



**A Study On
FPOs: An Empirical Evidence on Business Opportunities,
Sustainability Strategies and Value Proposition
in Eastern UP and Bihar**

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EXECUTIVE SUMMARY

With average size of agricultural land holding assessed at 1.08 hectares and expecting it to further decrease with time on account of family divisions, switching over to an aggregation model appears to be an imperative for smallholder farmers in India to tide over their problems of sustainability, achieving economies of scale and improving farmer's share in the consumer price. Collectivisation approach in smallholder agriculture is expected to reduce cost of production and post-harvest operations for farmers, through advantages of scale by way of bulk purchase of inputs, sharing of knowledge, technology, farm machinery, investments in post-harvest value addition, storage, marketing and better price realisation through pooled marketing of produce, yield maximization, etc. thereby enhancing net financial returns to farmers.

Many different organisational forms of collective enterprises have been promoted at different times in India, the oldest formal collectives being credit and non-credit cooperatives. Based on the recommendations of the 'High Powered Committee' under the Chairmanship of Dr. Y. K. Alagh, the concept of Producer Companies was adopted in 2002, and the Companies Act of 1956 was amended allowing for new form of corporate entity, namely, Producer Companies (PCs) having desirable aspects of both cooperatives and corporates.

Recognizing the strength of Producer Organisations (POs), NABARD also created a dedicated Producers Organization Development Fund (PODF) in 2011 to support these organizations followed by setting-up of 'Producers Organization Development and Upliftment Corpus' (PRODUCE) by GoI as a dedicated fund with NABARD in 2014, for promotion of 2000 FPOs. As a result of promotional assistance from NABARD as on 31st March 2020, there were 3178 FPOs at various stages of evolution engaged in a wide range of activities such as bulk procurement of inputs, aggregation of farm produce, value-addition and collective marketing. In two of the predominantly agrarian states of India viz. Uttar Pradesh and Bihar, which eventually have high proportion of smallholder farmers, good amount of progress has been achieved in promotion of FPOs. A total of 242 FPOs were formed in Uttar Pradesh (UP) with a membership base of more than 60,000 and, in Bihar, 205 FPOs were formed with a membership base of about 58,000. About 77 percent and 94 percent members of these FPOs belonged to small and marginal category in UP and Bihar, respectively.

The GoI launched a dedicated Central Sector Scheme 'Formation and Promotion of 10,000 Farmer Producer Organisations (FPOs)' in 2020 with the aim of supporting 10000 FPOs in 5 years. In the backdrop of potential expansion of FPOs under the new Central Sector Scheme across the country, it was felt necessary to conduct a quick study with a view to examining the level of participation of FPOs in value chains of agri-commodities in the area and various strategies and best practices adopted by them for improving sustainability to small holder farming and enhancing net financial

returns to farmers and sharing the same with other FPOs, stakeholders, policy makers, etc. Therefore, Bankers Institute of Rural Development (BIRD), which has been designated as a nodal agency by GoI at the central level for capacity building under the Central Government's 10000 FPO programme, has undertaken a quick study of three FPOs promoted by NABARD in eastern Uttar Pradesh and Bihar. The sample FPOs studied are (i) Purvanchal Poultry Producer Company Ltd., Deoria (Eastern UP), (ii) Kamla Farmer Producers Company Ltd., Darbhanga (Bihar) and (iii) Lord Buddha Producer Company Ltd., Khushinagar (Eastern UP).

The key observations and findings of the study are summarized below:

Purvanchal Poultry Producer Company Limited (PPPCL), Deoria, UP

- The FPO originally started with business activities like poultry feed manufacturing and supply and marketing of eggs in 2015 and later diversified into providing custom hiring services, procurement & processing of paddy, procurement of wheat under MSP as government agency. FPO now plans to undertake oil milling and seed processing activities in 2021.
- Based on the ground level issues faced by members and their experience, the FPO has been diversifying into new business lines while minimizing its involvement in activities which no longer remained suitable. FPO garnered good support under Central and State Government programs like setting up of custom hiring centers, oil milling unit & seed processing plant through local convergence.
- The feed manufacturing and marketing of eggs activities were initially taken up with the objective of providing better profit margins to local layer units as feed cost constituted about 75-80% of the total cost of egg production. Though, initially FPO could succeed by providing cheaper feed manufactured locally, but with time, the turnover and margins came down on account of constraints like availability of working capital, competition from established poultry feed units who started providing feed on extended credit sales (20 week) and also lack of appropriate feed manufacturing technology (competitors provided poultry feed in pellet form which is more effective as compared to feed in dry mixture form provided by FPO). The role of FPO as intermediary in supply of poultry feed and marketing of eggs, largely remained at the local level and scale of operation remained low. This resulted in gradual reduction of turnover under feed business. However, there exist a good scope for FPO for increasing the margins by way of striking better cost efficiency and the raw material inventory management as almost 65 percent of feed comprised of maize, soyabean and mustard and their rates varied substantially during the year. Thus, raw material, if procured in bulk at lower prices would help the FPO in bringing cost efficiency, translating into better margins. However, this would require adequate storage space/infrastructure and working capital support for FPO to be able to hold the stocks for a longer period. Availability of adequate working capital was a constraint for FPO. Alternatively, the FPO may also think of undertaking cultivation of the above crops on leased land or go for contract farming involving its members.

- In spite of limited margins earned by FPO in poultry feed manufacturing and supply business, the FPO could provide poultry feed to its members at cheaper cost as compared to prevailing average market rates of other brands. The estimated monetary benefit to the egg producers ranged from Rs. 20,306 to Rs. 1,01,531 for one cycle depending on the size of unit from 2000 birds to 10000 birds. Thus, though the feed supply activity could not become high margin business for FPO, it added substantial incremental economic benefits to the FPO members.
- Efforts were made by the FPO to undertake wholesale marketing of eggs produced by member units in and around Deoria through informal tie-ups with prominent egg vendors. Though, initially the effort yielded good results, later the shopkeepers entered into supply arrangement directly with the FPO members, by-passing the FPO. As a result, the activity had to be stopped by the FPO. However, situation analysis in the course of study suggested that wholesale egg marketing can still be profitable for FPO, if wider egg-markets are explored in Uttar Pradesh as the egg prices and the resultant potential price arbitrage varied in different markets.
- The FPO participated as procurement and processing agency for paddy under the government procurement system, though on a thin profit margin of about 4 percent. As the payments from government to FPO were linked to a minimum norm of 67% conversion of paddy into rice, for ensuring profit, FPO had to depend on the income from the by-products obtained from the processing of paddy. While normally, the composition of by-products is 5.5 percent broken rice, 7.5 percent rice bran and 20 percent rice husk, the actual composition varies with variety of paddy, technology/efficiency of processing, etc. Therefore, returns from by-products may sometimes vary, adversely, affecting the overall profitability of procurement business of FPO. However, though FPO itself worked on a thin financial margin as procurement agency of the government, its participation in the activity added gross incremental financial benefit of around 21 percent to its members due to sale of paddy to FPO on MSP (Rs, 1824/Qtl), which was higher than the average market price of paddy (Rs. 1508/Qtl) during the period.
- The FPO also participated as agency of the government for procurement of wheat on MSP. During the period 2018-19 to 2020-21, the actual cost of procurement of wheat at MSP by FPO was Rs.1874.41 per quintal against which FPO got reimbursement of Rs.1894.02 per quintal. Thus, the FPO operated on a very thin margin of Rs. 19.62 per quintal i.e. 1.05%. The study revealed that the benefits to the farmers due to procurement on MSP depended entirely on the market price of wheat during the year. The benefit accrued to the farmers varied from 12.73 percent in 2019-20 to 13.24 percent in 2020-21 as the MSP rates of wheat were higher than the open market price. However, in 2018-19, the open market rates of wheat were higher than MSP, and therefore, the farmers had to incur a loss of 16.9%.

Kamla Farmer Producers Company Ltd. (KFPCL), Darbhanga, Bihar

- This FPO in a relatively backward district of Darbhanga in Bihar presents a classic example of how the social capital built in the form of women SHGs for years could be taken to the next higher level of a collective business enterprise such as goat farming by organizing women

groups into an all women FPO.

- The main focus of the FPO (KFPCL) was to develop goat farming activity which was already being undertaken by women on a low scale and on traditional lines, into a scientific and commercial goat value chain. The FPO facilitated establishment of both backward and forward linkages viz. breed improvement (Black Bengal), goat rearing on scientific lines using shed system, stall feeding, balanced nutrition, vaccination, etc. and organised marketing.
- FPO intervened at the critical stages of goat value chain such as breed improvement, scientific goat rearing for productivity enhancement and as an intermediary in organized marketing of goats replacing the local traders. The FPO entered into written contracts with slaughterers for direct supply of live goats on a commission basis. FPO collected commission at the rate of 3 percent i.e. 1.5 percent each from producers & slaughterers. This helped prevent exploitative marketing practices that were being earlier adopted by local traders, putting goat rearers to substantial financial loss.
- The interventions of the FPO in goat value chain directly benefitted goat rearing women members of FPO in various ways. Adoption of scientific goat rearing practices resulted in productivity enhancement due to average 15-20 percent gain in body weight of 18 month old bucks and also reduction in mortality rate from 10 to 12 percent. Introduction of the transparent practice of goat sale by actual live weight instead of visual guess weight earlier practiced by unscrupulous local traders helped women goat producers in getting fair and higher value for their goats. On an average, increase of about 23.4 percent in overall income was observed at the individual producer level. Aggregation and execution of formal contracts by FPO with slaughterers also helped in hedging against adverse price management. The practice of shed & stall feeding introduced by FPO instead of open grazing prevented destruction of standing field crops, minimised infighting among villagers and children attending school regularly. Some of the male members of the families who earlier were seasonally migrating to adjoining states for employment, were now undertaking goat rearing locally on a full time basis.
- The FPO also diversified into agri-input & output business, providing seeds and other inputs services like fertilizers, plant protection material, etc. to farmers and marketing of their agriculture produce. The year-wise trends in margin indicates that with increase in turnover and experience, margins improved from 3.0 percent in 2018-19 to 5.5 percent in 2020-21.

Lord Buddha Vegetable Producer Company Limited (LBVPCL), Kushinagar, UP

- The LBVPCL FPO is engaged in multiple activities viz. agri-input supply comprising of sale of seeds, planting material, fertilizer and plant protection material. It also undertook processing and marketing of wheat and marketing of banana crops.
- The annual turnover under agri-input business component was to the tune of Rs. 24.47 lakh & Rs. 17.53 lakh during 2019-20 and 2020-21 with average margins of 4.64 percent & 9.09 percent respectively. Though a detailed analysis of margins could not be undertaken due to

component-wise non availability of data, it was gathered from the interactions with the FPO members that they could save 5-10 percent on the input cost in general in comparison to pre-FPO period in addition to other benefits like timely availability of quality input in adequate quantities.

- The FPO participated in the value chain of wheat both as procurement and processing agent on behalf of *Sustainable Human Development Agency* (SHDA), a local NGO involved in promotion of a variety of wheat rich in zinc. For this, FPO received a fixed commission of Rs. 1.85 per Kg (8 percent margin) from SHDA. This activity was quite beneficial to the members as the price received for the wheat produced was Rs.1966/quintal as compared to the average prevailing market price of Rs.1675/quintal, resulting in 17.37 percent more returns as compared to pre-FPO scenario.
- The FPO supplied tissue cultured banana planting material and fertilizers and as aggregator and primary trader/commission agent undertook marketing of banana. Tissue cultured banana plants supplied by FPO to its member farmers on a cost to cost basis helped in productivity enhancement. The profit margins increased from 1.33 in 2019-20 to 2.93 percent in 2020-21, with average margin of 2.25 percent. The banana marketing by FPO was restricted only to the local mandi in Gorakhpur. If the major mandis like Noida, Delhi, etc. are explored in future, the profit margins are likely to improve significantly. Notwithstanding low margins of FPO, aggregation model adopted by FPO helped in elimination of exploitative marketing practices by local traders and based on the feedback from FPO members, it is estimated that their earnings increased by 13.59 percent as compared to pre-FPO scenario.

Key observation and way forward

- The underlying objective of most of the business activities/interventions by FPOs was redressal of the problems being faced by the members/producers of major commodities in the area. It is observed that almost all the FPOs attempted business diversification across value chains to provide comprehensive solutions to variety of issues, maximising financial returns to members and sustainability of the organisation.
- Different FPOs participated at different stages of the supply/value chains and business activities covered agri-input marketing, technology improvement, aggregated marketing of produce, contract marketing with vendors, agency for government procurement at MSP, etc. These FPOs, however, needs to upscale size and area of their operations for profit maximization.
- FPOs have so far not been able to play effective role as secondary processors, where the operating margins are generally high. They have restricted themselves to the role of primary processor, and mostly aggregators. Therefore, FPOs were operating with modest turnovers on thin margins, underlining the need to expand the operations, improve efficiency, adopt technology and access finance.

