
Supply Chain Solution for Small Scale Farmers

1. Introduction

FarmToDoor is an early-stage startup, and we are passionate about helping farmers. We aim to provide sales channels and disruptive supply chain solution for Indian farmers. By doing so, we aim to give farmers a better price for their products and ensure that they focus on farming rather than investing their time on logistics and sales channels. India ranks second in farm produce by volume and weight. Agriculture is the primary livelihood in India. However, farmers are saddled with debts due to the small profits of the farm produce. Due to lack of efficient supply chain and sales channel, India ends up wasting a significant portion of its farm produce. Moreover, there are huge debts on farmers due to the small profits of the farm produce. Therefore, our motivation is to tackle the major issues of Indian agriculture. We provide the solution to assist farmers to improve the productivity and efficiency.

2. Roles and Responsibilities

- Chief Executive Officer:
 - Operations
 - Communication on behalf of company
 - Define company's short and long term strategy
 - Evaluating work of other executive leaders
- Chief Finance Officer: funding
 - Make financial plan
 - Manager financial risk
 - Report and record financial state
- Chief Marketing Officer: marketing plan
 - Propose a marketing solution to promote FarmToDoor
 - Establish connection in between farmers and businesses
 - Execute market test to determine whether marketing scenarios can be further developed
- Chief Technology Officer:
 - Leading the Engineering and Technology department
 - Developing softwares and hardwares.
 - Maintenance and updating
- Chief Sales Officer:
 - Leading and managing all sales department.
 - Managing Customer support and advertising
 - Maintaining overall sales and business targets
- Chief Research Officer:
 - Oversee allocation of research equipment.
 - Research goals and/or missions.

- Supervise the company's research financial plan aligned to strategic plan including financial commitment for capital equipment and research programs.
- Implement strategies to promote the innovative efforts of company.

3. Innovation Idea

- Problems

- Every year in India, nearly 20% of farm produce goes to waste, leading to a substantial loss in economy.
- Farmer gets approximately 10% of the money that the end-user pays to buy vegetables and fruits.
- Untimed harvesting leads to loss of perishable products or sale at a reduced price by farmers, due to lack of cold chain or appropriate logistics.

- Our Solution

Perishable goods are harvested daily, once harvested the products should either be sold or kept in refrigeration. Due to the lack and high cost of cold chain infrastructure, it becomes difficult to stock the goods. As a result, farmers need to sell them as soon as possible and at compromised prices. Our company provides a supply chain solution which empowers farmers to sell their products at the right price and without the hassle of logistics.

First of all, there will be one Kiosk installed per village, all the farmers in the village will be registered in our system via biometric thumb impression. If the farmer is expecting to harvest vegetables in the next few days, he can use the biometric login and provide information regarding the vegetable, the tentative quantity, date of produce and the price he is expecting. Once entered, the information will reach our sales channel online and offline, from where a trade can be made.

Once a deal is made, our logistic solution comes into place. We plan to set up one depot for every five villages, where we will station three vehicles, two as an operational and one as a backup. This depot will serve as the aggregation point, where farmers will drop their produce. The backend API will ensure that depot has complete knowledge of the farmers that are expected to drop their food and the delivery points of the stock.

- Advantages:

- By using our system, the farmers are ensured that they don't have to spend time in logistics, i.e. transportation of from seller to buyer.

- Also, our transparent sales channel ensures that the farmer gets the right price for their produce.
- Challenges:
 - Farmers in India have always been away from technology. So it will be a challenge to make them use a simple machine like a kiosk. Also, we could not expect farmers to trust us with their finances from the first day.
 - Scaling this project to the whole country would require huge investment, with a highly qualified board of directors in respective fields.

