

Issues and Challenges faced by FPOs in Karnataka.

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Executive Summary

Food is our basic need and hence the person who grows food must not be paid less attention to. Farmers are the key members of our lives providing us with every nutrient our body would ever need. This research was conducted to understand the lives of farmers and their suffering during COVID pandemic and otherwise. In the process of bringing this research to a point of conclusion, we have connected to 59 FPOs of Karnataka and have interviewed them telephonically regarding their issues with the system.

With the conversation we had with the CEOs and members of FPOs we realized that the situation of the majority of FPOs is not good. Few of them do not even have a proper physical space or infrastructure. Due to the poor condition of FPOs in Karnataka, they are not being able to gain the trust of Farmers to empower them to join the FPO. FPOs were created to help farmers, but FPOs have themselves become so helpless that they need help.

Most of the FPOs are fighting the battle of fluctuating prices but are very weak to win it. Hardly few FPOs get the demanded price for their products. As only a part of the produce is sold at MSP farmers are struggling to sell the rest of their produce. Even when sold at MSP they are not getting payments at the said time and at the same time COVID situation making it much worse. Non-availability of inputs and inability to go out and take care of their crops, farmers have lost a good deal which they are still struggling to recover. Again farm bills have set out new havoc of confusion among the farmers and the FPOs. Though most of them believe that farm bills are useful there are still a few things which need to be addressed to gain clarity. With this report, we

are making an effort to bring the problems and certain solutions into the light to invite required attention from the people who are in the position to improve the situation for all.

Introduction

The last meal you had was seeded, cultivated, and harvested by the farmers who worked hard in the field. Without farmers, it would be hard for us to find food. But the situation has turned out so worse that the farmers who were working to keep us alive are dying.

Farmers are the ones who work selflessly to feed the nation and what they get in return for it is mere cheating, deception, debts, and finally a forced death. People are blind with greed, that they don't see how important it is to protect farmers to keep the world alive and healthy. We are more dependent on farmers than they could ever be, but the situation is reversed due to all the mishappenings around. We are responsible for farmer's sufferings. We are very particular in being egoistic enough to bargain with farmers and small vendors. At the same time, we pay extra for the established vendors. Hence the farmers get poorer and the rich get richer day by day.

The poor organization of the agriculture sector limits the bargaining capacity of the farmers. The middlemen bargain with farmers and purchase the product at a lower price. To increase the bargaining power of farmers, the central government initiated farmers to form companies to organize the farming process and for the marketing of the farm produce.

Farmer Producer Organisation - A Government initiative for organizing the agriculture

The government has taken various initiatives to help farmers to increase their production capacity and double their income. Farmer Producer organisation (FPO) and Farmer Producer Company (FPC) are the initiatives to support the farmers and the farming community. FPC is a legal entity formed by a group of producers or farmers which has a minimum of 10 members under the Companies Act 2013.

The main objective of FPO and FPC is to organize farmers and improve their bargaining power in the market, owned and operated by shareholder farmers and administered by professionals. It adopts good principles of cooperative societies and efficient practices of business to organize the agriculture sector and empower the farmers. They produce, harvest, process, grade, store, and market food products, It also provides technical services, financial assistance, seed production and distribution, fertilizer and pesticide supply at a cheaper price, Minimum Support Price (MSP) facilitation, training and development of the member's interest and many more to empower the farmers.

FPOs are promoted by central government agencies like Small Farmers Agribusiness Consortium (SFAC), NABARD and Rashtriya Krishi Vikas Yojana (RKVY). Hence the FPOs are initiated by the Government to support and improve the standard of living of the farmers, and it is supposed to improve the standard of living as well.

According to SFAC India, there are more than Eight Hundred FPOs in the country. This study tries to understand the reality of the functioning of FPOs. The reality check on the working of the existing FPOs are crucial as the government is initiating Ten Thousand new FPOs all over India by 2024. Understanding the current challenges faced by the existing FPOs is necessary to bring new solutions for the effective functioning of FPOs in the country. We also try to comprehend the issues and challenges faced by the farmers during COVID 19 pandemic and feedback of FPOs regarding the Farm bill 2020.

We all know what COVID 19 has put up with lockdown wherein almost all sectors of the economy were shut down. But we couldn't shut down the agriculture sector, due to its inevitability in our life. It is quite evident from the news and other informative mediums that the agriculture sector was also affected due to the pandemic. Despite all the problems faced by the farmers, the pandemic added more challenges to their baggage.

Challenging situations in the economy give birth to new transformations. The Agri sector should sustain the well being of the people and for the same, we can depend only on technology for transforming to the next level. To improve the conditions of the farmer, the government initiated farm bill 2020 which is meant to support the farmers and increase the income of the farmers. It encourages new systems and technologies for marketing their products and increasing the income of the farmers.

But what will be the result in the long run, when an uneducated farmer and educated polished buyer bargain for the price? Certainly, the farming sector needs new advancements in adopting technologies and new methods of marketing to increase production and sustainability.

In this research, we are analysing the problems of farmers on account of the covid pandemic, new farm bills and its drawbacks. We are also trying to identify the requirements of FPOs and their needs, to run the FPOs and help the farmers.

Literature review

Raju KV, et al., (2017) In this study identified that the majority of the FPOs in Andhra Pradesh are yet to find ways for regular marketing of their produce. None of the FPOs dealing with perishable commodities has proper storage facilities. The bulk traders in major cities like Hyderabad, Visakhapatnam and others do not disclose the price until the commodities reach their doorsteps and once it does they purchase them at a price almost 40% lower than the market price. He says that very few FPOs have realized the importance of primary level processing of the commodity. The failure of extension level activities by the line departments have led to the disconnect in the transfer of technology and up gradation in taking up processing at FPO level. he also stated that most of the FPOs are at an infant stage and have not come across the benefits of aggregation of agricultural inputs like seeds, fertilizers and pesticides, farm equipment etc. Andhra Pradesh is one of the top producers of various agricultural commodities and yet has made very minimal exports. He suggested that their export potential must be harnessed through natural farming. In the earlier stages FPOs have faced a lot of problems due to limited access to low-interest credit. He stated that due to no proper financial help the FPOs were not able to even build minimal infrastructure like a warehouse, cold storage or even vehicles to help them mobilize and sell. The success rate of FPO's are very low and the major reason for this is unsuccessful revenue or business model. Stagnant growth production, constant price variations and increased cost of production have led to the failure of FPO in the AP state. He finally

concludes that an FPO can become successful only when there is a scope to consistently increase the crop productivity by at least 30-40% and reduce the cost of production by 20-30% or increase the price per unit by 20-30%.

