chandrapur Fed Agro Producer Company Limited	5	3	5	3	0	0	5	5	3	29
SHIRALU FPC	5	3	3	3	0	0	5	5	1	24
Anunad Agro Producer Company Limited	5	5	5	3	0	5	3	5	3	31
Chakrasila Tea & Agro Producer Company Limited	5	5	5	3	0	0	3	5	1	27
Abadari FPC	5	4	3	3	0	0	5	5	3	28

Bijit Narayan Farmers Producer Company Limited	5	5	5	3	0	0	3	1	3	25
Matra Kara Krishi Farmers Producer Company Limited	5	5	5	3	0	0	3	5	5	31
Mur Bhal Krishi Producer Company Limited	5	5	5	3	0	1	3	5	5	32
Basundhara Agre Fed Producer Company Limited	5	5	5	0	0	0	5	1	1	22
Panitola Agro Fed Farmer Producer Company Ltd	5	5	5	3	1	5	5	5	3	37
Dolonggh at Krishi Producer Company Limited	5	5	5	3	0	0	3	5	3	29
Suntali Maize Producer Company Limited	5	5	5	3	0	3	3	5	1	30
Sarukhetri Cooperative FPO Limited	5	3	3	3	0	0	5	5	3	27
Khowang Women Poultry Producer Company Ltd	5	5	5	0	5	0	5	5	5	35
Bordoloni Agro Fed Producer Company Ltd	5	5	5	0	5	1	5	1	5	32
Dhemaji Agro Fed	5	5	5	3	3	1	5	1	3	31

Producer Company Ltd										
MAA PADUMONI FED FARMER PRODUCER COMPANY LTD	5	5	5	0	5	0	5	1	1	27
Majuli Agro Organic Producer Company Ltd	5	3	3	0	5	0	5	5	1	21
Taba Tate Farmer Producer Company Ltd	5	5	5	3	5	1	5	1	3	33
Sissiborgaon Agro Fed Producer Company Ltd	5	5	3	3	0	0	5	5	3	29
Ghilamara Bamboo Producer Company Ltd	5	5	5	0	5	1	5	5	1	32
Pahumara FPC	5	3	3	3	0	0	3	5	3	25
Ghilamara Farmer's Producer Company Ltd	5	3	3	0	5	3	5	1	1	20
Jengraimukh Agri Farmer Producer Company Limited	5	5	5	0	5	0	5	5	3	33
Moumari Dhemaji Farmer Producer Company Ltd	5	5	5	0	5	0	5	5	3	33
Bechimary United Farmers Producer	5	5	5	3	0	0	3	5	3	29

Company Limited										
Amphri Valley Agri and Allied Farmer Producer Company Limited	5	3	1	3	0	0	5	5	5	27
Aranai FPC Limited	5	3	3	3	0	0	5	5	5	29
Bodoland Agro Organic Producer Company Ltd	5	5	5	3	0	0	3	5	5	31
Bordoisila Farmers Producer Company Ltd	5	5	5	3	0	0	3	5	1	27
jeew FPC	5	3	3	3	0	0	3	5	3	25
Dharitri Moran Mustard Producer Company Ltd	5	5	5	3	3	5	5	5	3	39
Gramya Krikhok Mancha Agro Producer Company Limited	5	3	3	3	0	0	3	5	1	23
Jwlwi Agro Producer Company Ltd	5	5	5	3	0	1	3	5	3	30
LEKOPE MAJULI Women Farmer Producer Company Ltd	5	5	5	0	5	0	5	5	5	35
Machkhowa Agro Fed Producer Company Limited	5	5	3	3	5	1	5	5	3	35

Tulungia Shine Farmer Producer Company	5	5	5	3	0	0	3	5	3	29
Moirabari Krishi Producer Company Limited	5	5	5	3	0	0	3	5	1	27
Mara Chaulkhowa FPO	5	5	5	3	3	1	5	1	3	31
Manikpur Joha Rice Producer Company Limited	5	5	5	3	0	0	5	5	3	31
Lakhipur Spices Farmer Producer Company	5	5	5	3	0	0	3	5	5	31
Kham Siphung Serja Farmer Producer Company Limited	5	3	3	3	0	0	5	5	3	27
Nilachal Agro Producer Company Limited	5	3	3	3	0	0	3	5	1	23
Birjhora Farmer Producer Company Limited	5	5	5	3	0	3	3	5	5	34
Adarshik Agro Producer Company Limited	5	3	3	3	0	0	5	5	5	26

Average indicator scores: Meeting Records 5.00; GST Filing 4.41; ITR Filing 4.34; Licenses 2.41; FPO Credit Score 1.27; Directors' Credit Score 1.02; Book Updates 4.14; Board Meetings 4.36; Female Membership 2.93; Mean Governance Score 29.34

Appendix F Financial Health Indicator Scores

Each FPC is scored on eleven financial metrics. Scores are summed to give the **Finance Score** (out of 55) as shown below.