4. Analysis

- Market size

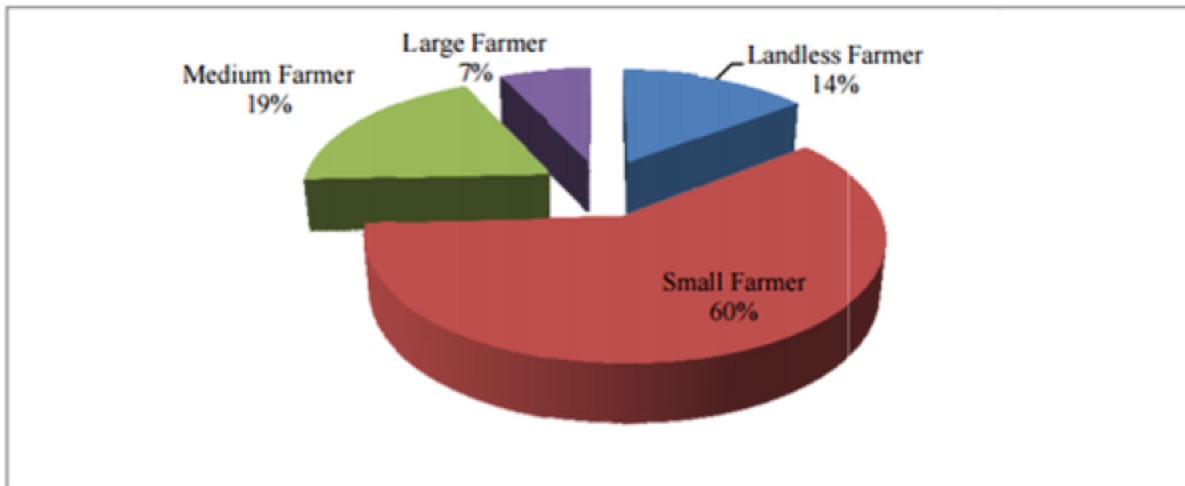
According to the Registrar General of India and Census report in 2011, the total number of cultivators were 118 million, and agricultural labourers' total figure is 144 million which formed up a total of 32 per cent of India's total population [1].

The below table shows that the total number of cultivators was 97 million in 1951, whereas in 2011 it increased to 263 million. If it is assumed that the total number of farmers in 2015 had the same growth rate of 2011, then the total number of cultivators would be 273 million in 2015.

Year	Total Population	Rural Population	% of Total Population	Agricultural Workers					% of Total Rural Population	% of Total Population
				Cultivators	% of Total Rural Population	Agricultural Labourers	% of Total Rural Population	Total		
1951	361.10	298.60	82.69	69.90	23.41	27.30	9.14	97.20	32.55	26.92
1971	548.20	439.00	80.08	78.20	17.81	47.50	10.82	125.70	28.63	22.93
1991	846.40	630.60	74.50	110.70	17.55	74.60	11.83	185.30	29.38	21.89
2011	1,210.80	833.70	68.86	118.70	14.24	144.30	17.31	263.00	31.55	21.72
2015*	1,256.00	864.82	68.86	123.13	14.24	149.69	17.31	272.82	31.55	21.72

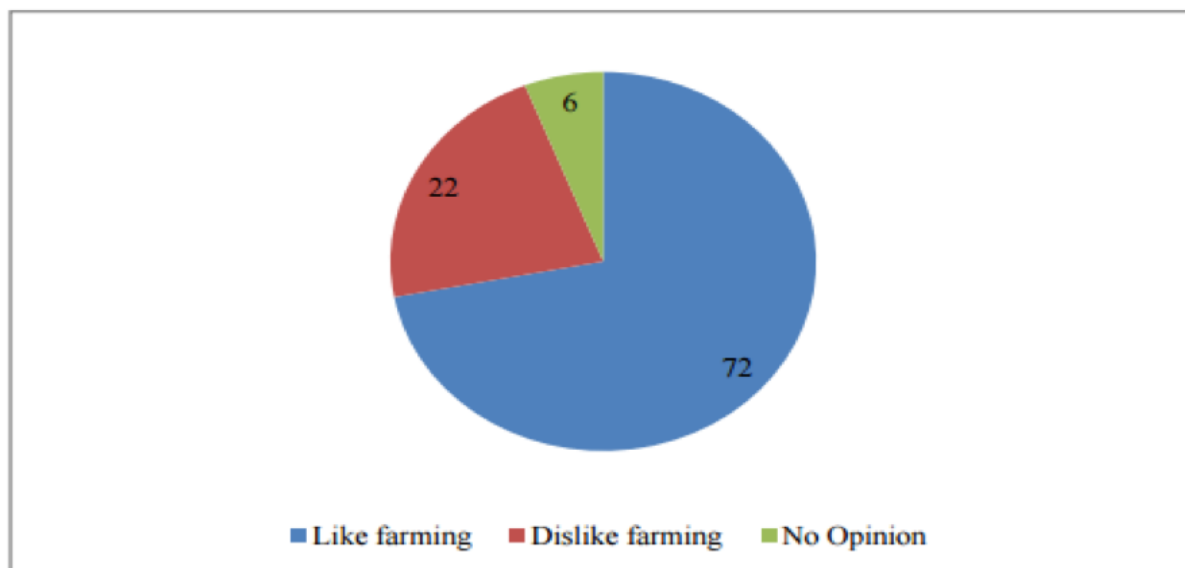
Table 1 - Farmers Population [1]