Rani Nidhi, et al., (2017) Concluded that drought is one of the most common problems of the majority of farmers. Farmers rarely sell through APMC, the majority of them sell their produce to the local vendors. The local farmers are not very favourable to adopting organic farming. Fixing a proper price or receiving the right price for their produce has been a major concern of the farmers due to lack of proper base or authentic source of information regarding the market prices. Hardly 30% of the farmer population own farm animals. Farmers in Karnataka are not much aware of the available government schemes which could prove to be beneficial to them. Lastly, she concludes that the monopoly of buyers in the market has led to distress and forced the sale of their farm products at a lower price leading towards the exploitation of farmers.

R Venkattakumar, et al., (2019) Stated that the major challenges faced by FPOs are delayed supply and distribution of inputs, the government using caste system as a base to decide who is eligible to access the particular scheme, delay in recognition of license from the concerned departments, the delay is accessing grants from SFAC, developing links with financial institutions, lack of experience in running business activities and delay in connecting to government. It was also stated that there is a need for FPO's to concentrate hugely on certain essential performance indicators, the ones like eliminating political interventions, involving members and encouraging them to participate in the decision making, empowering the members to elect or select, maintaining transparency in financial transactions, abiding by the set rules,

finding ways to raise funds, fixing reserve funds, sharing profits equally and connecting and joining with the government. There is a need for input supply and arranging on-farm training, advisory on agro-techniques and group formation and strengthening activities but there is a lack of an adequate number of appointed staff at various levels which has disabled the extension of broad-based services to the producer members.

These are some of the studies conducted regarding the functioning of FPOs and also of them concluded that an effective financial support scheme and transparent marketing will bring fortune to FPOs.

Our study focused on the recent challenges faced by FPOs due to COVID 19 pandemic and concerns over farm bill 2020, Thus our research is relevant due to one of the first kinds of research conducted in this area.

Problem statement

FPOs are the organised body of farmers to empower the farmers. Proper functioning of FPOs is vital for the empowerment of the farmers who are the members of the FPO. In this study, we are intending to find out the major challenges and problems faced by the FPOs, particularly related to COVID 19 Pandemic and also about the feedback and anxieties about the farm bill.

The objective of the study

- To identify the current problems of the farmers and FPOs during COVID
- To understand the anxieties and concerns about Farm Bill 2020.
- To identify the needs of the farmers and FPOs

Need for the study

Farmers are the support system of the Indian economy. By supporting them we can support the economy. The suffering of a farmer can make the economy also suffer and yet the farmers are not taken seriously. This study is important to know the needs of the farmers and help them accomplish the life they deserve.

FPO enables the small and medium farmers together to sell their produce by pooling them. This increased the bargaining power of the farmers which in turn helped them get better prices for their produce. Apart from that, FPOs also try their best to provide farmers with required inputs at an affordable price. It was introduced by the government considering the terrible situation of Indian farmers.

When the concept was introduced it did seem attractive to farmers. But the reality always shows itself when it is put into practice. The government has just introduced and put the concept into practice but has failed to help them with their day to day problems. Even though different schemes and departments were made to support the FPOs it has hardly made any positive changes to the FPO. It was closely like giving birth to a baby and abandoning it. Here, by denying it to work on its own. Farmers continue to get exploited. FPOs are still facing problems dealing with buyers. The situation has hardly changed for them. It is not that the situation is the same for all FPOs, some has improved and some not. We are trying to focus on how we can be of service to them.

Research Methodology

We researched within FPOs in Karnataka region, According to SFAC India database they mention 120 FPOs, Among them, we connected with 59 and did a telephonic interview with a predetermined questionnaire.

Data collection

The major part of the data collected is primary data, collected by contacting FPOs in person over the phone and asking them questions from a predetermined questionnaire.

Secondary data from some research study papers conducted in the field of FPOs by various institutions.

Sample size

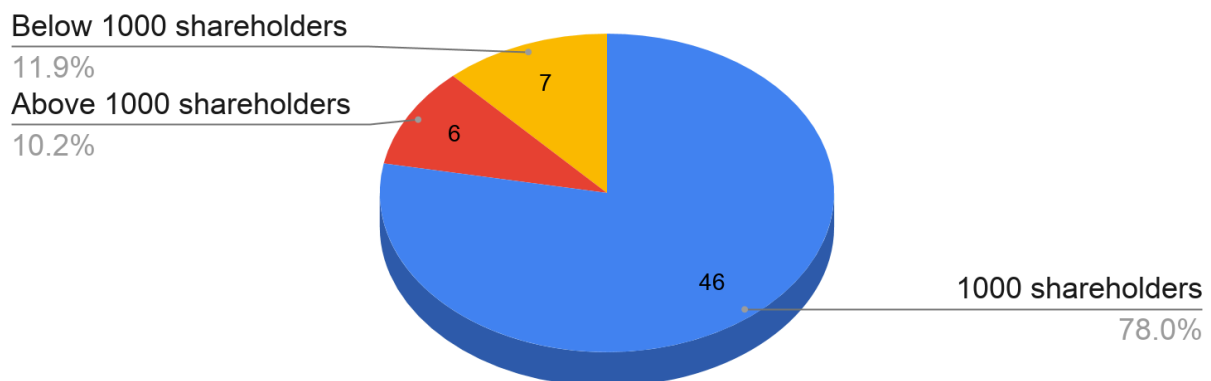
We have a sample of 59 respondents out of 120 FPOs from Karnataka state. Almost all FPOs have more than 1000 farmers, hence the response of the FPOs represents the voice for 59,000 farmers.