- Broadly enterprises by FPOs involved local production, manufacturing, value addition and trading such as seed supply, farm input trading, processing/marketing of produce. Activities such as processing/marketing of produce earned better margins for FPOs. Procurement as an agency of government had least margin but provided volumes to the FPO.
- In tune with FPO concept, sample FPOs made sincere efforts and chalked business strategies to address the problems faced by the members and maximising net financial returns to them by taking up wide range of pre-harvest activities (farm inputs supply, variety/breed/technology up-gradation, feed/seed supply, etc.) and/or post-harvest operations (aggregation of produce, processing and marketing, pre-contract pricing with local traders, transparent market practices to prevent exploitation of farmers, etc).
- Though the FPOs themselves operated on a thin margin, their business interventions generated substantial net incremental financial benefits to their farmer members due to saving in input cost, gains in productivity due to better quality inputs and scientific production practices, minimising losses due to transparent marketing practices with FPOs acting as a market aggregator, processing of produce, better price discovery for aggregated produce by FPOs in local markets, etc. The extent of financial gains accrued to farmer members due to FPO interventions ranged from the modest 7.5 percent (farm input supply) to as high as 23.40 percent (goat value chain interventions).
- Overall, the study validates the concept of FPO as a potentially vibrant umbrella business organisation for SFs/MFs for improving viability of smallholder farming enterprises through an aggregation strategy. For enhancing the business/profit margins of FPOs and expanding the horizon of their services to members, FPOs further need to adopt combination of strategies for enhancing membership, increasing business volumes, expanding beyond local markets, dealing in multiple commodities, charting business interventions along multiple stages of the given commodity value chains, embracing better technologies, finding and accessing large capital and financial resources for business expansion, undertaking primary/secondary processing of local produce, manufacturing key farm related inputs locally, enhancing their role in agri-markets for preventing exploitative marketing practices, connecting members to wider markets through e-NAM, etc. for better price discovery/realisation, exploring the scope for providing peripheral production, technological, financial and non-financial services to member farmers for improving financial viability of FPO operations.

INTRODUCTION 1

Out of the total 14.65 crores operational land holdings in the country, about 86 percent farmers are small & marginal i.e. have land holding size of less than 2 hectares, cultivating about 47 percent of the total cultivated area. With overall average size of land holding assessed at 1.08 hectares and that of marginal & small farmer being just 0.38 hectares and 1.40 hectares, respectively, the farmers are not able to take advantage of economies of scale as the scale of operation of individual farmer is too small. Owing to this and associated disadvantages small holder farmers face the following challenges:

- a) Not able to derive advantages of economies of scale in terms of input costs as well as output prices
- b) Limited bargaining power on account of low volume of production and marketable surplus
- c) On account of viability issues may not go for higher order farm mechanisation
- d) Due to lack of farm level storage infrastructure, inability to hold produce to take advantage of price movement of commodities
- e) With limited quantity of produce, not in a position to participate in supply chain beyond the local market and hence little or no participation in processing and exports.
- f) Lower participation in post-harvest value chain reduces farmers' share in the consumer price.
- g) Limited access to technical assistance and modern technology
- h) Limited access to modern marketing channels as also mechanism such as contract farming arrangements due to lower scale of operations
- i) Small farmers are likely to be left out of government programs/schemes on account of lack of awareness and capacity to comply with procedures

As land holdings are expected to decrease in size with time on account of family divisions, switching over to an aggregation model appears to be a logical way for taking advantage of economies of scale and increasing the farmer's share in the consumer price. Collectivisation approach in smallholder agriculture is expected to reduce transaction costs and bring advantages of scale through collective actions by farmers through bulk purchase of inputs, sharing of knowledge, technology, farm machinery, investments in processing, storage, marketing, better price realisation through pooled marketing of produce, thereby, achieving the objectives of cost reduction and yield/returns maximization. Collectivisation is also expected to protect farmers from exploitative tendencies in the competitive markets by strengthening their collective bargaining power. Policy makers and practitioners also expect producers' collectivisation to contribute to larger goals of social and economic empowerment of marginalized groups.



Collectivisation through Cooperatives: Many different organisational forms of collective enterprises have been promoted at different times in India. The oldest formal collectives are the credit cooperatives promoted since the early 1900s under the Cooperative Credit Societies Act with the primary objective of addressing farmers' indebtedness. Subsequently, formation of non-credit societies was enabled through the Cooperative Societies Act of 1912 and organisations such as consumer cooperatives, marketing cooperatives, cooperatives of handlooms weavers and others were termed. Later Multi-Unit Cooperative Societies Act and the Andhra Pradesh Mutually Aided Cooperative Societies (APMACS) Act also came into being. While in their early stages, cooperatives created expected positive impact in ameliorating the situation of smallholder farmers, in recent times, cooperatives have not been able to maintain their identity as member-controlled and self-sustainable business organisations. This has been attributed to low involvement of members, governance issues, too much dependence on government support, political interference, bureaucratisation and mismanagement.

Concept of Farmer Producer Organisation: In order to address these shortcomings, a 'high-powered committee' chaired by Dr. Y. K. Alagh introduced the concept of producer companies to combine together the desirable aspects of cooperatives and corporate sectors. In 2002, the Companies Act of 1956 was amended to allow for a new form of corporate entity, namely, Producer Companies (PCs). While membership in a cooperative is open to any individual or another cooperative, Central or State Government and other entities who may or may not be primary producers, shares in producer companies can only be owned by primary producers or their collectives (such as SHGs, producer cooperatives and other producer companies). In addition, Producer Companies may require shareholders to transact with the company ("patronage") as a condition for maintaining their membership. In cooperatives, the government has representation on the governing board and sometimes exercises indirect control over the Board's decisions. In contrast, in producer companies there is no provision for government representation on the Board of Directors. Due to these and other advantages of producer companies, they are seen as a better alternative to cooperatives. It is believed that the producer companies (PCs) would enable small producers to pool their resources and establish inclusive businesses benefiting small farmer members in enhancing their incomes and reducing risks. As member-based institutions, they would be inherently embedded in local communities and have the potential to become strong local institutions of marginalized producers (Govil, Neti and Rao, 2020).

Central Sector Scheme on Formation & Promotion of FPOs: Realising the importance of FPOs, Department of Agriculture, Cooperation & Farmers' Welfare (DAC&FW), Ministry of Agriculture & Farmers' Welfare (MoA&FW), GoI, launched a pilot programme for promotion of FPOs during 2011-12 under two sub-schemes of Rashtriya Krishi Vikas Yojna (RKVY) viz. National Vegetable Initiative for Urban Clusters and Programme for Pulses Development for 60,000 rainfed villages. The initiative got a real momentum in 2013 with formulation of National Policy and Process Guidelines for FPOs and with introduction of Equity & Credit Guarantee Scheme for FPOs. This was followed by setting up of a dedicated 'Producers Organization Development and Upliftment

Corpus' (PRODUCE) Fund with NABARD in 2014 for formation of 2000 FPOs. With an objective of bringing more number of farmers particularly the marginal & small farmers under the FPO fold for addressing the challenges being faced by them viz. lack of market access, credit linkages, inadequate financial support, lack of managerial skill, etc., the DAC&FW launched a dedicated Central Sector Scheme 'Formation and Promotion of 10,000 Farmer Producer Organisations (FPOs) in 2020 with an aim of grounding 10000 FPOs in coming 5 years.

Recognizing the strength of Producer Organisations (POs), NABARD had also created a dedicated fund "Producers Organization Development Fund (PODF)" during 2011 to support these organizations. The aim of the funds was to promote FPOs and support their initial financial requirements, to make them credit worthy, commercially vibrant and sustainable business enterprise of farmers. The details of FPOs formed under these funds are given below:

Table 1: Details of FPOs promoted by NABARD in State of Uttar Pradesh & Bihar

Particulars	Uttar Pradesh			Bihar		
	PODF	PRODUCE	Total	PODF	PRODUCE	Total
No. of FPOs registered	126	116	242	84	121	205
No. of districts covered	142	155	297	27	32	59
No. of villages covered	706	2528	3234	702	1943	2645
Total membership	15784	50443	66227	15408	42431	57839
No. of female members	3721	11043	14764	4151	20965	25116
No. of small & marginal farmers	11278	39762	51040	12264	42328	54592
No. of SC/ST members	3930	13513	17443	3963	13265	17228

- A total of 242 FPOs were formed in the state of Uttar Pradesh (UP) with a membership base of more than 60,000 and 205 in the State of Bihar with a membership base of about 58,000.
- About 22 percent were women members in UP and the corresponding figure in Bihar is 43 percent
- About 77 percent members belong to small and marginal category in UP and in Bihar this percentage was 94 percent

Present Study

There are about 7374 Farmers Producer Companies (FPCs) registered between January 1, 2003 and March 31, 2019 (Govil, Neti and Rao, 2020). These FPCs are at various stages of evolution and are engaged in a wide range of activities such as bulk procurement of inputs, aggregation of produce,



value-addition and marketing. Some of the FPCs have successfully organised their businesses and attempted various activities at different stages of agri-value chains (including allied agriculture activities). The type of interventions, commodities, scale, membership size and age of FPCs and situation in their area of operation are varied for different FPCs. Therefore, and in the backdrop of potential expansion of FPOs under the new Central Sector Scheme across the country, it was thought necessary and timely at this juncture to conduct a quick study to examine various interventions and strategies adopted by FPCs to participate in value chains of respective commodities, their impact on cost, benefits, market access to their members and compile the best practices, so as to share the same with other FPCs, stakeholders, policy makers, etc. Thus, Bankers Institute of Rural Development (BIRD), which has been designated as nodal agency at the central level for capacity building under the Governments 10000 FPO programme, has undertaken a quick study of three FPOs operating in the states of Eastern Uttar Pradesh and Bihar.

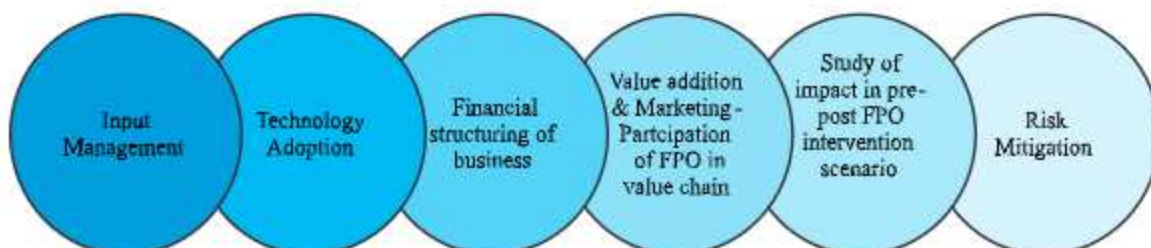
OBJECTIVE OF THE STUDY 2

To study:

- a) Basic features and characteristics of FPOs taking up collective business activities
- b) Factors leading to choice of interventions (Modus Operandi)
- c) Specific interventions in value chains
- d) Members participation
- e) Value chain analysis in pre and post FPO scenario
- f) Financial and non-financial impact of intermediation at various stages of value chain and benefits to FPOs and members farmers in pre-post FPO scenario
- g) Best practices, policy pointers and factors for success/failure

Methodology

- i. Within eastern region of India considered widely as a sleeping giant in Indian agriculture on account of wide gap existing between potential and productivity of major agriculture & allied sector activities, the representative states of Bihar and Uttar Pradesh (particularly eastern part) were chosen for the study.
- ii. Three Farmer Producer Organizations from Eastern Uttar Pradesh & Bihar viz. Purvanchal Poultry Producer Company Ltd., Deoria (UP), Lord Buddha Producer Company Ltd., Khushinagar (UP) and Kamla Farmer Producers Company Ltd., Darbhanga (Bihar) were identified. These FPOs are in business operations for at least more than two years, since incorporation.
- iii. Age and variability in business activities/models of FPOs were taken into consideration.
- iv. Stakeholder-wise structured templates were devised to capture the qualitative as well as quantitative data. This involved focused group discussions and interactions with individual farmers, Board of Directors and other staff of the FPO as well as the agri-product value chain participants.
- v. The parameters identified for study were based on interventions in the following critical areas:



- i. The basic approach adopted was to understand the commodity value chain, the level of participation of the producers/FPOs in the value chain and mapping the benefits accrued to FPOs/Farmers at different nodes of commodity value chain.
- ii. Analysis of best practices, strategies and models with respect to success or failure in terms of farmers' collective participation in value chains and its impact on net returns to FPOs and farmer members.

Limitations of the Study

Considering the small sample size, limited coverage in terms of geographical area and wide variability in local factors, the study findings and recommendations may not be true for other FPOs. Further, availability of complete data from the FPOs was also a limiting factor.

Sample FPOs

Basic details of the three sample FPOs selected for the study are as under:

Table 2: Basic details of sample FPOs

S.No.	Name of FPO	District	State	Date of formation	No. of members	Primary produce	Intervention undertaken
1	Purvanchal Poultry Producer Company Limited (PPPCL)	Deoria	UP	30.10.2015	550	Eggs, paddy, wheat	Poultry feed; egg marketing; procurement & processing of paddy; procurement of wheat
2	Kamla Farmer Producers Company Ltd (KFPCL)	Darbhangha	Bihar	26.02.2016	3716 (All women)	Goat, wheat, paddy	Marketing of live goats; input-output business of wheat & paddy
3	Lord Buddha Producer Company Ltd (LBPCL)	Khusinagar	UP	08.07.2015	702	Banana, wheat seed	Banana marketing; procurement & processing of wheat seed

OBSERVATIONS AND ANALYSIS 3

The details, observations and analysis of each of the sample FPOs is discussed in the following sections:

Purvanchal Poultry Producer Company Limited (PPPCL), Deoria, UP

In 2015, Deoria district of Eastern Uttar Pradesh had about 150 small layer poultry units with an average flock size of about 5000-6000 birds with a daily egg production varying from 6-7 lakh eggs. The profit margins for a producer in the district was about 43 percent less as compared to a poultry producer from Barwala (a major poultry hub) in Haryana. This difference was mainly on account of variation in feed cost which accounted for about 75-80% of the total recurring expenditure of egg production.