A recent study conducted by The Centre for the Study of Developing Societies named “State of Indian Farmers: A Report” covered more than 270 villages, showed that around 60 per cent of cultivators are small farmers while 14 per cent are landless growers. This study examined over 135 districts across 18 states [2].



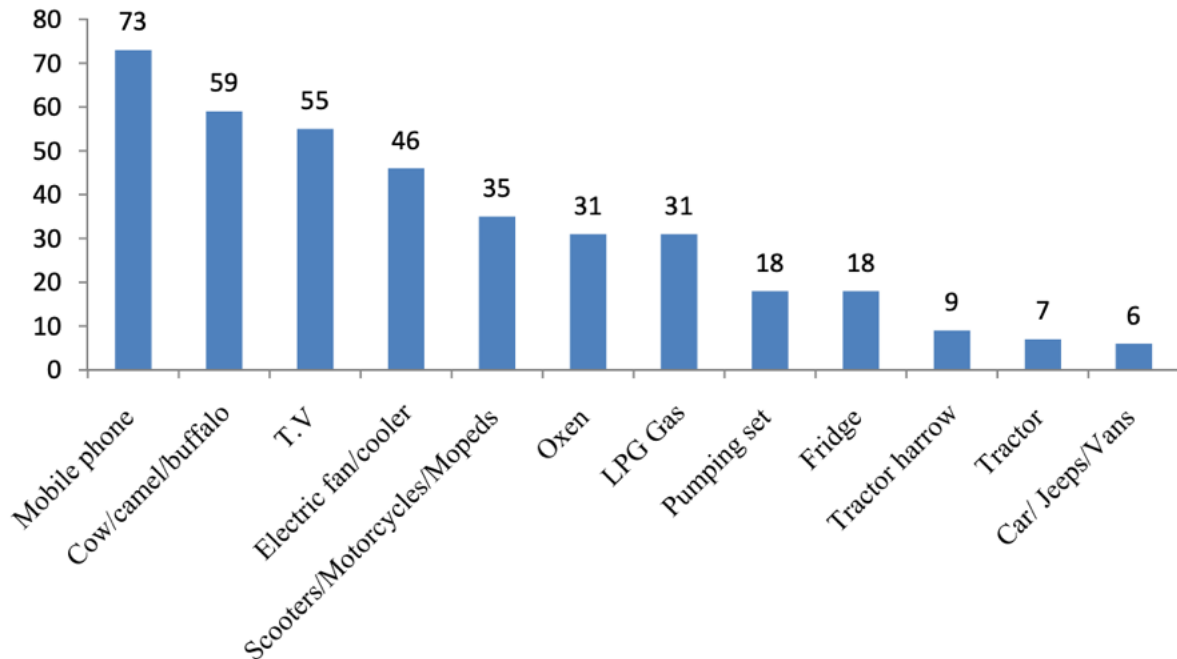
Pie Chart 1 – Farmers’ Land Ownership(in Percentage)[2]

Additionally, the survey shows that around 72% of cultivators enjoy and like farming, while approximately 22 per cent of cultivators don’t like farming. Those who enjoy farming have reported that 60 per cent of them enjoy it because it is an ancestral occupation and 15 per cent feel it is an honour for them to be a farmer and lastly, 10 per cent reported that they like it as it generates a worthy income.