Analysis and Interpretation

No. of farmers

78% of the FPOs have 1000 shareholders/ farmers. While the rest of 12% have shareholders below 1000 and 10% have shareholders above 1000 Shareholders and farmers but only a part of the members are active. They also revealed that farmers are losing the sense of belongingness to the FPOs due to their poor condition. The FPOs below 1000 are trying to increase their number of shareholders.

Figure: 1.1 Number of Farmers

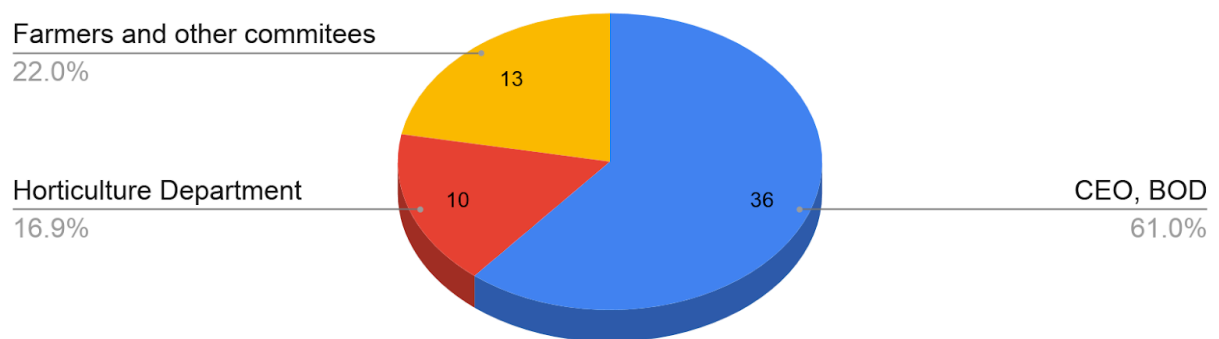


Source : Primary Survey

Who manages the FPO?

61% are managed by CEO, BOD's, 22% managed by Farmers and other committees, and 17% is managed by the horticulture department. Out of them, 6 FPOs are managed by women CEOs. Most of the FPOs are functioning from more than a year and few FPOs have just started and are not making any sales but are buying inputs and selling them to farmers at affordable prices.

Figure: 1.2 Who manages the FPO?

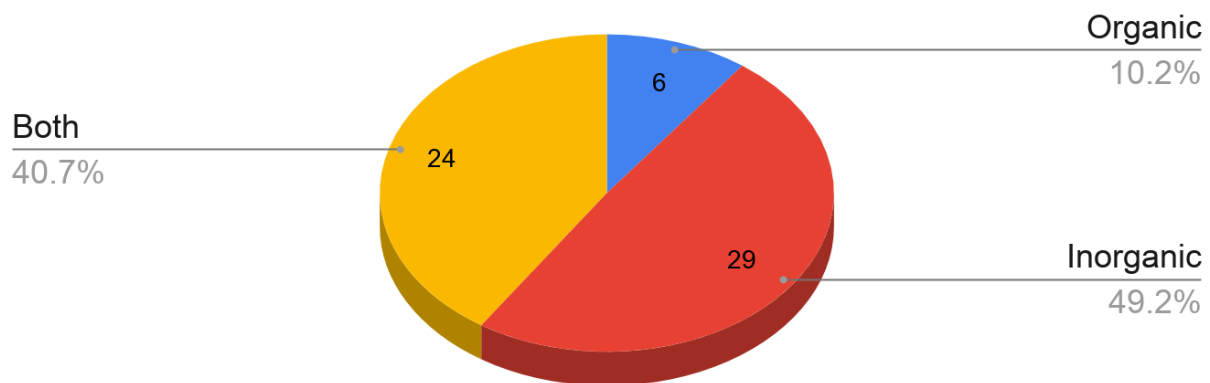


Source: Primary Survey

Method of Production

As we can see below the significant part is growing products inorganically. Followed by 41% of both organic and inorganic producers. There are only 10.2% of FPOs that produce entirely organically. This is because there is no much profit and yield in organic growth.

Figure: 1.3 Method of Production

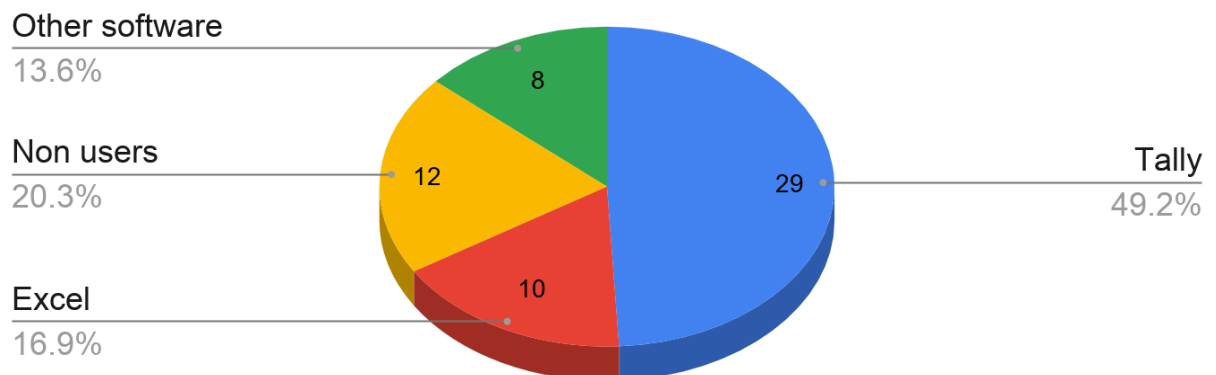


Source: Primary Survey

Computers/ ERP Softwares used

49% of the FPOs use tally ERP to manage their work and find it comfortable. 17% of the FPOs use excel to maintain records. 14% of the FPOs use other softwares like Karabi, Margo, IFPO, Fastrack and other government portals for this purpose. Rest of the 20% use no computers for this purpose and all are maintained in paper records.