FPC Name	Revenue Growth	Net Profit	EBITDA margin	Net Profit margin	ROCE	Leverage (TOL/TNW)	Interest Coverage	Current Ratio	Inventory Days	Debtor Days	Cash % of Rev.	Finance Score
Besimari FPC	5	3	0	0	0	5	0	4	5	3	5	30
Chengnoi FPC	3	1	0	0	0	5	0	1	5	5	3	23
Mohabahu FPC	3	1	0	1	1	5	0	5	2	5	1	24
Poohar FPC	3	1	5	5	1	5	0	0	0	0	2	11
Uttaran FPC	3	5	0	0	0	0	0	0	5	4	1	18
Bihpuria Pumpkin FPC	3	1	0	4	5	5	0	5	2	5	2	32
Howly FPC	3	1	0	0	0	1	1	3	5	0	5	18
Kalpani FPC	3	1	0	0	0	0	0	5	0	5	5	19
Madhunandan FPC	3	1	0	0	0	0	0	2	5	5	1	17
Pratishruti FPC	1	1	0	0	0	5	0	5	0	0	1	13
Jugami FPC	3	1	5	2	5	5	0	1	5	5	1	33
Naba Chandrapur Fed Agro Producer Company Limited	3	1	5	5	5	5	0	5	5	3	1	38
SHIRALU FPC	3	1	0	0	0	5	0	5	5	5	3	22
Anunad Agro Producer Company Limited	3	1	5	1	4	5	0	2	5	5	2	22
Chakrasila Tea & Agro Producer Company Limited	3	1	5	0	0	5	0	3	0	5	1	23
Abadari FPC	3	1	0	5	5	5	0	3	5	5	5	37
Bijit Narayan Farmers Producer	3	1	0	0	0	5	0	1	5	5	5	25

Company Limited												
Matra Kara Krishi Farmers Producer Company Limited	3	1	4	1	0	0	0	0	5	1	5	13
Mur Bhal Krishi Producer Company Limited	3	1	0	1	0	5	0	5	0	4	4	22
Basundhara Agre Fed Producer Company Limited	1	1	0	0	0	0	0	0	0	5	5	7
Panitola Agro Fed Farmer Producer Company Ltd	3	1	0	5	0	5	1	2	0	5	1	13
Dolonggha t Krishi Producer Company Limited	3	1	5	0	0	5	0	5	0	5	3	27
Suntali Maize Producer Company Limited	3	1	5	1	1	5	0	5	5	0	5	31
Sarukheti Cooperative FPO Limited	3	1	5	5	5	5	0	0	5	5	5	39
Khowang Women Poultry Producer Company Ltd	3	1	0	5	5	5	0	2	5	0	5	31
Bordoloni Agro Fed Producer Company Ltd	3	1	5	4	5	5	0	5	0	5	5	38

Dhemaji Agro Fed Producer Company Ltd	3	1	0	1	5	5	0	5	4	5	5	34
MAA PADUMONI FED FARMER PRODUCER COMPANY LTD	3	1	0	1	0	0	0	0	0	5	5	9
Majuli Agro Organic Producer Company Ltd	3	1	5	1	0	5	0	4	5	5	5	34
Taba Tate Farmer Producer Company Ltd	3	1	5	1	3	5	0	5	4	0	5	32
Sissiborgaon Agro Fed Producer Company Ltd	1	1	0	0	0	0	0	0	0	5	1	3
Ghilamara Bamboo Producer Company Ltd	3	1	0	1	3	5	0	3	5	5	5	31
Pahumara FPC	3	1	5	1	0	0	0	2	0	5	0	3
Ghilamara Farmer's Producer Company Ltd	3	1	0	0	0	5	0	3	5	5	5	22
Jengraimukh Agri Farmer Producer Company Limited	3	1	0	1	0	5	0	5	0	0	5	20
Moumari Dhemaji	3	1	0	0	0	5	0	3	5	5	5	22