Table 3: Cost dynamics of egg prices in Deoria (UP) & Barwala (Haryana) - 2015

(Amt. in Rs)

Particulars	Market Price per egg	Cost of production per egg	Margins per egg	Avg. margin per sale of egg
Barwala (Haryana)	3.01	2.75 – 2.80	0.21 - 0.26	0.235
Deoria (Uttar Pradesh)	3.26	3.10 – 3.15	0.11 – 0.16	0.135
Gap				43%

(Note: As the NECC does not declare the daily prices of eggs for Deoria, the prevalent practice is to consider the egg rates declared for Barwala (Haryana) and add transportation cost (Avg. about Rs. 0.25 per egg) to the same to arrive at the egg prices for Deoria)

To address this issue of high feed cost using economies of scale through collectivization, the poultry producers in Deoria district came together to form a farmer producer company. Thus, PPPCL, the FPO was incorporated on 30th October 2015 with an objective to address the issue of cost and quality of poultry feed and overall profitability of egg farmers. Initially, the company's focus was on production & supply of cheaper and good quality poultry feed and marketing of eggs. In 2018-19, the company diversified its business activities by undertaking procurement of rice and wheat at Minimum Support Price (MSP) as agent of the State Government and now plans to diversify in oil milling and seed processing. A snap shot of the company's business performance is as under:

Table 4: Snapshot of PPP Company Ltd, Deoria (UP)

(Rs. Lakh)

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Authorized Capital	10.00	20.00	20.00	20.00	20.00	20.00
Paid up capital	4.00	12.00	12.83	16.26	16.26	16.26
Membership	10	14	390	390	390	550
Total Assets	8.29	73.12	65.77	92.01	113.95	--
Profit / Loss	0.03	8.45	6.65	1.11	0.81	--
Borrowings	--	--	17.00	--	--	25.00

- The authorized share capital and paid-up capital of the FPO is Rs. 20 lakh and Rs. 16.26 lakh, respectively, with a membership base of 550. Out of 550 shareholders, about 300 are actively involved in the FPO business. No new addition of members has taken place for the past few years, except in 2020-21.
- Though, the company is in profit since inception, the same has been declining gradually. The reasons have been discussed in the subsequent sections.

Table 5: Segment-wise business turnover (PPPCL)

(Rs. Lakh)

S.No.	Particulars	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Poultry Business						
a	Poultry Feed		306.66	287.00	197.84	139.65	90.00
b	Marketing of eggs	7.70	11.26	0.45	0.36		
c	Supply of egg trays	2.08	1.52	2.37	1.64	0.22	
	Sub-total	9.78	319.44	289.82	199.84	139.87	90.00
2	Custom Hiring Services		0.89		0.70		
3	Procurement & Processing of rice						
a	Procurement of rice				28.53	44.40	76.41
b	Marketing of rice bran				1.99	3.10	4.67
c	Marketing of rice husk				0.91	1.42	0.87
d	Marketing of broken rice				0.74	1.15	1.52
	Sub-total				32.17	50.07	83.47
4	Procurement of wheat				52.77	63.34	45.05
5	Sale of paddy seed				0.49		
	Business Turnover	9.78	320.33	289.82	285.97	253.28	218.52

Note: Figures for 2020-21 are tentative

Business Diversification

- PPPCL started its business with overall turnover of Rs. 9.78 lakh during the initial 6 months of incorporation in 2015-16 which increased to Rs. 3.20 crore in 2016-17. However, thereafter, a gradual decline was observed.
- The business focus till 2018-19 was on supply of poultry feed which constituted nearly 96% of the total business in 2017-18 & 87% in 2018-19, the remaining being marketing of eggs, services under farm mechanization center, selling of egg tray and paddy seed. However, a gradual decline in the business turnover under poultry feed segment is observed with time.
- The reason attributed for this decline in poultry feed business of FPO was financial resource constraint. The FPO was providing feed to its members on a credit cycle of 15 days, whereas, the other established competitors as part of their marketing strategy for increasing the market share started providing feed at a credit cycle of 20 weeks resulting in drift of FPO members to other suppliers. This drastically impacted the poultry feed business of the FPO. Further, maize and soyabean are the two major raw material for making poultry feed constituting about 60-65% of the poultry feed. The prices of maize and soyabean normally fluctuate during the year. Commercial feed unit having adequate financial strength & storage infrastructure manage to procure & stock raw materials when the prices are low and, on account of large volumes, take advantage of economies of scale. On the other hand, the FPO, on account of financial constraints could not create the required storage infrastructure and stock raw material and, thus, had to resort to buying the raw material in retail at relatively higher cost which adversely impacted the business margins on account of competitive disadvantage. All the above challenges resulted in a decline of the business turnover and prompted the FPO to explore new business opportunities for sustaining its business viability.
- In 2018-19, the company decided to diversify into food grain procurement business on agency basis. The FPO started with wheat procurement and later also the procurement and processing of paddy during the same financial year. Gradual expansion of procurement activity changed the overall composition of FPO's business portfolio which is presented below:

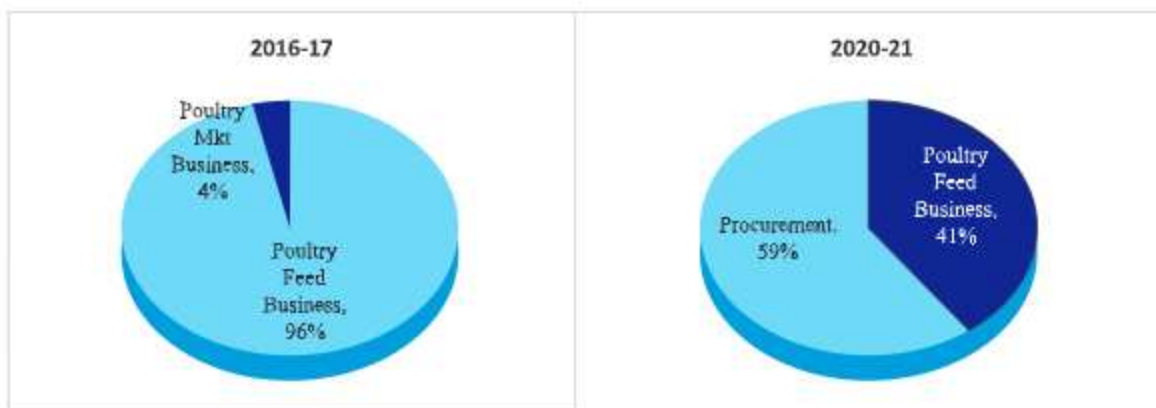


Fig. 1: Change in business composition of PPPCL

- The share of poultry feed business came down from 96 percent in 2016-17 to 41 percent in 2020-21 due to aforesaid reasons, while marketing of eggs has practically stopped by FPO due to margin constraints and competition. There was a shift in business focus to procurement of food grains as agency of the State Government, which, in 2020-21, constituted almost 59 percent of the total turnover of the FPO.
- As regards future plans of the FPO, the company is venturing into oil milling especially for mustard crop, which is grown in abundance in Deoria district and, also in seed production & processing, for which necessary infrastructure is being created. One of the promoters has agreed to provide a new oil expeller on rental basis and the FPO has been sanctioned a subsidy of Rs. 60 lakh by Government of Uttar Pradesh for setting-up of a seed processing unit.

Table 6: Profitability of PPPCL

(Rs. Lakh)

<i>Particulars</i>	2015 -16	2016 -17	2017 -18	2018-19	2019-20
Revenue	9.78	322.60	289.82	285.97	253.28
Expenses	9.74	308.90	280.13	284.66	252.25
Profit before tax	0.04	13.70	9.69	1.31	1.03
Tax	0.01	5.25	3.13	0.20	0.22
Profit after tax	0.03	8.45	6.56	1.11	0.81

- It may be observed from above that there has been a continuous decline in annual profit of the FPO over a period of time. The profit which stood at Rs. 8.45 lakh in 2016-17, got reduced to Rs. 0.81 lakh during the year 2020-21. The fall in annual profit can be attributed to the fact that the share of feed business which had higher profit margin (about 5 percent) has been replaced by the procurement business with lower margin (about 1-2 percent). Adjustment of loss of Rs. 8.93 lakh incurred during the year 2018-19 on account of non-payment of credit sales/receivables of poultry feed also accounted for decline in profits.

FPO in the Poultry Value Chain

The pre and post-FPO value chain structures and the business intermediation by FPO are presented and discussed below:



Fig. 2: Pre-FPO Poultry value Chain

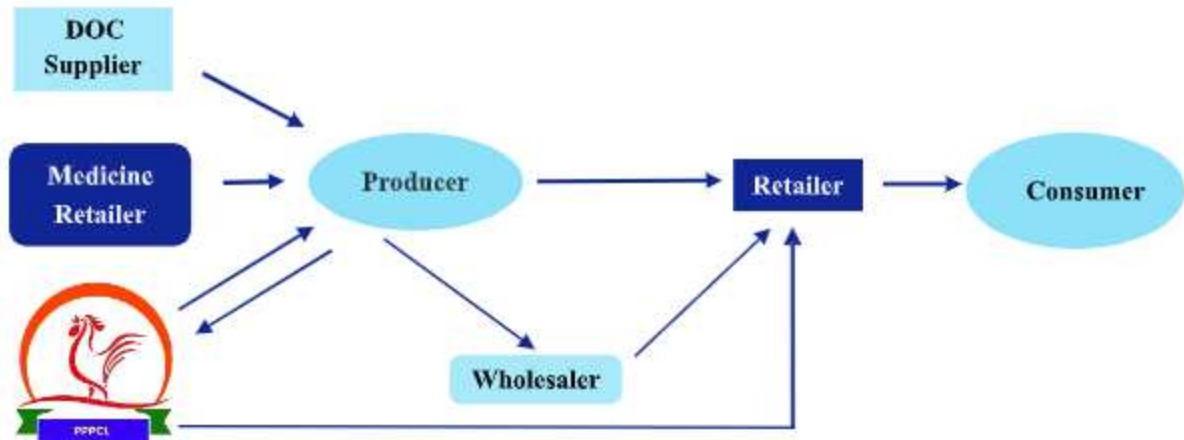


Fig. 3: Post Poultry Value Chain

- The FPO is participating as manufacturer and wholesaler in the business of poultry feed. Being a new entrant, it is making efforts to overcome the stiff competition from big competitors and aligning the businesses based on ground level experiences. However, presently, it is facing a lot of resistance from the existing feed suppliers working in the region who are giving liberal trade credit to growers/members of FPO. Another challenge being faced by FPO in the poultry feed business is related to the technology being used for preparation of feed by the big players who are providing poultry feed in pellet form whereas FPO is supplying in dry mixture form. The feed in the pellet form has better usage efficiency by birds especially in the context of fortified micro-nutrients like vitamins, minerals, etc. which further gets translated in the egg productivity in the birds besides reduction in feed wastage. Seeing the advantage and for regaining the market share, the FPO is contemplating to setup a pellet unit in future. Due to lack of finance, the FPO has not been able to upgrade its manufacturing technology at present.

- Initially, efforts were also made by the FPO to undertake wholesale marketing of egg in and around Deoria on a pilot basis. It tied-up with 4-5 prominent shopkeepers in different places viz. Kasia (Khusinagar), Talkulwa, Gader, etc. (Doeria). FPO marketed eggs procured from its members with a nominal margin of Rs. 0.05 per egg. Initially, the effort yielded some good results but later the egg vendors/traders entered into a direct arrangement with the egg producer members of FPO, by-passing the FPO, and the activity had to be stopped by the FPO.

Income Analysis of Poultry Feed Business

The details of the costs, revenues and profit margins from the poultry feed business of the FPO are presented in Table 7.

Table 7: Costs, revenues and profit margin from the poultry feed business (PPPCL)

(Amt in Rs)

S. No.	Particulars	2016 -17	2017 -18	2018 -19	2019 -20
1	Raw material cost	18.48	16.99	17.86	22.00
2	Operational cost	0.73	0.75	0.80	1.50
3	Total Cost (1 + 2)	19.21	17.74	18.66	23.50
4	Sale price	20.67	18.70	19.66	24.68
5	Profit margin (4 - 3)	1.46	0.96	1.00	1.18
6	% Profit margin	7.60%	5.41%	5.36%	5.02%

- The profit margin for FPC from feed business varied from 5.02 percent in 2019-20 to 7.60 percent in 2016-17, with an average margin of 5.85 percent.
- However, a declining trend is observed in the profit margin. The reason for this was attributed to unhealthy competition among feed manufacturers and an increase in cost of raw material.

Benefits to FPO Members

Notwithstanding the restricted margins on account of high competition and price sensitivity of the feed cost, the FPO supplied poultry feed to its members at lesser rates than the prevailing average market rates of other brands. The average selling price of feed by FPO was Rs. 20.93/Kg which was about 0.5 – 1.25 percent (avg. 0.88 percent) less than the average prevailing market rate of feed. This margin can be further improved by bringing further cost efficiency in feed manufacturing by FPO.

Table 8: Estimated financial benefit accrued to producer members of PPPCL

Particulars /Producer Unit Size (no. of birds)	2000	5000	7000	10000
Total Feed Consumption in 72 Weeks (Kg)	110880	277200	388080	554400
Average Sale price of FPO (Rs/kg)	20.93			
Average Market Rate (Rs/Kg)	21.11			
Reduction of feed cost per small poultry farmer (Rs)	20306	50766	71072	101531

Accordingly, the estimated monetary benefit to the small poultry producers for one cycle of poultry layer farming varied between Rs. 20,306 to Rs. 1,01,531 depending on the size of the unit varying from 2000 birds to 10000 birds per producer.