Figure: 1.4 Computers/ERP software users

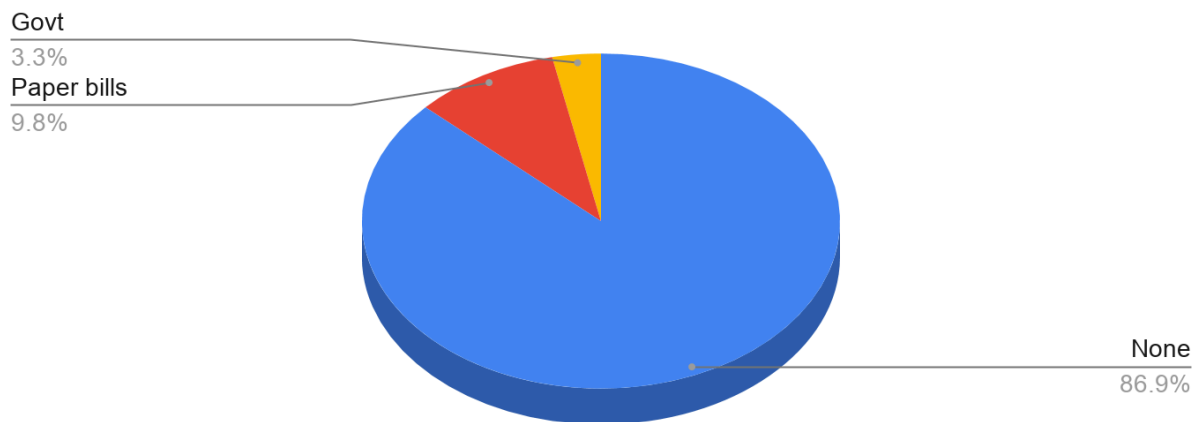


Source: Primary Survey

Traceability Software Users

None of the FPOs uses software to trace their activities. In 3.3% FPOs, it is taken care of by the government. 10% of the FPOs keep records of bills and invoices for that purpose and the CA or auditor keeps a track of the activities.

Figure: 1.5 Traceability Software Users

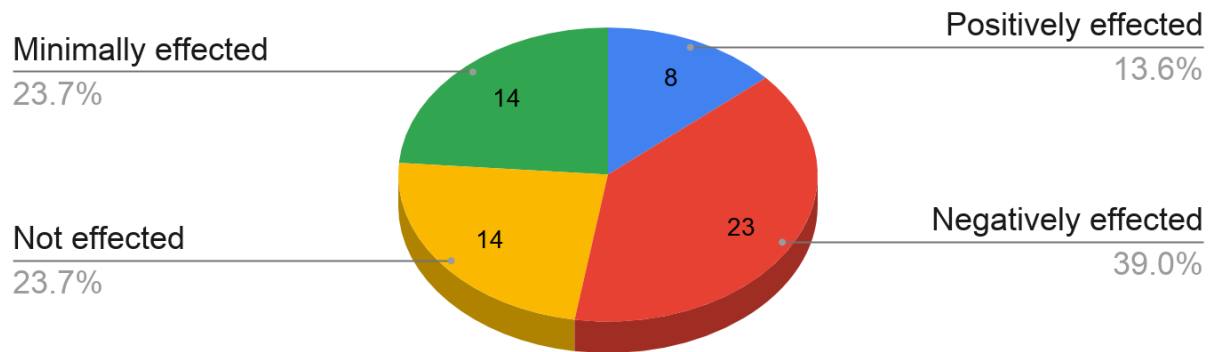


Source: Primary Survey

Effect of Covid-19 pandemic

39% of the FPOs have been negatively affected and have faced a lot of problems due to the lockdown; everything was shut down, while some farmers had faced problems procuring required inputs, on the other hand, other farmers were facing difficulties with regards to maintenance of the growing crops as they were not allowed to step out they had to skip harvesting and everything was going on a toss. Farmers who had harvested their produce faced problems in selling them; they had no resources to go door to door selling either. 24% was minimally affected. 13% of the people were positively affected by Covid Pandemic. They believed that it gave them time to interact and slow down and learn new techniques. 23.7% of the FPOs were not at all affected by the Pandemic. They said that they had food and shelter. What else is needed?

Figure: 1.6 Effect Of Covid-19 Pandemic

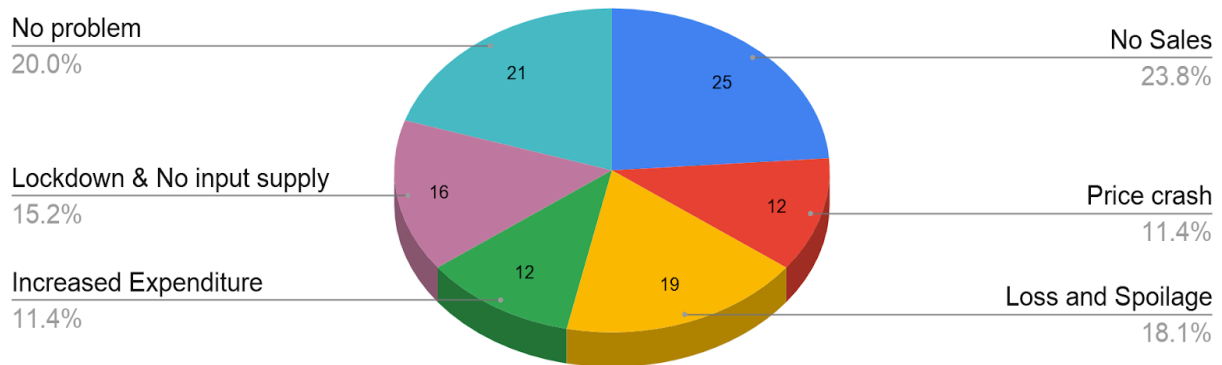


Source: Primary Survey

Problems faced during Covid pandemic

Below are the major problems faced by the FPOs. Majority of them had no sales going on during the period due to lockdown and also had to sell their produce at a low price. Due to less sale, they also got to experience loss and spoilage of the food crops. 15% of them had to face problems in lockdown because of the non-availability of inputs. Few of them had to face a hike in expenditure like transportation and rent. The second majority of FPOs have not faced any challenges during this time. They could sell their produce door to door at a better price due to panic buying, They got time to explore new techniques of farming and hence had a positive impact.