Farmer Producer Company Ltd												
Bechimary United Farmers Producer Company Limited	3	1	0	0	0	5	0	0	0	5	5	19
Amphri Valley Agri and Allied Farmer Producer Company Limited	1	1	0	0	5	5	0	5	0	0	2	19
Aranai FPC Limited	3	1	0	3	5	5	0	5	5	0	5	32
Bodoland Agro Organic Producer Company Limited	5	5	5	1	0	5	0	5	5	5	5	41
Bordoisila Farmers Producer Company Limited	3	1	5	1	0	5	0	5	5	5	5	35
jeew FPC	3	1	0	0	0	5	0	5	0	5	0	14
Dharitri Moran Mustard Producer Company Ltd	3	1	1	1	0	0	0	0	0	5	5	9
Gramya Krikhok Mancha Agro Producer Company Limited	3	1	0	0	0	5	0	5	0	5	2	16
Jwlwi Agro Producer Company Limited	3	1	0	0	0	5	0	5	5	5	5	29
LEKOPE Majuli Women	3	1	5	3	5	5	0	5	0	4	5	36

Farmer Producer Company Limited												
Machkhowa Agro Fed Producer Company Limited	3	1	5	1	5	5	0	2	5	5	5	37
Tulungia Shine Farmer Producer Company	3	1	5	1	5	5	0	5	5	3	5	38
Moirabari Krishi Producer Company Limited	3	1	5	0	0	5	0	5	2	0	5	26
Mara Chaulkhowa FPO	3	1	0	1	5	5	0	5	4	5	5	34
Manikpur Joha Rice Producer Company Limited	3	1	0	0	0	5	0	4	5	5	5	28
Lakhipur Spices Farmer Producer Company	3	1	0	1	0	5	0	0	5	5	4	19
Kham Siphung Serja Farmer Producer Company Limited	3	1	0	5	5	5	0	3	5	5	5	37
Nilachal Agro Producer Company Limited	3	1	0	1	0	5	0	5	5	5	1	26
Birjhora Farmer Producer Company Limited	3	1	0	1	0	5	0	4	5	5	5	29
Adarshik Agro	3	1	5	1	0	5	0	5	5	0	0	19

Producer Company Limited												
Average	2.93	1.18	1.79	1.30	1.57	4.11	0.04	3.25	3.09	3.79	3.61	24.63

Appendix G Market-Linkages Indicator Scores

Below is the raw scoring sheet for each FPC's fourteen Market-Linkages indicators and the resulting **Market Score** (out of 45).

FPC Name	Input Seeds	Fertiliser	Pesticides	Core Crops	Bulk Sales	Revenue Sources	Supplier Delay	Buyer Delay	Buyer Satisfaction	Digital Records	Digital Inclusion	Communication	Tech Used	Market Score
Besimari FPC	0	0	0	1	5	1	5	5	5	5	1	3	3	28
Chengnoi FPC	5	0	0	1	1	1	5	5	3	5	3	3	1	18
Mohabahu FPC	5	5	5	5	5	5	5	5	5	5	5	3	3	36
Poohar FPC	5	0	0	5	1	5	5	3	5	5	3	3	1	26.5
Uttaran FPC	0	0	0	5	5	5	1	3	3	1	5	3	1	22
Bihpuria Pumpkin FPC	5	5	0	3	1	5	5	5	5	5	5	5	5	54
Howly FPC	5	0	0	5	1	5	1	1	1	5	3	3	3	21
Kalpani FPC	5	5	5	5	5	5	3	3	3	5	3	3	3	33.5
Madhunandan FPC	5	0	0	3	3	5	5	5	5	1	5	5	5	47
Pratishruti FPC	0	0	0	3	5	5	5	5	5	1	5	3	3	32
Jugami FPC	5	0	0	1	5	1	5	5	5	5	1	3	3	25.5
Naba Chandrapur Fed Agro	5	0	0	5	1	1	3	3	3	5	5	3	1	25

Producer Company Ltd														
SHIRALU FPC	5	0	0	2	1	1	3	3	3	5	3	5	1	22.5
Anunad Agro Producer Company Ltd	0	0	0	1	1	1	5	5	5	5	1	3	3	21
Chakrasila Tea & Agro Producer Company Ltd	5	0	0	3	1	1	3	5	3	5	1	3	1	23
Abadari FPC	5	0	0	5	1	1	3	3	3	5	5	5	1	26
Bijit Narayan Farmers Producer Company Ltd	5	5	0	1	1	1	3	5	5	5	3	3	1	20
Matra Kara Krishi Farmers Producer Company Ltd	5	5	0	1	5	5	5	5	5	5	3	3	3	50
Mur Bhal Krishi Producer Company Ltd	5	5	0	3	3	5	5	5	5	5	5	3	3	34
Basundhara Agre	5	0	0	5	5	1	5	5	5	5	3	3	1	35