Economics of Paddy Procurement and Processing Value Chain

Participation by FPO in the paddy value chain

The prevailing agriculture value chain for paddy comprises of open marketing system and government procurement under Minimum Support Price (MSP) as depicted in Figure 4 below:

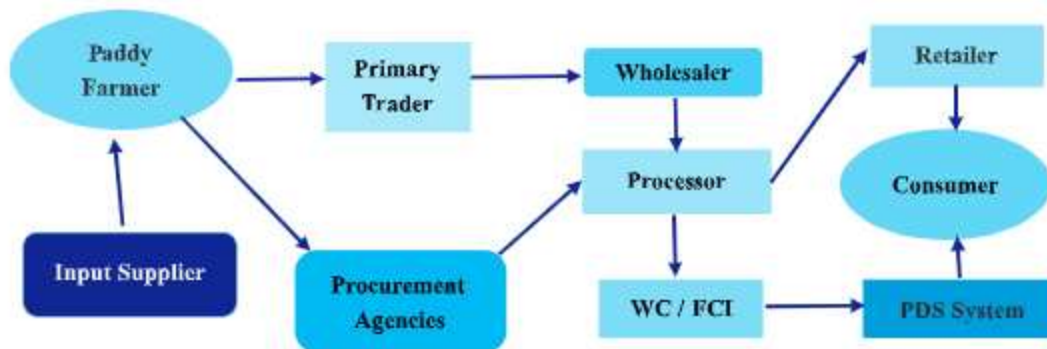


Fig. 4: Agri-Value chain of paddy without FPO

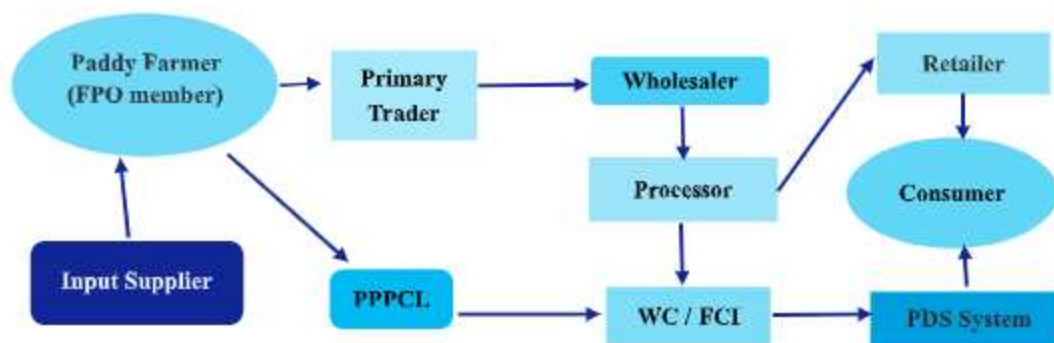


Fig. 5: Agri-Value chain of paddy with FPO

PPPCL participated in prevailing agri-value chain as a procurement & processing intermediary of the State Government. It directly procured paddy from farmers at Minimum Support Price under the government procurement system. This ensured more inclusive and transparent procurement and MSP to all the member farmers of FPO.

Rice Procurement Business – Cost, price and margin analysis

The details of the paddy procurement business of the FPO is presented in Table-9.

Table 9: Details of paddy procurement business by PPPCL

Particulars	2018 -19	2019 -20	2020 -21	Total
Quantity Procured (Qtl)	1876.20	2577.44	4090.47	8544.11
MSP (Rs/Qtl)	1770.00	1835.00	1868.00	5473
Procurement Cost (Rs. lakh)	33.21	47.30	76.41	156.92
Expenditure (Rs. lakh)	5.13	4.26	5.94	15.33
Income (Rs. lakh)	5.49	5.54	11.13	22.16
Profit (Rs. lakh)	0.36	1.28	5.19	6.83
Income (Rs/Qtl)	292.61	214.94	272.10	779.65
Expenditure (Rs/Qtl)	273.43	165.28	145.22	583.93
Profit (Rs/Qtl)	19.19	49.66	126.88	195.73

- The average quantity of paddy procured by PPPCL during last 3 years was about 2848 quintals at MSP with average procurement cost of Rs. 52.30 lakh and incidental handling expenditure of Rs. 5.11 lakh.
- The average net profit accrued to the FPO from this business activity was only Rs. 2.28 lakh with profit margins of about 4 percent.
- Under the prevailing system, the procurement agencies are required to supply 67 kg of rice to State Government agencies for every 100 kg of paddy procured and accordingly the payments are made. The options available for any procurement agency is to either get paddy processed from outside or set-up its own processing unit. In this case, the FPO procured a second hand paddy processing plant. The details of the cost incurred by FPO on procurement and processing of paddy from 2018-19 onwards were as under:

Table 10: Cost of paddy processing

S. No.	Particulars	2018-19	2019-20	2020-21	Average
i	Qty. procured (Qtls)	1876	2577	4090	2848
ii	Processing cost (Rs)	339155	247062	297835	294684
iii	Fuel - Diesel for transportation (Rs)	155740	161114	277905	198253
iv	Salary of Staff for 3 mths (Rs)	18000	18000	18000	18000
	Total	512895	426176	593740	510937
	Cost incurred (Rs/Qtl)	273.40	165.38	145.17	179.40

The average cost (2018-19 to 2020-21) incurred for paddy handling and processing was Rs. 179.40 per quintal. Though, the handling & processing cost per quintal declined from Rs. 273.40 in 2018-19 to Rs. 145.17 in 2020-21, the same was much higher than the rate of reimbursement of Rs. 92.21 per quintal paid by the government (Table 11). This calls for further improvement in processing efficiency and up-gradation of technology. Details of the handling and processing charges paid by the government to FPO is indicated below:

Table 11: Reimbursement from the Government for Rice Procurement

(Amt in Rs)

S. No.	Description	2018-19	2019-20	2020-21	Average	Income (Rs/Qtl)
i	Commission	52533	24239	114533	63768	22.39
ii	Loading/Unloading	11632	5367	25360	14120	4.96
iii	Transport	30957	42527	67492	46992	16.50
iv	Milling	18762	25774	40904	28480	10.00
v	Incentive	37524	51548	81809	56960	20.00
vi	Dryness	33208	47296	76409	52304	18.37
	Total	184616	196751	406507	262625	92.21

- Thus, there is a negative gap of Rs. 87.19 per quintal (Rs. 179.40 – Rs. 92.21) of paddy procured by FPO.
- However, the FPO earns additional income from the sale of by-products obtained from the paddy processing activity which compensates for the loss in direct income. The details of income earned from paddy processing by-products are presented in Table 12.

Table 12: Income from paddy processing by-products (PPPCL)

(Amt in Rs)

S. No.	By-products	2018 -19	2019 -20	2020 -21	Average	Earnings (Rs/Q tl) of paddy processed
1	Husk	91461	84336	87400	87732	30.80
2	Rice Bran	198752	213712	467188	293217	102.95
3	Broken Rice	74216	59595	152250	95354	33.48
	Total	364429	357643	706838	476303	167.24

To summarize, it can be stated that against the total expenditure of Rs. 179.40 per quintal of paddy, FPO earned a total income of Rs. 259.45 per quintal of paddy handled comprising of Rs. 92.21 per quintal from reimbursement from the government (36 percent) and Rs. 167.24 per quintal from sale of processing by-products (64 percent). It is also observed that profitability under paddy procurement is highly dependent on the returns from the sale of processing by-products, which again is a function of processing efficiency/technology. The dynamics are discussed below.

Dynamics of returns from the paddy processing by-products

At the time of procurement from farmers, the FPO checks for the quantity of rice, husk, bran and broken rice content on a sample basis (as the government reimburses as per the standard commission ratio of 67% from paddy to rice). If the likely recovery of rice from paddy is less than a minimum standard of 67%, the farmer has to provide proportionate extra paddy to FPO or the same is adjusted in the payment. Further, the income from the by-products varies with the actual quantity/composition of by-products and the market prices from time to time. The average prevailing prices and standard composition of by-products were as under:

Table 13: Average prices and composition of bye-products

Paddy processing products	Avg. Prices	% composition
Broken Rice (per Kg)	14.00	5.5%
Bran (per Kg)	13.50	7.5%
Husk (per Kg)	1.40	20.0%
Rice (Per Kg)		67.0%

It may, therefore, be observed from above that any change in the prices and the composition of the by-products becomes very important for maintaining the overall income and profitability of procurement operation by the agency. A sample test at the time of study showed that the husk content

was 23% as against the average of 20%. This means that the share of the broken rice and bran was less by about 3 percent. Assuming that there was a decline of 1.5 percent each in broken rice and rice bran, the implication of the same on income are presented in Table 14.

Table 14: Implication of change in composition of paddy by-products on income

(Amt. in Rs.)

Products	Avg. Prices (Rs/kg)	Avg. share of by-product (%)	Qty. (kg)	Income	Altered share of by-products (%)	Revised Qty.	Revised Income	Loss in income
Total Qty procured (Kg)	284800							
Broken Rice (per Kg)	14	5.50%	15664	219296	4.00%	11392	159488	-59808
Bran (per Kg)	13.5	7.50%	21360	288360	6.00%	17088	230688	-57672
Husk (per Kg)	1.4	20.00%	56960	79744	23.00%	65504	91705.6	11961.6
		33 %	93984	587400	33 %	93984	481881.6	-105518

- It is therefore evident that the returns from the sale of paddy by-products is dependent on the composition of by-products obtained from milling process. The variation in the composition in by-products could be on two accounts viz. the machine efficiency or the paddy variety procured. Thus, FPO has to take remedial measures to maintain the earnings/profitability particularly in case of machine efficiency. Considering the fact that the net profit of FPO was very thin i.e. Rs. 0.81 lakh during 2020-21, the above loss of Rs. 1.05 lakh due to change in composition of by-products has potentially wiped-off the profits of the FPO.
- Thus, it is predominantly with the sale of by-products directly undertaken by FPO, the overall procurement activity becomes viable. The overall profit margins under this activity for the FPO were as under:

Table 15: Overall profitability of paddy procurement operations of PPPCL

Particulars	2018-19	2019-20	2020-21	Avg.	Rs/QtI
Qty Procured (QtIs)	1876	2577	4090	2848	--
a) Handling Expenditure Incurred by FPO (Rs)	512895	426176	593740	510937	179.40
b) Reimbursement of expenditure from Govt. (Rs)	184616	196751	406507	262625	92.21
c) Income from sale of paddy by-products (Rs)	364429	357643	706838	476303	167.24
d) Net Income (b + c - a)	36150	128218	519605	227991	80.05

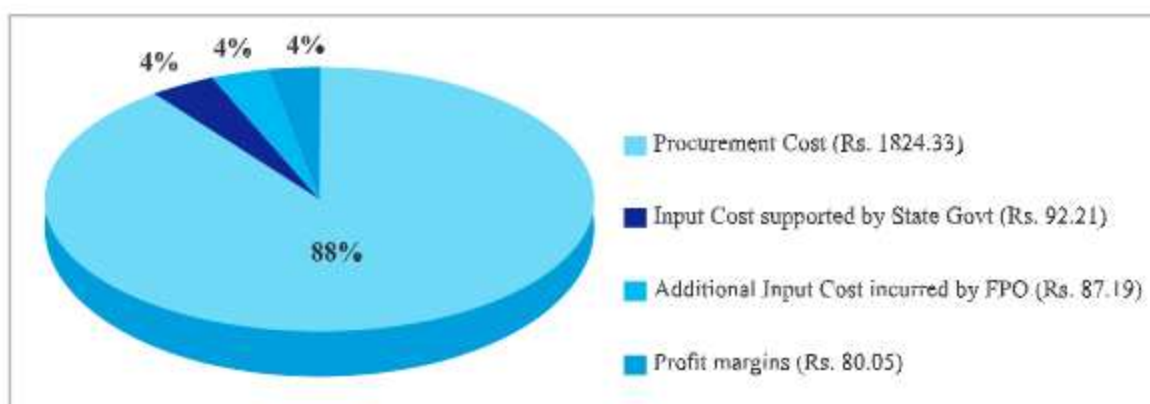


Fig 6: Procurement & Input Cost and profit margins in paddy procurement business for PPPCL (Rs. per Quintal basis)

Incremental Benefits to Farmers due to Paddy Procurement by PPPCL

The average price of paddy in the open market was Rs.1508 per quintal as compared to the average MSP of Rs.1824 per quintal paid by the FPO during the last three years. The enhancement of economic rent of the farmers was found to the extent of Rs. 27.18 lakh which is about 21 percent above the open market price of paddy. The details are presented in Table 16 below.

Table 16: Margins under paddy procurement business (Producers)

Procurement	Qty handled	Avg. Market Price	MSP	Incremental price over Mkt. Price	Incremental benefits to Producers due to MSP	Avg. Incremental benefits over 3 yrs
	Qtls	Rs/Qtl	Rs/Qtl	Rs/Qtl	Rs.	%
2018-19	1876	1475	1770	295	553479	20.00%
2019-20	2577	1500	1835	335	863442	22.33%
2020-21	4090	1550	1868	318	1300769	20.52%
Aggregate of 03 yrs	8544	1508	1824	316	2699939	20.95%

Procurement of Wheat by PPPCL

Similar to the paddy procurement, the existing value chain for wheat comprises of open marketing system and government procurement at MSP. The FPO participated in agri-value chain as a procurement agency under the government procurement program at MSP.