Figure: 1.7 Problems Faced During Covid-19 Pandemic

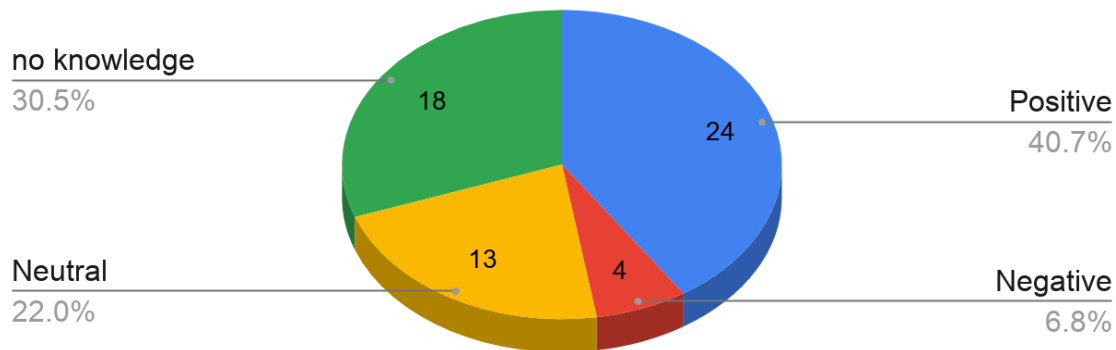


Source: Primary Survey

Opinion on Farm Bills

41% of the FPOs believe that Farm bills can create a positive impact on the life of farmers. 22% of FPOs claim that it could impact both positively and negatively in the long run and farmers may be exploited 100 times more if certain aspects of Farm Bills are unchanged or modified. 7% of FPOs believe that the New Farm Bills could harm farmers in the long run and hence they will not be favourable. 30% of the FPOs have no clear understanding of the farm bill.

Figure: 1.8 Opinion On Farmbills

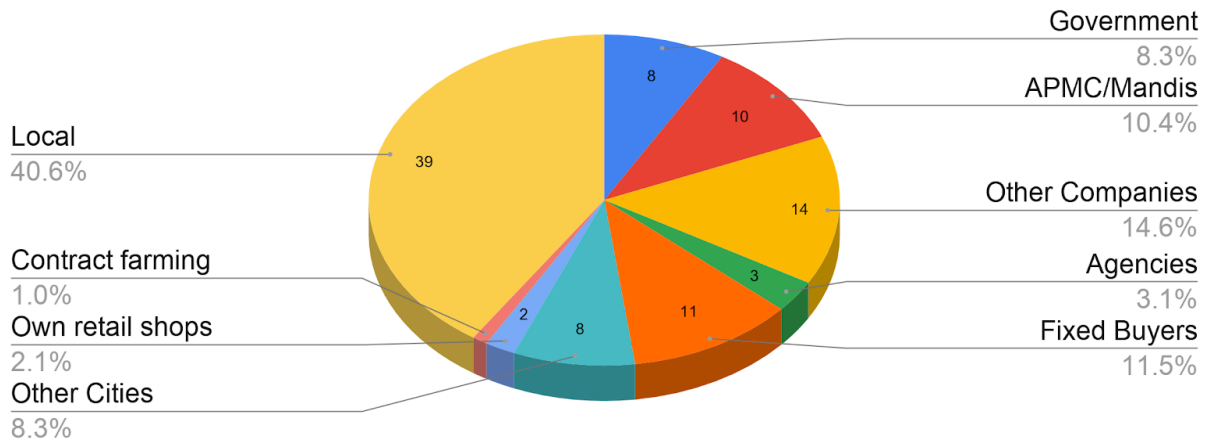


Source: Primary Survey

Method of sales

Majority of FPOs sell locally to local vendors and consumers who buy in bulk. 8% is purchased by the government for mid-day meals programmes and others. 10% of the FPOs products are sold in APMC or Mandis for MSP. 8% of the products are transported to other cities. 14% of them are purchased by companies like Big Bazar, More, Big Basket, Cargill, Lotus, ITC etc. 11% of the FPOs have Fixed buyers. 3% of them sell to local agencies. 2 FPOs have retail shops and 1 FPO is into Contact Farming with the Corporate.

Figure: 1.9 Method of Sales



Source: Primary Survey

Problems In Marketing

Here, we can observe that the majority of FPOs aren't able to get a proper price for their produce. 11% of the FPOs have no buyers to sell the extra produce. When the government buys produce, they buy in fixed quantities due to which the remaining quantity of produce will go waste or get spoiled. 13% of the FPOs have problems transporting their produce from one location to another. Most of the FPOs are in rural areas and face problems in finding low-cost transportation. 4% of the respondents told that they frequently get cheated by the middlemen and are forced to sell at a low price. 7% of them face problems when it comes to the quality and grading of their produce.

They often get rejected or be forced to sell for a lower price, being told that they are not up to the quality of standards. 6% of the respondents have said that they won't get paid on time. Even when it is sold on MSP it takes 3-4 months for the amount to get transferred to their account. The expenses of maintaining the FPOs are increasing as there is no support from the government and if at all they do, with poor performance. 16% of the FPOs face different problems like spoilage of food, gets cheated by fake inputs, politics, due to fixed sales the balance goes on loss, not networking, no support, no labour, no inputs and much more issues.