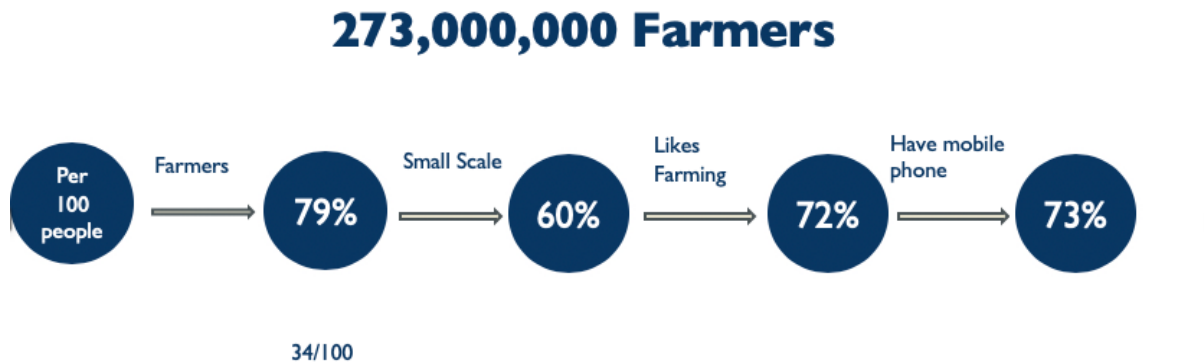
Pie Chart 2 - Interest of Farmers in Farming (in Percentage) [2]

Regarding the economic profile of Indian cultivators, 73 per cent of farmers are reported to have a mobile phone. High portions of farmers who own a mobile phone are located in villages in North India whereas a low portion of farmers who own mobile phones are located in the Eastern part of India.



Bar Chart 1 - Economic Profile of Indian Farmers [2]

Based on the analysis and calculation, we are aiming to target an estimate of 34/100 out of all farmers. However, reaching our objective would have a few obstacles, due to the facts that we are newly established business. Farmers might prefer to partner with a more experienced company to sell their produce. On the other hand, if the estimated number of growers decided to come on board, we might not be able to meet their goals as we are a small team. Additionally, we don't have enough resources to hire more team members to assist us with meeting the demand that we could potentially get.



Infographic 1 – Market Size Estimation

We are aiming to target farmers in 10 villages around Kanpur City. With an average population size of 7,000 farmers per village. The total number of farmers will

approximately be 23,800. This number is based on multiplying the number of farmers by ten cities and multiplying that by 0.34, which represents our desirable and achievable market size for our early-stage start-up. The equation is as follows $7,000 \times 10 \times 0.34 = 23,800$.

2) Competitor

- Kisan Network
- Kisan Abhimaan
- Myfarm
- My Farmer

COMPETITIVE ANALYSIS				
Comparison Matrix				
	Variety of Products	User-Friendly Interface	Logistics Service	No Network Services Required
Farm To Door	●	●	●	●
Siddhivinayak	○	○	○	○
Kisan Network	○	○	○	○
Kisan Abhiman	●	●	●	○
My Farm	○	○	●	○

Based on our value propositions, we have made a competitive analysis, as shown in the matrix. According to the comparison matrix, FarmToDoor is better than other competitors. We provide a supply chain for a variety of products such as fruits, vegetables, whereas Siddhivinayak only deals in potato and Kissan Network provides supply chain solution for fruits. Our technology is more user friendly compared to other services, MyFarm requires a user to have credentials, whereas our biometric system avoids such a hassle for the user. Last but not least, MyFarm provides support with meat and dairy products with a much more complex user interface. So to conclude on competitive analysis, our business model and products are best in the market.