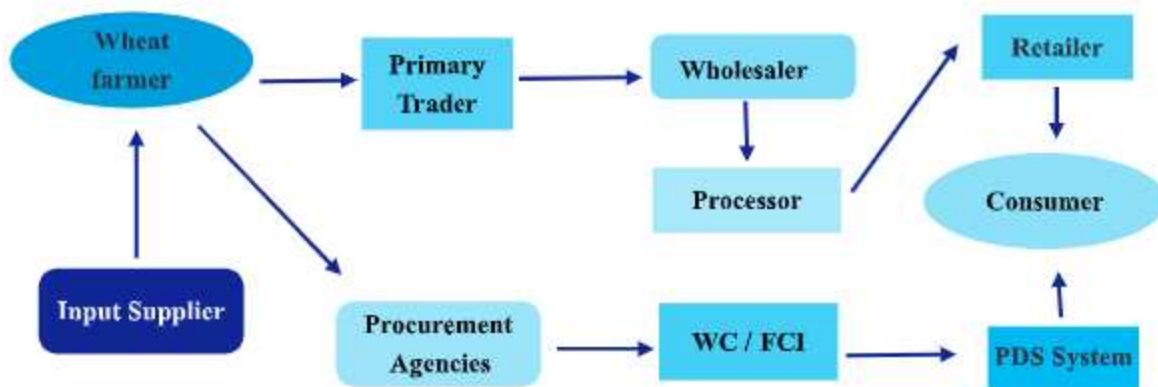


Fig. 7: Agri-Value chain of wheat without FPO

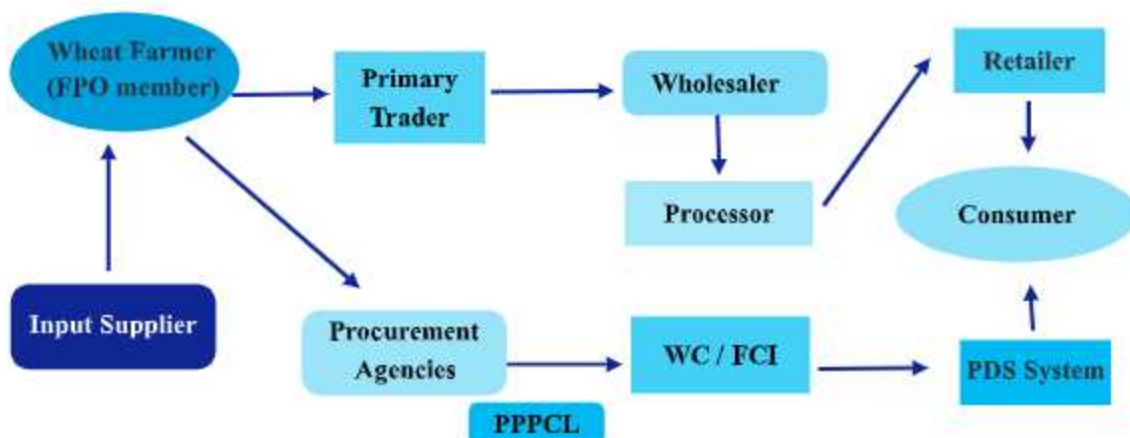


Fig. 8: Agri-Value chain of wheat with FPO

Financials of Wheat Procurement Business by PPPCL

The year-wise details of wheat procurement business of the FPO are presented below:

Table 17: Wheat procurement business by PPPCL

Particulars	2018-19	2019-20	2020-21	Average
Quantity Procured (Qtls)	2862.50	3405.02	2340.00	2869.17
MSP (Rs/Qtl)	1745.00	1860.00	1925.00	1843.33
Value of wheat procured (Rs. Lakh)	49.95	63.33	45.05	52.78
Handling expenses (Rs. lakh)	0.99	0.88	0.81	0.89
Commission received (Rs. Lakh)	1.45	1.73	1.19	1.45
Surplus (Rs. lakh)	0.46	0.84	0.38	0.56
Economics per quintal of wheat procurement				
Commission received by FPO (Rs/Qtl)	50.70	50.70	50.70	50.70
Handling expenses of FPO (Rs/Qtl)	34.45	25.92	34.45	31.08
Surplus (Rs/Qtl)	16.25	24.77	16.25	19.62

- The FPO procured about 860.70 MT of wheat and earned a net cumulative profit of Rs. 1.69 lakh during the three years of operation (2018-19 to 2020-21).
- The average of net profit accrued to FPO from wheat procurement for three years was Rs. 0.56 lakh which is about Rs. 19.62 per quintal of wheat procured. It may be observed that the surplus earned by FPO per quintal of wheat procured improved in 2019-20 with increase in volume of wheat procured. The break-up of the same is presented in Table 17.

The profit margins under wheat procurement business were as under:

Table 18: Per quintal economics of wheat procurement business (PPPCL)

S. No.	Particular	Unit	Unit Rate paid by Dept. of civil supply	Actual Cost incurred by FPO	Margins
A	Cost of wheat purchased	Rs/qtl	1843.33	1843.33	0.00
B	Other costs incurred				
i	Transportation	Rs/qtl	16.44	19.25	-2.81
ii	Loading /Unloading	Rs/qtl	6.25	10.01	-3.74
iii	Misc. Expenses including interest on WC	Rs/qtl	0.00	1.83	-1.83
C	Commission earned by for FPO	Rs/qtl	28.00	--	28.00
	Total cost	Rs/qtl	1894.02	1874.41	19.62

- The actual cost of procurement of wheat at MSP incurred by FPO was Rs.1874.41 per quintal against the reimbursement of Rs.1894.02 per quintal from the Department on Civil Supply. Thus, the activity resulted in a limited margin of Rs.19.62 per quintal (1.05 percent) of wheat procured.

Benefits to Farmers due to Marketing Wheat through FPO

The price dynamics for the wheat procured by FPO was as under:

Table 19: Price discovery for FPO member from wheat sale through FPO (PPPCL)

Year	Quantity Procured by FPO at MSP Qtls	MSP Rs/Qtl	Avg. Market Price Rs/Qtl	Diff. in MSP & Avg. Market price Rs/Qtl	Gross benefit/loss to farmers Rs.	Loss/benefit to farmers %
2018-19	2862.50	1745	2100	-355	-1016188	-16.90%
2019-20	3405.02	1860	1650	210	715054	12.73%
2020-21	2340.00	1925	1700	225	526500	13.24%
Total	8607.52	1843	1817	26	48541	1.45%

- Benefit to farmers by selling wheat to FPO depended on the difference between MSP at which FPO paid to farmers and average market price of wheat during that year.
- During 2018-19 there was no benefit to the farmers who sold wheat to FPO at MSP as the average market price of wheat was higher than MSP during that year.
- The benefit accrued to the farmers varied from 12.73 percent in 2019-20 to 13.24 percent in 2020-21 as the MSP was higher than the average market rates during these years.
- On an average, the farmers gained by about 1.45 percent from 2018-19 to 2020-21 on account of selling wheat to FPO at MSP.

Kamla Farmer Producers Company Ltd. (KFPCL), Darbhanga, Bihar

The KFPCL started its operations in Ghansyampur block in district Darbhanga which a backward and underdeveloped area prone to frequent floods. Constrained by lack of employment opportunities, the adult males of the area moved out seasonally to other states for work as non-skilled farm labour. The women supported household incomes by undertaking economic activities like backyard poultry, goat rearing and kitchen gardening at subsistence level. About a decade back, *Heifer International*, an international NGO started supporting formation of women SHGs, with an objective of alleviating poverty prevalent in the area. About 1000-1200 women were organized into informal SHGs with efforts to build their capacities in livelihood opportunities through *Mithila Gram Vikas Parishad (MGVP)*, a local NGO. The activity for which maximum interest was exhibited by the locals was goat farming as it was operationally feasible, involved little investment and economically beneficial. In fact, goats as commodities were considered as bank ATMs for women as they could raise immediate cash in times of need by selling goats locally.

Though selling of goat was not a challenge in the area, but prices obtained by women were low. The prevalent system of sale was on piece basis rather than on body weight basis. The goat rearing activity was also not being undertaken on scientific lines, allowing free grazing, which not only impacted the goat productivity but also resulted in social issues due to open grazing, browsing of each other's kitchen gardens leading to frequent fights among villagers.

In 2016, with an intent of resolving the above issues, MGVP, the NGO formed a FPO of these women SHGs and thus Kamala Farmer Producers Company Ltd. came into existence. Presently, the membership base of the FPO is 3716, with 3512 shareholders from about 51 villages in Kiratpur and Ghanshyampur Blocks of district Darbhanga. The unique feature of the FPO is that it is fully owned and governed by women farmers belonging to the weaker sections of the society.

Business Profile of FPO

Though the main activity of the FPO is promoting goat farming, it has also diversified into agricultural input & output business i.e. providing seeds to the farmers in their area and marketing of agriculture produce. For promotion of goat farming activity, the FPO is facilitating backward linkages such as breed improvement (Black Bengal), scientific goat rearing with shed system and stall feeding, vaccination, etc. and developing forward linkages for marketing of goats with better

price realisation through contractual buy-back arrangements. The FPO was also instrumental in introduction of system of sale by live weight basis in place of earlier prevailing sale on live piece basis based on visual assessment by traders. A snapshot of company's performance is presented in Table 20.

Table 20: Snap shot of performance of Kamla Farmer Producers Company Ltd, Bihar

Particulars	2017-18	2018-19	2019-20
Authorized Capital	10.00	10.00	10.00
Paid up capital	1.00	1.00	5.62
Assets	2.00	7.92	15.69
Profit / Surplus	0.01	0.03	0.95
Borrowings	0.00	1.79	2.25

Participation of FPO in the Goat Value Chain

The extent of participation in the goat value chain is depicted in Figure 9.



Fig. 9: Goat Value Chain

- The FPO is participating in the value chain of the goat business as input supplier and primary trader/aggregator by replacing the local primary traders. The FPO has entered into a written contract with wholesalers for direct supply of live goats procured from FPO members on a commission basis.

Goat Business by FPO – Turnover and Profit

The business from goatry activity for the FPO is only restricted to 3 percent commission on the sale value both from the Producer (1.5 percent) and the Wholesalers (1.5 percent). The total turnover and profit under this activity for the FPO is presented in Table 21.

Table 21: Turnover and profits under goat Business (KFPCL)

Year	Turnover (Rs)	Profit (Rs)	% Margin
2017-18	13,18,267	13,419	1.0%
2018-19	13,58,826	38,824	2.9%
2019-20	27,59,267	82,096	3.0%
2020-21	36,06,492	1,07,593	3.0%
Average	22,60,713	60,483	2.7%

- The average turnover under this business segment during last 4 years was Rs. 22.61 lakh with an average margin of 2.7 percent.



Fig. 10: Year-wise margins under goat business (KFPCL)

- The year-wise analysis indicates that the FPO started with a very thin margin of 1 percent in first year which has now reached a level of stable 3 percent during the last two years, mostly on account of contractual arrangement of FPO with processors.

Trading of Agri-Produce and Agri-Input by KFPCL

Besides, FPO interventions in goat value chain, KFPCL also ventured/diversified into trading of local agri-produce (mainly wheat & maize) and bulk purchase of agri-inputs and selling to farmers at minimum margins. The details of turnover, profit and margins are discussed below:

a) Trading in Agri-Produce

This business segment comprised of procurement and sale of agri-produce (mainly wheat & maize) by KFPCL. The details of business turnover and profits under this component are as under:

Table 22: Turnover and profits under agri-produce trading by KFPCL

Year	Business Turnover (Rs)	It (Rs)	Margins (%)
2017-18	93,529	1,330	1.4%
2018-19	3,39,201	5,089	1.5%
2019-20	6,55,930	9,842	1.5%
2020-21	5,41,141	10,529	1.9%
Average	4,07,450	6,698	1.6%

- The average turnover in trading of agri-produce during last 4 years was Rs. 4.07 lakh, with an average profit margin of 1.6 percent.
- The year-wise business margins presented below (Figure 11) indicates that FPO is operating this business on a very thin margins. However, it is also observed that with time, both the trading volumes as well as margins have improved.

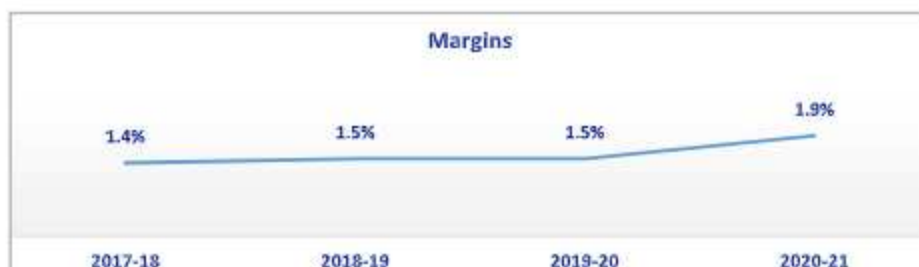


Fig. 11: Year-wise profit margins under trading of agri-produce by KFPCL

b. Agri-Input Business by KFPCL : Profitability

Under input business, the FPO is supplying seeds of cereals & vegetables to the farmers. The details of the turnover and profits under this segment are presented in Table 23 below.

Table 23: Turnover and profits under input business (KFPCL)

Year	Business (Rs)	Profit (Rs)	Margin (%)
2018 -19	3,27,900	9,954	3.0%
2019 -20	13,61,870	59,995	4.4%
2020 -21	20,19,030	110514	5.5%
Average	12,36,267	60,154	4.9%

- The average turnover during last 3 years was Rs. 12.36 lakh, with an average profit margin of 4.9 percent.
- The analysis of year-wise margins (Figure 12) indicates that the same are increasing with increased turnover of seed business. There is an increase in profit margins from 3 percent in 2018-19 to 5.5 percent in 2020-21.



Fig. 12: Year-wise margins under input business (KFPCL)

How Farmers/Members benefitted from KFPCL ?

Due to interventions of KFPCL in goat value chain, benefit to farmers/producer accrued on three accounts viz. increased productivity, better price realisation and on social harmony.