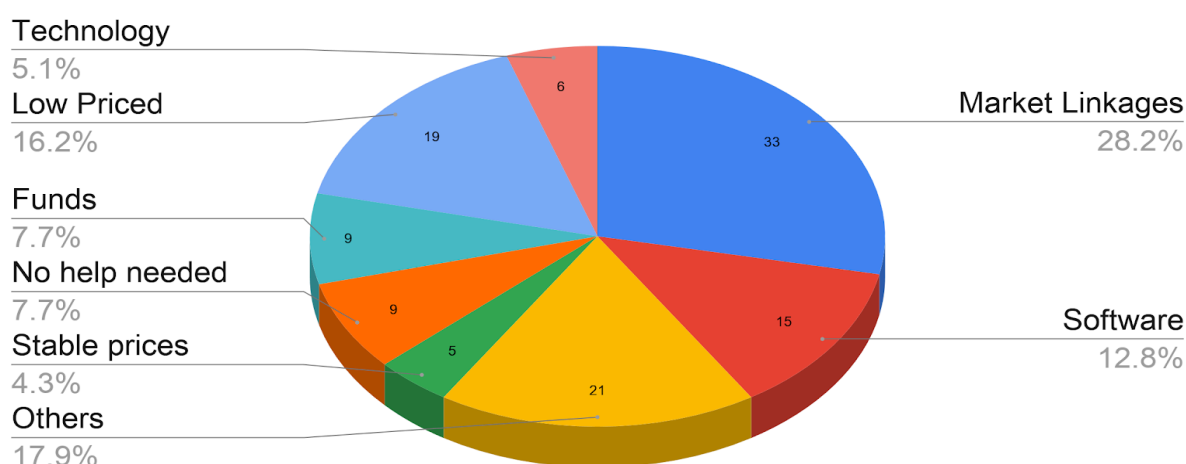
Source: Primary Survey

Support needed for the FPOs

As we can see in the below graph there is a greater need for Market linkages among the FPOs, this is because there are not enough buyers to whom they can sell at a fair price. Most of the time farmers are exploited at this point to sell their price at a low price otherwise it will go bad as they are perishable. 16% of FPOs require low priced Fertilizers, Pesticides and other inputs. Most of the time the inputs are sold at market price which is very expensive to the farmers. 13% of the FPOs need softwares to support their business. 8% of FPOs need financial help and funds for maintaining the FPO. 5% of them require technical support and new technology to support

farmers. Due to frequent price fluctuation, they are also in need of stable prices for their produce. 8% of FPOs are doing well and do not need any help. The balance of 21% need dealership, traceability, more farmers to form better FPO, infrastructures like cold storage and other facilities, government support, contract farming, website and training farmers in organic farming and other aspects.

Figure: 1.11 How can we support?



Source: Primary Survey

Findings

Method of production

Organic farming is getting into the trend, but not many FPOs have completely adopted organic farming as there is no money and yield in organic farming. Farmers find it comfortable to mix both organic and inorganic farming and develop a sustainable method of farming. In many FPOs,

there is a small group of farmers who cultivate produce organically. It is not as profitable as inorganic. Moreover, the price of organic produce and inorganic produce are the same. Some of them have got no organic certification. Yet there are a few FPOs that are interested in Organic farming but they have no knowledge about the tricks and tips. They stated that farmers must be taught about organic farming and software must be developed to make them understand how to do it and why it is important, along with tips to improve the yield quantity.

Gathering more farmers

Many FPOs have shareholders up to 1000, but again only a part of them are active. For an FPO to function appropriately it needs more farmers to come together. Most of the time the FPO will not be in a state to help the farmers due to which the farmers lose the touch with the FPOs and stop interacting with the FPO. They stated that they need farmers to feel a sense of belongingness to the FPO for them to trust us. For that, we need to help them when they are in need. But due to the situation of FPOs, which is operating on the loss they cannot be helpful to farmers and thus the reason or motive behind setting up an FPO has failed to be accomplished. No farmer is equal to no FPOs.

Effect of Covid on FPOs

Not many FPOs were majorly affected. The few FPOs which were badly affected had problems regarding the sale of their farm produce, procurement of inputs and reaching out to farmers.

Few of them were minimally affected as they supported the farmers by selling the produce door to door thus helping the farmers. Many of the FPOs were not at all affected and few were positively affected as they had a lot of time to learn new methods. A CEO of an FPO stated that

the farmers had land, food, shelter and other necessities and hence they have not faced many problems.

Problems during the Covid pandemic

During the lockdown, they were not allowed to go out and thus were not able to take care of the growing crops. They were also not receiving inputs like fertilizers and pesticides which lead to loss of crops. The harvested crops could not be sold and if at all the sale could be made it still was sold at a very cheap price leading to a great loss. Conducting meetings with farmers and interacting with them had become a great deal at that moment. A lot of training and demonstration sessions for the farmers were missed at that time.

Usage of Softwares

None of the FPOs uses traceability software. They use paper bills and records to keep a record of it and also auditing is conducted by Chartered Accountants. Most of the FPOs use tally for managing their activities and excel for making records and reports. Few of FPOs use various other softwares like Karabi, Fasttrack, margo, IFPO. There are a few FPOs that do not even use computers. Here we can observe that FPOs in Karnataka are not Digitally supported or have not been digitally evolved.

Infrastructure and other Facilities

Most of the FPOs are running in a rented space. Few of the FPOs do not even have a proper physical location. They run under a hut or tied up sheets. Apart from that, hardly any FPO has a

cold storage facility and are in too much need for it. They are also in need of technology to make their work easier.

Funds and Financial help

Many FPOs are facing problems with regards to finance and availability of funds. There is a need for low interest or no-interest loans. They also stated that a good financial scheme can help them better their situation in many ways.

Marketing and Sales

This is one of the major requirements of the majority of FPOs. The FPOs that sell in MSP to the government said that the government buys only a part of their products and all the remaining produce goes on a toss. The government has a fixed quota which it buys from the farmers and does not buy more than that which is why they need more market linkage to sell off the remaining produce. Most of their sales are made locally and few FPOs are looking forward to export but are not receiving necessary support.

Low Priced Fertilizers and Pesticides

The price of fertilizers are reaching sky high and many farmers are not able to afford good quality fertilizers. It was also found that most of the farmers are being cheated with cheap and fake fertilizers and pesticides. Thus low priced fertilizers and pesticides have been one of the major needs of the FPOs. Few FPOs stated that many companies sell fertilizers but they always

sell at market price even if purchased in bulk. And then we will have to provide it to the farmers with no profit. If this goes on, how can the FPOs develop?.