3) Buyer

The buyers are local stores, Restaurants and SuperMarkets in india where they can sell My Farm products.the super markets are Trinethra,Spencers,Food World,Food Bazar,Choupal Fresh,@Fresh,More and Spar etc.
RPG's Spencer's Retail etc,

5. Business Model

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
kiosk manufacturer Logistic services	Install kiosk Biding price updates	Simplest user interface Significant increasing profit for farmers Combination of selling and logistic service	Training on how to use infrastructure kiosk maintenance Frequent price updates	Farmers B2B buyers
	Key Resources		Channels	
	Widely support from famers		Face to face meeting with farmers Pricing update through phone calls Bidding crops through online platform	
Cost Structure			Revenue Streams	
kiosk installation fee Development fee logistic fee Salary			Charging 5% technology service fee Charging 5% logistic fee Advertising	

- **Key Partners:** We will cooperate with the manufacturer to produce the kiosks, also at the start of business, we will use the vanilla logistic services to transport the vegetables.
- **Key Activities:** Before the start of service, we need to install the kiosk for the farmer. During the service, we will inform the farmers when the price updates.
- **Key Resources:** Only with support from farmers, we can widely promote our services.
- **Value Proposition:** We will design the simplest user interface for the kiosk so the farmer can easily use it. The incoming for farmers will significantly increase, and we provide logistic service, which guarantees the convenience for farmers. As a result, we are expected to be the preferred choice for supply chain solution.

- Customer Relationships: Since many farmers in India are less educated, we have to train them to use the kiosk. Also, we need to have periodical maintenance on installed kiosks and update price to farmers through text messages.
- Communication Channels: Firstly, we have to train farmers to face to face. After that, we will use phone calls and messages to update the price. For the buyers, they use the online platform to place bids.
- Customer Segments: Our service connects farmers and buyers; both of them are our customers. B2B buyers can include local stores, restaurants and supermarkets.
- Cost Structure: Initially, we have to pay the cost of developing our online platform and manufacturing kiosks. After our services are running, we will have to pay for the logistic services and salary of employees.
- Revenue Streams: We charge 5% logistic fee and 5% technology support fee from the price of the deal as our primary revenue streams. Also, when the platform becomes influential, we can profit from advertising.

6. Market Test

Market testing is mainly testing out marketing scenarios and picking the most potential for expansion. FarmToDoor helps connect farmers to their buyers so that farmers can get paid a fair amount selling directly to business clients like major and local supermarkets. Our company provides sales channels and supply chain to the growers to help sell their products and deliver them to their customers. To establish the most efficient marketing channel, we categorize our target clients into three categories. Firstly, we will contact the farmers and supermarkets to promote our ideas and propose a one-year test run. We will display digital and printed ads in malls and social gathering places. Also, we will bring awareness to end-user to utilize our services as it provides a farmer with a fair price.

- Mission:
Providing fresh farm produce that is competitively priced with excellent quality. Creating a frictionless buying and selling in between farmers and supermarkets to eliminate high fees incurred from middlemen.
- Vision:
Our vision is to help increase growers' income by 300 percent selling their fresh produce directly to supermarkets throughout the nation in 10 years.

- Target clients:
 1. Local farmers through Consortium of Indian Farmers Association (CIFA)
 2. Local Indian supermarkets includes Bigbasket, Grofers and Naturesbasket.
 3. E-commerce companies includes Amazon, Ebay and Flipkart.

- Actions:
 1. In order to approach local farmers, we will contact the Consortium of Indian Farmers Associations (CIFA) and held an event or workshop to present our proposal to the farmers.

 2. For big supermarkets and e-commerce, we are seeking to approach them as buyers and present our ideas in hopes of getting them on board for collaboration.

- Goals:

Connecting farmers and buyers and cooperating with both sides with at least 1-2 years engagements so that we can ensure our long-term partnership and profitability.

7. Funding plan

- Seed funding

When: Early stage of the company.

In terms of funding: It is the first formal stage in the funding process

How: We get funds from ourselves, family, friends and incubators. Seed funding will be used to fund team wages, market research and product development.

Seed funding is the first official stage in the funding process, and the first financing obtained is seed funding. Seed funding is usually the money raised by an enterprise or the first official money a business venture receives. At this stage, the potential investors are mainly the founders of the company, friends, family, incubators, venture capital companies and so on. The seed money obtained is correspondingly small.