Fed Producer Company Ltd														
Panitola Agro Fed Farmer Producer Company Ltd	5	0	0	5	1	1	5	5	5	5	3	3	1	25.5
Dolonggghat Krishi Producer Company Ltd	5	0	0	1	3	5	5	5	5	5	3	3	3	28.5
Suntali Maize Producer Company Ltd	5	5	0	1	1	5	3	3	3	5	1	3	3	25
Sarukhetri Cooperative FPO Ltd	5	0	0	1	1	1	5	5	3	5	3	5	1	20
Khowang Women Poultry Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	3	1	39
Bordoloni Agro Fed Producer Company Ltd	5	0	0	5	1	1	5	5	5	5	5	3	1	24.5

Dhemaji Agro Fed Producer Company Ltd	5	0	0	3	1	1	5	5	5	5	5	3	1	23.5
MAA PADUMONI FED FARMER PRODUCER COMPANY LTD	5	0	0	5	1	1	5	5	5	5	5	3	1	24.5
Majuli Agro Organic Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	5	1	28.5
Taba Tate Farmer Producer Company Ltd	5	0	0	5	5	1	5	5	3	5	5	3	1	21.5
Sissiborgaon Agro Fed Producer Company Ltd	5	0	0	3	1	1	5	5	5	5	5	3	1	35
Ghilamara Bamboo Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	5	1	28.5

Pahumara FPC	5	0	0	5	1	1	3	3	3	5	3	5	1	24
Ghilamara Farmer's Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	3	1	26.5
Jengraimukh Agri Farmer Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	3	1	26.5
Moumari Dhemaji Farmer Producer Company Ltd	5	0	0	5	5	1	5	5	5	5	5	3	1	26.5
Bechimary United Farmers Producer Company Ltd	0	0	0	2	1	5	5	5	5	5	1	3	3	28
Amphri Valley Agri and Allied Farmer Producer Company Ltd	5	0	0	1	1	1	1	1	1	5	1	3	3	16

Aranai FPC Limited	5	0	0	5	1	1	5	1	3	5	1	5	1	22.5
Bodoland Agro Organic Producer Company Ltd	5	0	0	1	5	1	3	5	3	5	3	3	3	25.5
Bordoisila Farmers Producer Company Ltd	5	5	5	1	1	1	5	5	5	5	3	3	3	30
jeew FPC	5	0	0	5	1	1	3	3	0	5	5	5	1	24.5
Dharitri Moran Mustard Producer Company Ltd	5	5	5	3	1	5	5	5	5	5	5	3	1	35
Gramya Krikhok Mancha Agro Producer Company Ltd	0	0	0	5	1	1	3	3	3	5	3	5	1	24
Jwlwi Agro Producer Company Ltd	5	5	0	1	3	3	3	3	3	5	1	3	3	25
LEKOPE	5	0	0	5	1	1	1	3	3	5	5	3	1	23

Majuli Women Farmer Producer Company Ltd														
Machkhowa Agro Fed Producer Company Ltd	5	0	0	3	1	1	5	5	5	5	5	3	1	23.5
Tulungia Shine Farmer Producer Company	0	0	0	5	1	5	5	3	5	5	5	3	1	23.5
Moirabari Krishi Producer Company Ltd	5	0	0	1	1	1	5	5	5	5	1	3	1	27
Mara Chaulkhowa FPO	5	0	0	3	1	3	5	5	5	5	5	3	1	23.5
Manikpur Joha Rice Producer Company Ltd	0	5	0	5	5	5	5	3	5	5	3	3	1	28.5
Lakhipur Spices Farmer Producer	0	0	0	5	1	1	5	3	5	5	3	3	3	23.5

Company														
Kham Siphung Serja Farmer Producer Company Ltd	5	0	0	5	1	1	3	3	3	5	3	5	1	24
Nilachal Agro Producer Company Ltd	5	0	0	5	1	1	3	3	3	5	5	5	1	23.5
Birjhora Farmer Producer Company Ltd	0	0	0	5	5	5	5	3	5	5	3	3	3	46
Adarshik Agro Producer Company Ltd	5	0	0	2	1	1	3	3	3	5	3	5	1	22.5
Average	**4.11**	**0.98**	**0.36**	**3.48**	**2.43**	**2.29**	**4.18**	**4.11**	**4.09**	**4.79**	**3.57**	**3.50**	**1.79**	**27.62**