No payment on time

Most of the FPOs deliver the goods with no advance payment. When the goods reach the buyer they either reject it for lame reasons or say that they have not yet received the goods and refuse to make the payments. When the goods are sold in MSP, it takes 3-4 months for the amount to be credited to the account. This is another reason why FPOs in Karnataka are not developing.

Pricing Issue

Exploitation by middlemen for commission, cheating and unfair pricing systems have become very common. And is one of the major problems and disappointment. Majority of the farmers or FPOs do not get the right prices for their produce. They are always asked to sell below the cost of production for one or the other reason. Due to no other option, he has to follow whatever is told to him and just take home whatever he gets. He is just a price taker and not the price maker.

Opinion on Farm Bills

Only a small part of FPOs are against the farm bills. Majority of them are very happy about them. Then there are a few FPOs that say a part of it is useful to farmers whereas the rest must be changed. Then again some people do not know the bills. The people who are against the bill say

that the people who are in favour of the bill do not know the cons of it. They also say that a certain aspect of the bill may be useful only to big farmers because small farmers can not travel far to sell their little produce. It is important to educate farmers about the pros and cons of the bills to let them decide for themselves.

Suggestions and services to improve the functioning of FPOs and farming.

Transparency Marketing Systems

According to the research, there is an emergence of transparency in grading, pricing and marketing is needed for sustainable farming and agricultural ecosystems. After all, a farmer always has the fear of getting cheated by the buyer on the price because the farmer was always manipulated.

We need effective technology platforms rather than middle man for connecting the farmers and potential buyers which make fair deals for farmers as well as the potential buyers, where the value of the product is properly analysed and priced fairly.

Thus trust can be built between the farmers as well as the buyers with a transparent platform.

Vibrathon provides ERP based traceability solutions to farmers, FPOs to analyse their value generation and cost analysis.

With integrating Blockchain, IoT and Ai we created a platform for traceability and transparency to build trustworthy and sustainable marketing of food products. With our platform, farmers and FPOs can update all the costs incurred for farming and they can communicate the value generated and the quality of the product for the potential buyers.

Some FPOs produce organically without certification. With our traceability platform, farmers can update all kinds of information on the method of production, what kind of seed they have used for cultivation, fertiliser and pesticide information can be traced and we will make aware the farmer about the value they generated. And also technically connect with potential buyers who are willing to pay for the value generated.

Connecting with the buyers in time needs market forecasting, and predicting the harvest. Our platform has both sides to predict the harvest and connect with the potential buyers.

With our platform, the end consumer will also be aware of the value and cost of the product he consumes.

Price Fixing

According to the research, one of the major challenges faced by the FPOs was the pricing of the commodities. Most of the time during the commodity sales by the FPOs, they don't even get the price to meet their production cost. The price fluctuations of the commodities were another concern, the unpredictable market price for the products always made the farmers and FPOs in trouble.

The Commission for the Costs and Prices (CACP) recommendation for the MSP is based on A2+FL cost which includes all paid-out costs such as cost of hired human/animal/machine labour, rent paid on land, expense on various inputs including seeds, fertilisers, irrigation, etc. It also includes the imputed value of wages of family labour and depreciation of farm machinery and building.

When MSP was introduced, for the benefit of farmers it also led to various other problems. When the government decided to pay maximum MSP on certain crops, farmers decided to grow more of those crops rather than growing the ones which are regionally and climatically suitable. This led to overproduction and oversupply exceeding the market demand for them.

In MS Swaminathan report, he suggested the government to include many more crops in the list so that the farmers would show more interest in other crops as well. He also stated that the MSP must be fixed at 50% above the cost.

When MSP was declared for sugarcane all the farmers started growing sugarcane. Sugarcane consumes more water than many other crops. The amount of water required to grow one acre of sugarcane can be used to grow three acres of other crops. This again led to a water crisis and oversupply.

When farmers started producing more due to MSP fixed by the government and the government could not buy all the produce, it became troublesome to farmers. They had no place to store their products plus they could not sell their produce at MSP in the APMC leading to wastage and a huge debt which he couldn't repay and then ultimately turning suicidal.

Telangana had come up with the Rythu Bandhu Scheme for this purpose. As per this scheme, Rs4000/acre would be transferred to the bank account of each landholder for every crop season whether or not it is used for agriculture. This was done so that they could easily meet the expense of fertilizers, pesticides, seeds and others. This helped the farmers to get out of the debt trap as they had money beforehand and need not depend on money lenders. Which in turn also helped them to be independent of MSP, which they were dependent on earlier to pay off the debts. This is a great initiative to protect farmers and it must be implemented in every state.

There are many other initiatives for providing MSP under testing like Market Assurance Scheme (MAS), Price Deficiency Procurement Scheme (PDPS), Private Procurement and Stockist Scheme, but none of them is becoming effective solutions for fixing the price.

In Farm bill 2020, the government assured MSP but in what policy they are providing the MSP was not mentioned. That was a major concern for the farmers and farming organisations.

And the Farm bill 2020 also allows farmers to bargain over the price with the buyer, but if an uneducated farmer and educated, polished buyer bargains, the result is predictable. The farmers will suffer in the long run if there is no proper policy for providing MSP.

That is why we suggest leveraging on technology for fixing the price of the commodity. Use technology for understanding the value generation in the farms and analysing the cost incurred for the production as well as fixing the price and avoiding bargaining.

If bargaining could be avoided and a technology-oriented third party (an algorithm) could fix the MSP of the product, based on analysing various determinants with traceability, quality and cost, the internal and external market environment for fixing a fairer price for both farmers and buyers can be achieved

We developed our transparency platform for sustainability which is fair for both farmers and potential buyers, we can leverage technology where humans fail to find solutions. So let the technology platform do the price-fixing.

How our platform works for price-fixing:

- We have a mobile application for farmers to update and forecast day to day activities from seeding to harvest.
- Everyday tasks like seeding, applying fertilizer, clearing weed, and pesticide the cost incurred for him to perform these tasks.

- The farmer profile, total land for cultivation, his certifications, method of cultivation etc can be recorded.
- With this application, the everyday activities of farmers are recorded and the cost incurred from seeding to harvest will be calculated.