Seed funding is the first financing of the enterprise and is used in the initial stage of enterprise development. It is often used to hire an initial team to complete the tasks of market research and product development. This allows the company to determine what the final product is and who the target demographic is for the product.

In our start-up, we already have an initial team and a clear division of labor. This reduces the time and expense of hiring the team. Seed funding will be used to fund team wages, market research and product development. Since there is already a target group (farmers), we need to conduct a random survey on the target demographic on this basis to confirm the target audience's acceptance of our company's products and whether there is new demand. Based on market research results, the first batch of products will be developed. Our expected seed funding is \$20,000.00. This amount is considered insignificant for corporate finance, so it is easier to achieve. Specifically, we will use the money for hiring a team to do market search, renting a temporary office space, buying vehicle for transporting products, creating a prototype software, looking for buyers and sellers and building a long-term relationships with them.

- Series A

When: Early establishment of the company (the company has been established)

In terms of funding: it is the next stage of financing after the company has already reached the initial scale

How: We get funds from series A. The funds mainly used for establishing a more stable user base, optimize product performance and optimize the corporate structure, establish a more complete enterprise system and absorb more high-quality talents. At the same time, we will buy more transportation vehicles and rent a larger office and warehouses for food storage . Also a small amount of money will be reserved for marketing purposes (e.g. advertising).

The Series A funding is the next stage of financing after the company has already reached the initial scale. At this time, the company has established a user base, has a stable income, and can achieve some key performance indicators. In this phase of financing, companies need to have a business model that can generate long-term profits in order to obtain more financing.

The funds obtained from the Series A funding are mainly used to further optimize the user base and products, and if there is a better chance to maximize the market.

In our case, Series A funding will be carried out after the company is able to operate stably and has a business model with lasting benefits. The team of the company will be expanded from the original core team to a larger team, and the team is relatively stable. At the same time, companies can generate better profits based on support costs. At this stage, we will take a long time to prepare, so that the company has a more solid foundation and is more competitive.

We intend to buy more transportation vehicles and rent a larger office and warehouses for food storage. Also a small amount of money will be reserved for marketing purposes (e.g. advertising).

- Series B

When: Development period of the company (the company has been formed with perfect products and high-quality employees).

In terms of funding: This is the next stage of financing, raising money to expand the market for enterprises to achieve greater success.

How: We get funds from series B. The funds will mainly use for increasing infrastructure, expanding the market and hiring more high-quality talents.

The purpose of the [Series B](#) round is to let the company pass the development stage. Through seed funding and Series A funding, our start-up has built a large user base and demonstrated to investors that the company is ready for success on a larger scale. In this phase, the company has a successful product, and a team with high-quality talent will attract more funding for the company. The funds obtained from Series B financing will help companies expand their market reach for greater success. At this stage, our company will expand its market scope and continuously optimize the structure of the company to adapt to the current development and absorb more high-quality talents. The fund obtained in Series B will mainly use for increasing infrastructure, expanding the market and hiring more high-quality talents.

8. Conclusion

In this report, the first part is an introduction of background information which motivates us to propose the idea. In the second part, we identify the role and responsibility of each member. In the third part, we introduced FarmToDoor, which is an innovative solution to the existing problem of low incoming for farmers in India. Specifically, we provide a bidding platform, on which the farmers list the vegetables they grow as well as the estimated amount and the buyers (restaurant, local stoles) bids for these vegetables. After bidding, we also provide the logistic service, transport vegetables from farmers to buyers and charge 5% for logistics fee and technology support fee each. Besides, the advantages and challenges are addressed in this part.

In the next part, we further analyse the problem and market. Due to the large population group and the bad situation of the farmers in India, our solution has great potential in the Indian market. The fifth part is the business model. This part presents a business model canvas and an explanation of each section in the canvas. A plan about how we conduct market testing is shown in part 6. This plan defines the mission, the vision, the target clients, the actions and the goals. The final part is the funding plans of three stages: seed funding, series-A and series-B. The plan includes the definition of the stages, how we apply for them, and how we spend them.

9. Reference

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