Fig. 13: Benefits to producers in Post FPO scenario (KFPCL)

- a) Productivity: The initiatives undertaken by FPO for productivity enhancement in goat rearing were as under:
 - o Breed improvement: Maintaining and providing for breeding to farmers, bucks of *Black Bengal* breed producing high-quality meat and having other advantages like low requirement of feed, high kid production rate (a doe giving one to three kids twice a year), easy adaptability to varying environment and high disease resistance.
 - o Scientific rearing: Introduction of the system of model goat shed made from local material, stall feeding, regular vaccination through Pashu Sakhi (trained women FPO members) and diet management helped in productivity enhancement in goats. Skill development of the goat rearers in making mineral block for ensuring proper growth of the goat along with popularization of azola farming (considered a very nutritious feed for the goat). As a result, there was not only 15-20 percent gain in body weight of an 18 month old buck but the mortality rate also came down from 10 percent to 2 percent.
- b) Transparent market practices for better price realisation
 - o Introduction of weighing machine for promotion of live-goat selling instead of prevailing practice of pricing of goats based on visual assessment by local traders helped the producers in getting fair price for their goats based on actual live body weight. Assuming the role of aggregator, the FPO executed written contractual arrangement with wholesalers and thus the producers were also hedged from the price fluctuations.
 - o Based on the information collected from the producers, the difference in income between pre & post FPO scenario was as under:

Table 24: Price Discovery for FPO members in goat farming (KFPCL)

Particulars	Pre-FPO	Post-FPO	Remarks
Average weight of a 18 month goat	12-14 Kg (Avg. 13 kg)	14-16 kg (Avg. 15 kg)	Introduced weight system
Market price (Rs/kg live weight)	Rs. 200-230 (Avg. 215)	Rs. 220-240 (Avg. 230)	Introduced price contract as an aggregator
Sale realisation per goat (Rs)	2795	3450	
Price Difference (%) per goat due to FPO interventions		23.4%	

c) Social Advantages

- o Before FPO formation, goat farmers normally left the animals for open grazing. Many a times, the goats would browse the vegetables in household wadis/ kitchen gardens resulting in frequent brawls among villagers. With shed system and stall feeding introduced by FPO, not only this issue got resolved but farmers also started sending their children to schools who would otherwise accompany grazing goats.
- o Men folk were migrating to adjoining states to work as agriculture labourers. However, understanding the profitability of goat rearing activity, a few of them stopped migrating and have undertaken goat rearing as a livelihood activity on a full time basis.

Lord Buddha Vegetable Producer Company Limited (LBVPCL), Kushinagar, UP

The FPO is a NABARD supported FPO formed in July 2015 in the district of Khushinagar of Uttar Pradesh. Presently, the FPO has 702 members and is engaged in multiple activities viz. agri-inputs business, seed procurement, processing and marketing of wheat and marketing of banana. The overall financial performance of the company is as under:

Table 25: Snap shot of financial of LBVPC Ltd

(Amt in Rs)

Particulars	2019-20	2020-21
Authorised Capital	500000	500000
Issued, Subscribed & Paid up Capital	100000	195110
Assets	946034	621134
Turnover	1932687	6051350
Profit	12807	40963

Details of Activities of LBVPCL

a) Agri-Input Business

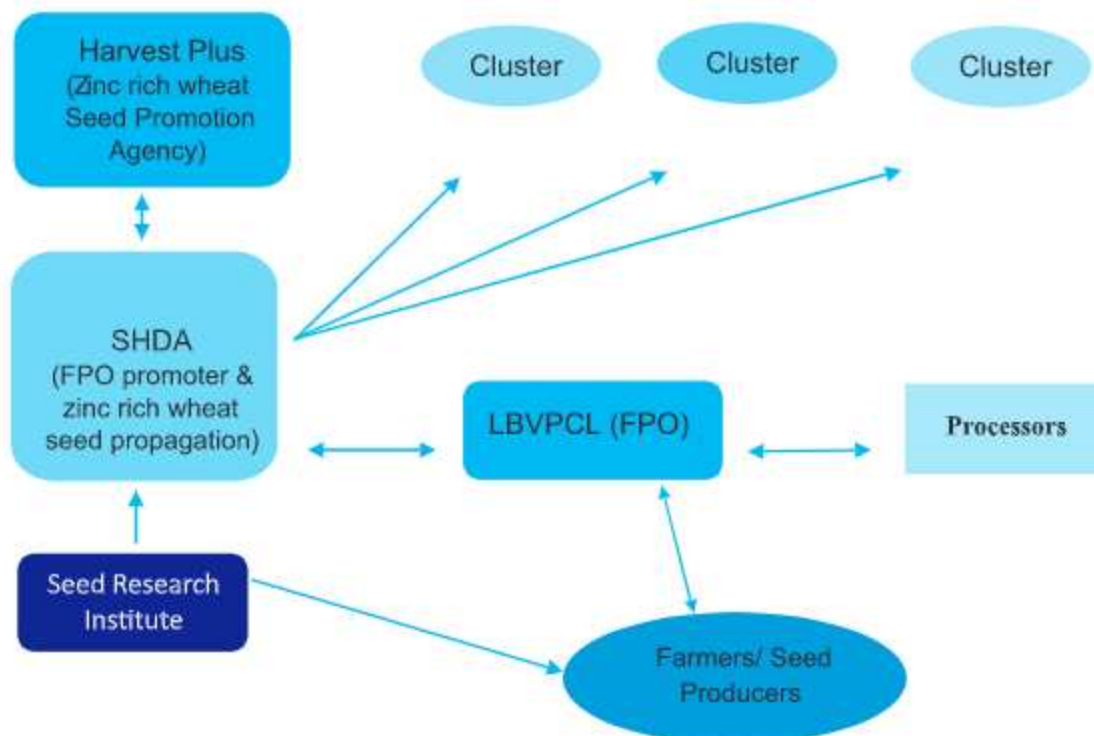
Agri-input business of the company comprised of sale of the planting material of banana, onion, turmeric, wheat, paddy, etc. along with other inputs like fertilizers and plant protection materials (pesticides, insecticides and weedicides) to its members in a timely manner, at reasonable cost and by ensuring the quality.

The annual turnover of the input business undertaken by the FPO was to the tune of Rs. 24.47 lakh & Rs.17.53 lakh during 2019-20 and 2020-21 with average profit margins of 4.64 percent & 9.09 percent, respectively.

Due to component-wise non availability of data on cost, expenses and sale price of individual items, a detailed analysis of cost, income and margin could not be undertaken for this activity. However, during the interactions with FPO officials and members, it was indicated that the member producers could save about 5-10 percent on the input cost as compared to purchase of these inputs from open market, in addition to other benefits such as timely availability of quality input in adequate quantities to farmers which improved productivity/quality of produce.

b) Seed Procurement, Processing and Marketing of Wheat Seed

This business activity of FPO was supported by *HarvestPlus*, a USA based foundation, which is working for improvement in nutrition and public health by developing and promoting bio-fortified food crops that are rich in vitamins and minerals. Under the agreement between *HarvestPlus* and *Sustainable Human Development Agency* (SHDA), promotion of a particular variety of wheat with high quantity of zinc is to be undertaken by SHDA. SHDA which also happens to be the promoter of this FPO has created clusters in the region for direct supply of zinc rich wheat seeds to the farmers. The FPO has been assigned an agency role for procurement of wheat seed from its members, processing the same with a buyback arrangement between SHDA & FPO. The wheat procurement price is fixed by SHDA on annual basis and reimbursements to the FPO are made by SHDA along with a commission charge of Rs. 1.85 per Kg inclusive of processing charges. The agri-value chain of seed propagation and participation of the FPO as an agency for procurement, processing and marketing of wheat seed is illustrated below.



During the last two years (2019-20 & 2020-21), the total quantity of wheat seed handled by FPO was about 3340 quintals. The details are presented below:

Table 26: Wheat seed business of LBVPC Ltd

S. No.	Particulars	Amount (Rs.)	Cost (Rs./ Qtls)
A	Quantity Handled (Qtls)	3340	
B	Cost Incurred		
i	Wheat procurement cost	6565733	1966
ii	Seeds Certification, Demo, Licence Cost	45898	14
iii	Transportation Cost	51000	15
iv	Processing & Packaging Cost	523968	157
v	Freight Charges	22000	7
vi	Labour Cost	6000	2
vii	Loading Charges	35000	10
viii	Cost of bags	100562	30
ix	Seed testing charges	4880	1
x	Weight Machine charges	10800	3
	Total Cost	800108	240
C	Revenue from sale of processed wheat seed	7982270	2390
D	Profit	616429	185

Benefit to the FPO from Wheat Seed Business

Wheat seed was procured by FPO from its member producers during last two years at an average rate of Rs. 1966/quintal. This price was higher than the average MSP of wheat and also the market price of wheat during respective years. The processing of the wheat was undertaken by FPO on a custom hiring basis. The average processing cost (grading & packing) was Rs. 240 per quintal and the seed was purchased by SHDA from FPO @ 2390/quintal. This resulted in a profit of Rs. 185 per quintal to the FPO which was around 8 percent of the sale value per quintal of wheat.

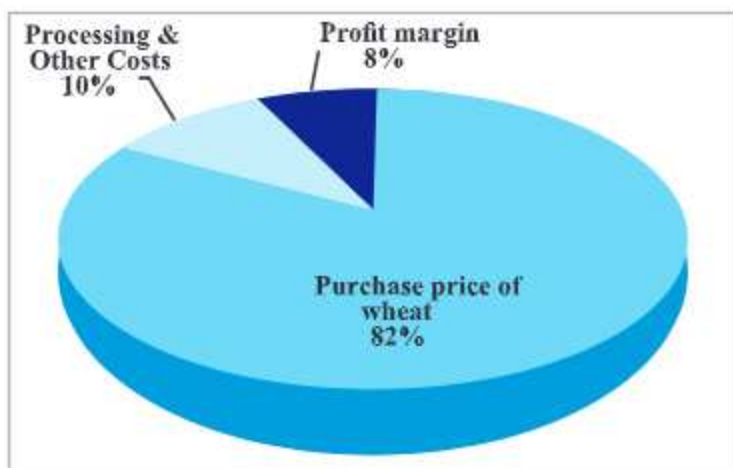


Fig 15: Margin under wheat seed procurement, processing & marketing.

Benefit to the Producer Members

The price received by members of the FPO for their wheat produce was Rs.1966 per quintal as compared to the average prevailing market price of Rs.1675 per quintal. Hence, a producer associated with FPO could realise 17.37 percent more returns as compared to pre-FPO scenario. The price realisation was also better as compared to the average MSP of wheat during these years.

c) Procurement and Collective Marketing of Banana

District Kushinagar is one of the major banana growing districts in Uttar Pradesh along with Maharajganj, Gorakhpur, Barabanki, Faizabad, Santkaber Nagar and Fatehpur. While analysing the agri-value chain of the banana cultivation, harvesting and marketing of banana starts in the month of September and lasts up to November. The average yield varies from 200 to 250 quintal per acre with major cultivars *robusta* and *grande naine*.

Participation of FPO in the Banana Value Chain

The extent of participation in the banana value chain by the FPO is presented in Figure 16.



Post FPO value chain of banana

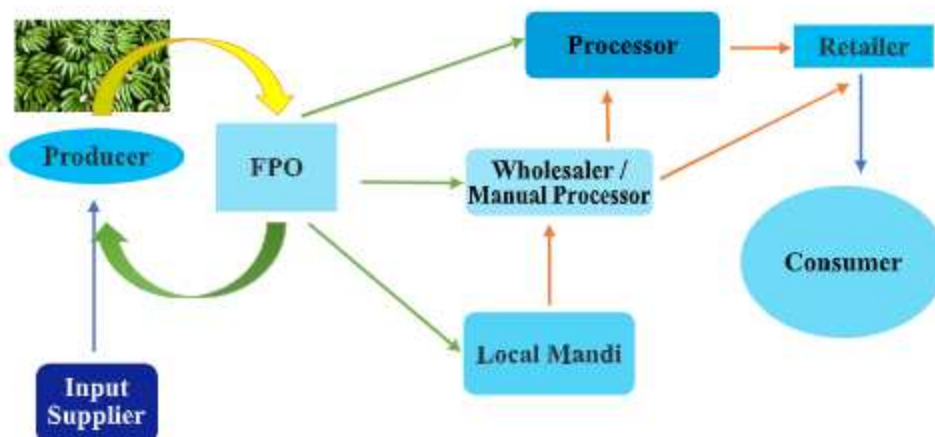


Fig. 16: Pre FPO value chain of banana

The majority of the banana produced in Khushinagar district is sold through primary trader/commission agents and remaining produce passes through local mandies, the major fruit mandi at Gorakhpur. Overall, as the district lacks requisite infrastructure and support system for banana processing (value addition activities). Mostly, green banana is sold by the producers through these channels. LBVPCL, the FPO participated in the banana value chain as agri-input supplier and aggregator cum trader of banana produced. Other than facilitating supply of the inputs like fertilizers & plant protection material, etc. the FPO also procured tissue cultured banana plantlets and supplied to the member farmers on cost without profit for productivity enhancement.

Banana Procurement and Marketing by LBVPCL

The details of procurement and marketing business of the FPO are presented in Table 27. The business turnover under this segment was to the tune of Rs.11.07 lakh and Rs.15.07 lakh during the year 2019-20 and 2020-21 respectively. The FPO marketed the banana procured from farmers in Gorakhpur Mandi which is the major market in the nearby area.