With this application, we will be able to know the cost of production for farmers and what kind of crop they produce and forecast the harvesting.

With quality metrics, cost metrics, internal and external marketing metrics, our algorithm will be able to fix the price for the commodity fairly for both farmers and buyers.

Financial assistance

According to the research, we came to know that many of the FPOs are struggling for funds to sustain. The government should provide suitable measures and assistance urgently for supporting the FPOs and farmers.

They are asking for interest-free loans, subsidies at the right time, and proper communication about the same with farmers at proper timing.

Many of the farmers said that they didn't get timely updates on the subsidies and allowances for them, hence a transparent communication is needed for them to communicate about the subsidy updates and other allowances.

It is essential to provide attractive financial assistance for the farmers because the next generation of farmers will only be interested in farming if they have a financially secured agricultural ecosystem.

Efficient measures for the proper working of FPOs and related firms are important for attracting more young people into farming, and then only India will have a sustainable agricultural ecosystem.

Training on Farming

According to the research, the majority of the FPOs are produced in an inorganic method, but many of them wish to do farming organically, but they don't have relevant knowledge in organic farming and don't have access to right inputs.

And it will take more than five years to get organic certification and during that period they will get paid only the same price level as normal produce.

If one among many starts organic farming the pest may attack the organic farms more than inorganic.

To teach the next generation farmers and schedule everyday farming tasks, we are launching an application for farmers to assign tasks every day and beginners of farming to get everyday tutorials and support throughout the process of seeding to harvest.

For a sustainable farming ecosystem, we need the new generation should be involved in every aspect of agriculture,

Proper training should provide those who are involved in agriculture and they get a clear idea about pre-harvest and post-harvest methods.

We can generate employment if we can provide proper training in farming and farm management.

Similar to corporate companies, FPOs could hire employees in various profiles for managing them and effective functioning.

Making technology farmer-friendly

According to the research, we came to know that most of the farmers are not educated and not aware of technologies. They only know the regional language. Thus we need to build applications and technologies which they can also adopt and use.

Our farmer application understands the farmer and the farmer can use the app comfortably by themselves. The main challenge is the language and keypad for the regional language. We understand this pain point and come up with better methods for recording the data.

The farmers can write using their fingers in their local language in our application about their daily tasks and activities about farming, Our application will understand their regional language and keep record about their activities.

Ensure the quality fertilizers and provide an affordable price for farmers.

According to the research, most of the farmers are purchasing the fertilizers at the normal market price. Special prices should provide for small farmers to reduce their cost of production.

And many of them said that the fertilizers they get don't have the quality, they are not getting results by using some of the fertilizers, there is a [possibility of adulteration in fertilizers too.

Vibrathon services for FPOs and farmers

With the research we had within the FPOs, we came to understand clearly about the challenges of running FPOs, The major lacking for the running of the FPOs are the absence of an efficient technological ecosystem in farming.

We are a technological solution provider company for agritech who are happy to serve the agricultural ecosystem for improving the standard of living of the farmers.

The solutions which we provide are:

ERP based traceability solution

We provide ERP softwares for FPOs at a very cheap rate for efficient management of the FPOs, Cloud-based softwares for Accounting, Billing, Stock management, CRM, HRM are customised for FPOs. with the same software, we ensure the traceability of the product is ensured throughout the supply chain.

We provide Artificial Intelligence-powered suggestions and reports for cost efficiency and improvement of quality. With our software, they can manage and monitor the FPOs more efficiently.

Price fixing

Fixing the price of the product by the farmers can be done efficiently when we get proper accountability of cost of production and other external factors.

If the farmers are using our ERP software we will get exact details of the cost of production and with the detailed information, we can fix the price of the products.

Market linkages

Most of the FPOs sought help for market linkages for selling their produce at the right time. We are developing a business to a business web portal to sell the produce in wholesale. Where the FPOs can update their produce for sale. And potential buyers can purchase from the portal. We can predict the market for the product and also forecast the sales with our intelligence.

Farmers task management and training

We are also launching a mobile application for managing the farming especially for day to day task management and get proper training for farming by sharing knowledge and scheduling everyday tasks. With the same application, FPOs can notify the farmers about the updates on events and schemes for member farmers, get updates on subsidy information and provide proper knowledge on allowances and subsidies available for farmers.

Fertilizers and pesticides

With the high request from farmers, we are also connecting with best institutions and companies which manufacture best quality fertilizers and pesticides at a discounted price. Through our farmer application, the farmer can choose better fertilizers and pesticides which are quality ensured.

Other Financial Supports

We are also providing financial support from our surplus. We have decided to keep 5% of our profit from our business to be reinvested in farming.

We are also planning to provide pensions schemes for the farmers who sell their products through our web portal continuously for five years.

We are also launching a programme called “Zero Hunger Farmer” to eliminate hunger for farmers. The programme is for member farmers in our portal, if they are hungry and don't have money to eat, the company will pay the bill of the farmer from anywhere in India for what the

farmer eats, The farmer can have a meal per day to stay away from hunger in any extreme poverty conditions.

Conclusion

To conclude, we would say that the situation of our farmers can get much worse if it is not paid attention to. A lot of farmers are quitting agriculture and farming due to these unfair practices and treatments. A farmer who sows seeds nurtures it, grows it and finally after all those struggles, he harvests them and has to fight with the world to get better pricing for it. Then he gives up on our corrupted system and ends up selling his produce for the cheapest price which may not even cover the cost of growing them. How much worse can this get? Some farmers have even quit their lives.

Farm bills were mainly aimed at improving the lives of farmers, but there are too many loopholes where farmers can be easily exploited and the situations could be made terrible to the farmers. Again the government has simply made the bills but have not communicated to the farmers both the pros and cons. In addition to that, the practicality of farm bills may pose a lot of issues which are not known now.

However, farmers are important people to not only India but also in our personal lives, because that's where our source of life and energy comes from. To protect farmers is to protect ourselves. Which is why it is important to involve ourselves in the fight to ensure that farmers of our country are living a happy life.

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