Table 27: Financial of banana marketing by LBVPC Ltd

Years		Qty of Banana Procured	Cost of Procurement	Operational Expenses	Total Cost Incurred	Income from Sale of banana	Surplus /Profit	Avg. profit over total cost
		Qtls	Rs lakh	Rs lakh	Rs lakh	Rs lakh	Rs lakh	%
2019-20	Total	1000	10.48	0.45	10.93	11.07	0.15	1.34%
	Avg. (Rs/Qtl)		1047.96 (94.63%)	44.75 (4.04%)	1092.70	1107.39	14.69 (1.33%)	
2020-21	Total	1500	13.32	1.31	14.63	15.07	0.44	3.02%
	Avg. (Rs/Qtl)		887.99 (88.40%)	87.09 (8.67%)	975.08	1004.56	29.49 (2.93%)	
Total	Avg Cost (Rs/Qtl)	1250	11.90	0.88	12.78	13.07	0.29	2.31%
	Avg. (Rs/Qtl)		967.97 (91.67%)	65.92 (6.24%)	1033.89	1055.98	22.09 (2.09%)	

(Percent share to sale indicated in brackets)

Benefit to the FPO

The FPO operated this business segment on a very thin average margin of 2.31%. However, there was a slight increase in the profit margins in 2020-21 to 3.02% as compared to previous year (1.34%).

Benefits to the Producers

Based on the discussions held with the banana producers regarding the benefits accrued to them from marketing their produce through FPO as compared marketing through the primary traders/mandi, it was reported that the benefits were more on account of the aggregation model through FPO which helped in elimination of exploitative marketing practices by local traders. Thus, the price realisation for the produce was more on account of improvement in operational aspects of marketing, the details of which are as under:

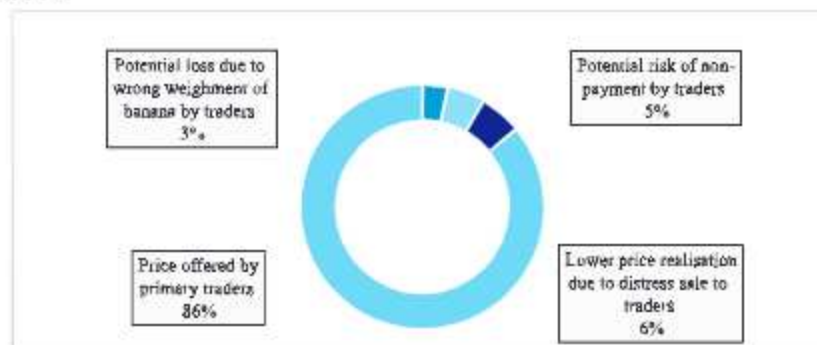


Fig 17: Benefits to the producer through FPO procurement & marketing

The mal-practices related to weight measurements by primary traders accounted for loss to the producers ranging from 2-4 percent, non-payment of the part dues by traders accounted for losses in the range of 4-6 percent and the low price realisation due to distress sales accounted for loss varying from 4-8 percent. Thus, on an average a producer was getting around 14 percent less revenue for his produce sold through primary traders as compared to the revenue earned when sold through FPO.

The financial loss for the member of FPO for last two years averaged Rs. 129.33 per quintal of banana. The details are presented in Table 28.

Table 28: Estimated benefits to banana farmers by marketing through FPO

Particulars	Gross Amt (Rs.)	Per Quintal (Rs/ Qtl)	Relative Share (%)
Value realised by farmers by selling banana to FPO	2379940	951.98	100.00%
Potential loss saved due to under-weighting by traders @ 1 Qtl/30 Qtls of sale	79331	31.73	3.33%
Potential loss saved due to risk of non-payment by traders @ 5 - 10%	118997	47.60	5.00%
Potential loss saved due to distress sale price by traders @ 50/Qtl (minimum)	125000	50.00	5.25%
Selling price received by farmers in pre-FPO scenario	2056612	822.64	86.41%

Thus, based on the feedback provided by FPO members, it is estimated that the earnings for the farmers increased by 13.59 percent as compared to pre-FPO scenario due to collective marketing of banana by FPO.

CONCLUSIONS AND WAY FORWARD 4

1. **The Purvanchal Poultry Producer Company Limited (PPPCL), Uttar Pradesh**
 - a) **Business Diversification and convergence:** PPPCL, Deoria originally started with business activities like poultry feed manufacturing/supply and marketing of eggs in 2015 and later diversified into providing custom hiring services (2016), procurement & processing of paddy, procurement of wheat under MSP as government agencies (2018) and now plans to undertake oil milling and seed processing activities in 2021. They have already been sanctioned a subsidy of Rs. 60 lakh from Government of Uttar Pradesh for setting up of the seed processing plant and the work has already started. Based on the ground level issues faced by members and their experience, FPO has been diversifying into new business lines. FPO could also garner excellent support from Central and State Government under their sponsored programs like setting up of custom hiring centers, oil milling unit & seed processing plant through local level convergence. Thus, business plan diversification of FPO has been guided both by identified business opportunities in the local area and availability of incentives under government schemes. It is, however, observed that the custom hiring center of FPO is being used only for transporting poultry feed and related raw material and not as farm machinery bank in its true sense.
 - b) **Availability of working capital, technology and market competition:** The feed manufacturing and marketing of eggs activities were initially taken up by PPPCL with the objective of providing better profit margins to local layer units. The profit margins for egg producers in Doeria district of UP was 43 percent less as compared to a poultry farmers in Barwala in Haryana. This was on account of higher feed cost for units in Deoria. Feed cost constituted about 75-80% of the total recurring expenditure for egg production. Though, initially FPO could succeed by providing cheaper feed manufactured locally, but with time, the turnover and margins came down on account of constraints like availability of working capital, competition from existing big poultry feed units who started providing feed on extended credit sales (20 week) and also feed manufacturing technology (competitors providing poultry feed in pellet form which is more effective as compared to feed in dry mixture form provided by FPO). This resulted in gradual reduction of turnover under feed business from Rs. 3.06 crore in 2016-17 to Rs. 0.90 crore in 2020-21. Thus, while the FPO participated as a wholesale intermediary in supply of poultry feed and marketing of eggs, it could operate only at the local level and scale of operation remained low, denying benefit of economies of scale to FPO.
 - c) **Optimizing raw material cost to remain competitive:** The profit margin for FPO from feed business came down from 7.06 percent in 2016-17 to 4.78 percent in 2019-20. The average margin being 5.52% during the period. The reasons attributed were unhealthy competition and

an increase in cost of raw material. However, there exists a good scope for FPO for increasing the margins by way of striking better cost efficiency in the raw material management. A bulk of the raw material in poultry feed (almost 65 percent) comprises of maize (50 percent), soyabean meal (10 percent) and mustard meal (5 percent), while others constitute 35 percent.

The rates of all these three key ingredients vary during the year, based on demand and supply position and other factors. If the same can be procured in bulk at lower prices and stored, it can help the FPO in bringing about cost efficiency which in turn shall get translated into better margins. However, this would require adequate storage space/infrastructure and also adequate working capital support to hold the stocks for a longer period. Availability of adequate working capital is a constraint for FPO at present. Alternatively, the FPO can also take land on lease and undertake cultivation of the above crops or go for contract farming involving its members. Thus, the FPO can hedge its raw material price risk to a large extent.

- d) **Value proposition for FPO members despite low business margins:** In spite of restricted margins on account of high competition and price sensitivity of the feed cost, the FPO could provide poultry feed to its members at cheaper cost as against the prevailing average market rates of other brands. The estimated monetary benefit to the producers for one cycle of poultry layer farming varied from Rs. 20,306 to Rs. 1,01,531 depending on the size of unit from 2000 birds to 10000 birds per producer. Thus, though the feed supply activity could not become high margin business for FPO, it added substantial incremental economic benefits to the member farmers.
- e) **Market intelligence and diversification for better margins:** Efforts were made by the FPO to undertake wholesale marketing of eggs produced by its members in and around Deoria through informal tie-ups with prominent egg vendors. Though, initially the effort yielded good results, later on the shopkeepers entered into supply arrangement directly with the nearby producers' members, by-passing the FPO. As a result, the activity had to be stopped by the FPO. However, situation analysis in the course of study suggested that wholesale egg marketing can still be profitable for FPO, if wider egg-markets are explored in Uttar Pradesh as the egg prices and the resultant margins vary in different markets. For example, average monthly rates per 100 eggs for the period 2015 to 2020 declared for identified places in Uttar Pradesh by National Egg Coordination Committee (NECC) showed variation and good potential for price arbitrage as indicated below:

Table 29: Year-wise monthly margins

(Rs/egg)

Markets	2018	2019	2020
Barwala (Haryana)	3.58	3.59	3.60
Deoria (Uttar Pradesh)	3.83	3.84	3.85
Lucknow (Uttar Pradesh)	4.17	4.21	4.36
Varanasi (Uttar Pradesh)	4.13	4.22	4.36

The applicable wholesale market rates at Deoria are normally the rates declared for Barwala wholesale market plus the transportation charges (from Barwala to Deoria) which on an average work out to about Rs. 0.25 per egg. Considering the fact that the distance from Deoria to market centres like Lucknow & Varanasi would be less than or equal to distance to Barwala, the transportation cost can be assumed to be the same or even less. Thus, the margins per egg for wholesale egg marketing business would have been as under:

Table 30: Year-wise monthly average rates by NECC

(Rs/egg)

Markets	2018	2019	2020
Lucknow (Uttar Pradesh)	0.09	0.12	0.26
Varanasi (Uttar Pradesh)	0.05	0.13	0.26

As can be seen, market-wise notional net margin per egg varied from Rs. 0.05 to Rs. 0.26 per egg. Thus, there exist a good opportunity for FPO in future to carefully study the price trends in various potential markets, workout transportation costs and strategize tie-ups with wholesalers/retailers in diversified market to remain competitive in egg wholesaling business and also add financial benefits to its member producer.

- f) **FPO as government agency for food grain procurement: Govt. policy and technology are the key:** PPPCL, the FPO participated in agri-value chain as an independent procurement and processing agency for paddy procurement from farmers under the government procurement system. Participation as agency of government for procurement of food grains under MSP provides high turnover business opportunity to FPO. FPO had a turnover of Rs. 57.42 lakh under paddy business activity but average net profit was only Rs. 2.28 lakh. Thus, the FPO worked on a thin margin of about 4 percent. As the payments from government to procurement agency only linked to a minimum 67% conversion in rice, for ensuring profit, FPO has to depend on the income from the by-products obtained from the processing of paddy. While the by-products comprise of about 5.5 percent broken rice, 7.5 percent rice bran and 20 percent rice husk, the actual composition may vary with variety of paddy, technology/efficiency of processing, etc. and returns from the by-products may, therefore, vary adversely affecting the profitability of procurement business of FPO. For example, the sample test at the time of study showed that the husk content in the sample was about 23 percent as against the standard of 20 percent, which translated in financial loss of as high as Rs. 1.06 lakh. Considering the fact that the overall net profit of FPO was only 0.81 lakh during 2020-21, the above could have more than doubled the profit of the FPO for the year. It can be suggested that since this increase in husk percentage can only on two counts viz. the machine efficiency or the varietal issue, the same needs to be addressed by the FPO. This calls for review of the existing paddy procurement policy of the government as per which, the procurement agencies have to supply a minimum of 67 Kg of the rice for every 100 kg of paddy procured. However, there is a large variation from 58 to 67 percent in the rice yield per 100 kg of paddy depending upon the paddy

variety and processing technology employed. The financial loss on account of lower ratio of rice conversion is borne by FPO.

Therefore, while government needs to suitably amend its payment policy taking into consideration the varietal/other issues to prevent financial loss to FPOs as procurement agents. On their part, FPOs will have to invest in promotion of better paddy varieties by farmers, evolving better methods of sample testing at procurement centers and use of modern technology for processing of paddy.

Despite the practical issues faced by the FPO and low margin earned, participation of FPO in the paddy procurement activity added gross incremental benefit of Rs. 27.18 lakh (20.95 percent higher) to its members due to sale of paddy to FPO on MSP (Rs. 1824/Qtl) which was higher than the average market price of paddy (Rs. 1508/Qtl) during the period.

- g) FPO participation in wheat procurement on MSP – Benefits to farmers depended on MSP Vs. Open market prices** PPPCL also participated as agency of government for procurement of wheat on MSP. The FPO participated in agri-value chain as a procurement agency under the government procurement program at MSP.

During the period 2018-19 to 2020-21, the actual cost of procurement of wheat at MSP by FPO was Rs.1874.41 per quintal against which FPO got reimbursement of Rs.1894.02 per quintal from the Department on Civil Supply. Thus, the FPO operated on very thin margin of Rs. 19.62 per quintal i.e. 1.05%. The study revealed that the benefits to the farmers due to procurement on MSP depended entirely on the market price of wheat during the year. The benefit accrued to the farmers varied from 12.73 percent in 2019-20 to 13.24 percent in 2020-21 as the MSP rates of wheat were higher than the open market price. However, in 2018-19, the open market rates went above MSP rates for wheat, therefore, the farmers had to incur a loss of 16.9%.

2. Kamla Farmer Producers Company Ltd. (KFPCL), Bihar – Goat value chain – Of the women, by the women!

- a) The case presents a classic example of how the social capital built in the form of women SHGs for years can be taken to the next higher level of promoting income generation activities such as goat farming by the women groups who formed themselves into an all women FPO in a relatively backward district of Darbhanga in Bihar. The main focus of the FPO (KFPCL) was to develop goat farming which was already being undertaken by women on a low scale and on traditional lines into the goat value chain on scientific and commercial lines. The FPO facilitated establishment of both backward and forward linkages viz. breed improvement (Black Bengal), goat rearing on scientific lines using shed system, stall feeding, balanced nutrition, vaccination, etc. and organised marketing. In addition to above, the FPO also diversified into agri-input & output business providing seeds and other inputs services like fertilizers, plant protection material, etc. to families along with marketing of their agriculture produce, for further enhancing incomes of its members.

FPO participated in the critical nodes of goat such as breed improvement, scientific rearing for productivity enhancement and as an intermediary in organized marketing of goats replacing the wholesalers. The FPO entered into a written contract with wholesalers for direct supply of live goats for meat on a commission basis. This prevented exploitative marketing practices that were being earlier adopted by local traders, putting goat rearers to substantial financial loss

FPO acted as an aggregator for selling of goats of members to local wholesalers on actual live weight basis on a commission basis at the rate of 3 percent of the sale value (1.5 percent each from producers & wholesalers). With average turnover of Rs. 22.61 lakh during last four years, the margin under this segment for FPO was about 2.7 percent which is expected to increase with rise in sales volumes. With good ground work being done by FPO for propagating better goat rearing practices among its members, the business is likely to grow in scale with increase in size of the goat holding unit per family in future.

- b) **Benefit to the goat rearers:** Interventions of FPO in goat value chain directly benefitted goat rearing women members in various ways. Adoption of scientific goat rearing practices resulted in productivity enhancement due to 15-20 percent gain in body weight of an 18 month old buck and also reduction in mortality rate from 10 to 2 percent. Introduction of sale by actual live weight instead of live-goat selling (guess weight) earlier practiced by local traders helped the producers in getting fair value for their goats. On an average, increase of about 23.4 percent in overall income was observed at the producer level. FPO assuming the role of an aggregator and execution of formal contractual arrangement with wholesalers also helped hedging price against undue fluctuations. The practice of shed & stall feeding instead of open grazing introduced by FPO prevented destruction of standing crop, minimised fights among villagers and families started sending their children to schools for education. Some of the male members of the families who earlier were seasonally migrating to adjoining states for employment have now undertaken goat rearing locally on a full time basis.
- c) **FPO services in agri-input supply and marketing of produce:** FPO also has diversified itself in supply of seeds/inputs and procurement and sale of agri-produce. The average turnover during last 4 years under procurement and sale of agri-produce was about Rs. 4.07 lakh, with average margin of 1.6 percent. Though, the FPO is operating on a very thin margin, with time & experience, the margins have improved from 1.4 percent (2017-18) to 1.9 percent (2020-21). Under input business the FPO is mainly undertaking seed supply. The average turnover for last three years was Rs. 12.36 lakh with an average margin of 4.9 percent. The year-wise trends in margin indicates that with increase in turnover, the margin have grown from 3.0 percent in 2018-19 to 5.5 percent in 2020-21.

3. Lord Budhha Vegetable Producer Company Limited (LBVPCL), Kushinagar, Uttar Pradesh

The LBVPCL FPO is engaged in multiple activities viz. agri-input supply comprised of sale of seeds, planting material, fertilizer and plant protection material. It also undertook processing

and marketing of wheat and marketing of banana crops.

- a) **Agri-input business:** The annual turnover under this component was to the tune of Rs. 24.47 lakh & Rs.17.53 lakh during 2019-20 and 2020-21 with average margins of 4.64 percent & 9.09 percent respectively. Though, due to component-wise non availability of data, a detailed analysis of margins could not be undertaken, it was gathered from the interactions with the FPO members that they could save 5-10 percent on the input cost in general in comparison to pre-FPO period in addition to other benefits like timely availability of quality input in adequate quantities.
- b) **Procurement, processing and marketing of wheat seed:** The FPO participated in the value chain of wheat both as procurement and processing agent on behalf of *Sustainable Human Development Agency* (SHDA) involved in promotion of a variety of wheat rich in zinc. FPO received a fixed commission of Rs. 1.85 per Kg (8 percent margin) from SHDA. This activity was quite beneficial to the members as the price received for their wheat was Rs.1966/quintal as compared to the average prevailing market price of Rs.1675/quintal resulting in 17.37 percent more returns as compared to pre-FPO scenario.
- c) **Procurement and marketing of banana:** The majority of the banana produced in the region is sold through primary trader/commission agents and remaining in local mandies, mostly at Gorakhpur. FPO participated as input supplier (tissue cultured planting material & fertilizers) and as aggregator and primary trader/commission agent. Tissue cultured banana plants supplied by FPO to the member farmers on a cost to cost basis helped in productivity enhancement. The average profit margins of FPO, were less at 2.25 percent, though, the profit margins increased from 1.33 in 2019-20 to 2.93 percent in 2020-21. The banana marketing by FPO was restricted only to the local mandi in Gorakhpur. If the major mandis like Noida, Delhi are explored in future, the profit margins are likely to improve significantly.
- d) **Benefit to the producers:** The benefits to the producers were more on account of the aggregation model through FPO which helped in elimination of exploitative marketing practices by local traders. Based on the feedback provided by FPO members, it was estimated that the earnings for the farmers increased by 13.59 percent as compared to pre-FPO scenario due to collective marketing of banana by FPO.

4. FPO business interventions – Financial Sustainability and Value Proposition for Farmer Members

The underlying objective of most of the business activities / interventions by FPOs was redressal of the issues being faced by the producers of major commodities in their local areas. It is observed that almost all the FPOs attempted business diversification across value chains to provide comprehensive solutions to variety of issues of members and maximising financial returns to them from the specific commodity value chains for sustainability of the organisations.

Different FPOs participated at different stages of the supply/value chains and business activities covered agri-input marketing, technology improvement, aggregated marketing of produce, contract marketing with vendors, procurement agencies of government at MSP, etc. Thus, these FPOs need to upscale their operations for profit maximization.

The FPOs have so far not been able to explore the role in value chain as secondary processors, where the operating margins are high. They have restricted themselves to the role of primary processor, there too, as aggregator only. Thus, operating with modest turnovers on account of financial constraints and with operations restricted to local markets only, they are operating on thin margins.

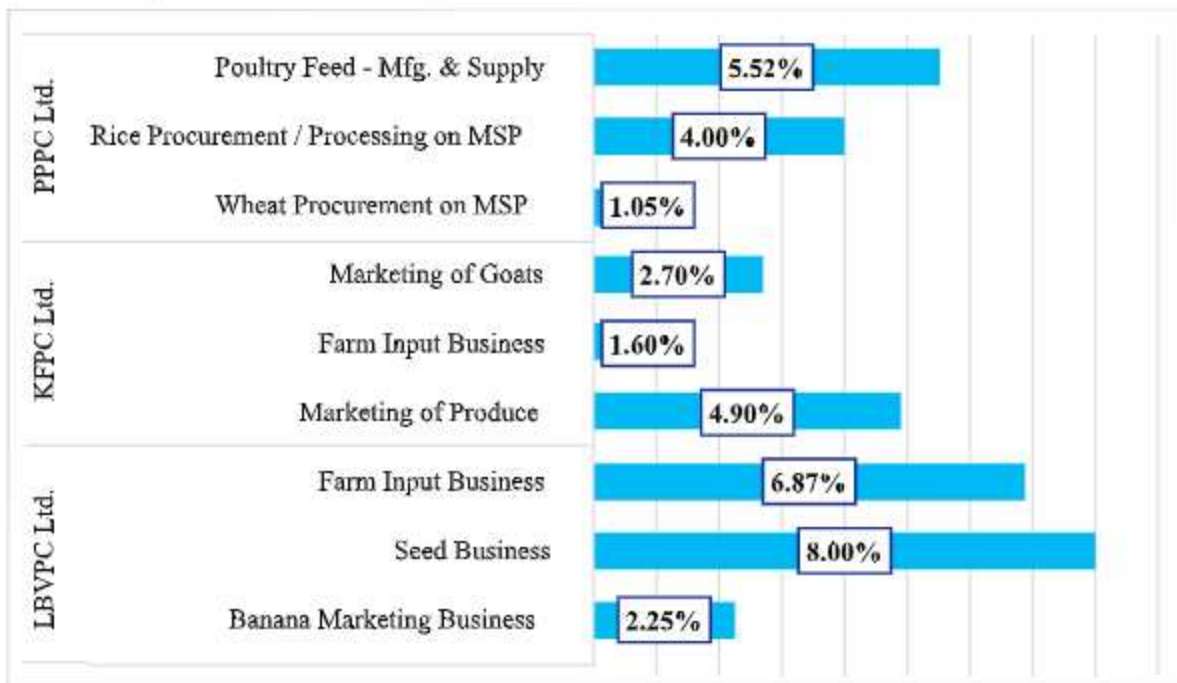


Fig. 18: Segment-wise profit margin for FPOs

- a) **Profitability of business activities of FPOs** The average business margins for FPOs from different business activities are summarised below:

Broadly enterprises by FPOs involved local production, manufacturing, value addition and trading such as seed supply, farm input trading, processing/marketing of produce. Processing/marketing of produce earned better margins for FPOs. Procurement as an agency of government had least margin but provided volumes to the FPO.

- b) **Incremental financial returns to FPO members:** As mentioned earlier, the business interventions by FPOs were mostly prioritised/ formulated based on the problems being faced by the member farmers across the supply/value chain of the commodity/produce they were primarily dealing with. As per the FPO concept, most sample FPOs made sincere efforts and drew business strategies to find solutions to problems of their members and/or maximising net

financial returns of the members by taking up activities for improving the financial/production efficiency of pre-harvest activities (farm inputs supply, variety/breed/technology up-gradation, feed/seed supply, etc.) and/or post-harvest operations (aggregation of produce, processing and marketing, pre-contract pricing with local traders, transparent market practices to prevent exploitation of farmers, etc.). The net incremental benefit accrued to farmer members from various interventions of different FPOs are summarised below:

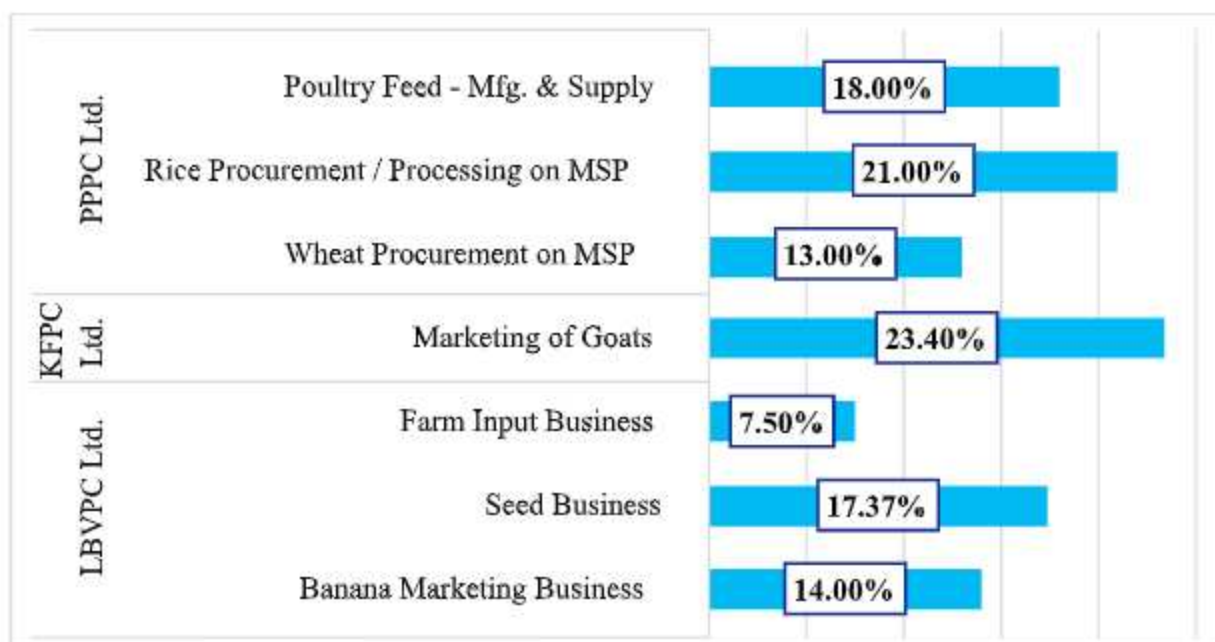


Fig 19: Net incremental benefit to farmer members due to intervention by FPOs

As can be seen, though FPOs themselves operated on a thin margin, their business and other interventions generated substantial net incremental financial benefits for their members due to saving in input cost, gains in productivity due to better quality inputs and scientific production practices, minimising losses due to transparent marketing practices with FPOs acting as a market aggregators, better price discovery for aggregated produce by FPOs in local markets, etc. The extent of financial gains accrued to farmer members due to FPO interventions ranged from the modest 7.5 percent (farm input supply) to as high as 23.40 percent (goat value chain interventions).

This validates the concept of FPO as an umbrella feasibility and business organisation for SFs/MFs for improving viability of smallholder farming enterprises through an aggregation strategy. For enhancing the business profit margins of FPOs and expand the horizon of their services to members, FPOs further need to adopt combination of strategies for enhancing membership, increasing business volumes, expanding beyond local markets, dealing in multiple commodities, charting business interventions along multiple nodes across the given commodity value chains, embracing better technologies, finding and accessing large capital

and financial resources for business expansion, undertaking primary/secondary processing of local produce, manufacturing key farm related inputs locally, enhancing their role in agri-markets for preventing exploitative marketing practices, connecting members to wider markets through e-NAM, etc. for better price discovery/realisation, exploring the scope for providing peripheral production, technological, financial and non-profit services to member farmers for improving financial viability of FPO operations.



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